Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Title V Operating Permit

Permit No.: O-0060-19-V | Plant ID: 0060

Effective Date: 12/10/2019 | Expiration Date: 12/31/2024

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source:	Kosmos Cement Company 15301 Dixie Highway Louisville, KY 40272	Owner:	Kosmos Cement Company 15301 Dixie Highway Louisville, KY 40272

The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen months and no later than six months prior to the expiration date.

Application No.: See **Application and Related Documents** table.

Administratively Complete Date: 12/17/2005
Public Notice Date: 04/14/2018
Proposed Permit Date: 10/23/2019

Permit writer: Randy Schoenbaechler

Air Pollution Control Officer
12/10/2019

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Title V Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	156-97-TV	04/18/2001	10/22/2000	Initial	Entire Permit	Initial Permit Issuance
NA	O-0060-19-V	12/10/2019	4/14/2018	Renewal	Entire Permit	Permit renewal; Incorporation of Construction Permits listed below.

Application and Related Documents Table:

Date	Doc ID	Description
4/1/2005	6178	Temp SNCR Test Application
5/11/2005	6179	Three DCs for Ash and Sand Application
6/30/2005	6180	Permanent SNCR Application
10/18/2005	6222	TV renewal application
2/28/2006	6181	Screening Application & PTE
2/28/2006	6460	STAR Form 82 & Plot Plans HAND
4/18/2006	6461	STAR Category 1 SAM Form 81
8/23/2006	6182	Sand storage DC mod Application K-355
10/3/2006	6462	CO Revised STAR SAM Form 81
12/21/2006	6183	K-334 and K-231 DC mod Application
1/2/2007	6463	CO Revised STAR SAM Forms 82 HAND
1/2/2007	6474	CO STAR EA Demo 12-31-2006 MAIL
2/8/2007	6184	Additional Information P-185-06-C
4/16/2007	6464	CO Revision STAR CY 2005 SAM Form 81
7/3/2007	6475	CO STAR Revised EA Demo
7/23/2007	6185	Coal Mill Application to modify P-62-98-C
10/10/2007	87366	Dust collector operational flexibility
10/29/2007	6186	4 Raw Mill DC Application & PTE
11/15/2007	6477	CO Revised EA Demo MAIL
11/20/2007	6187	Effect of Coal Mill Throughput
3/11/2008	6465	STAR Revised EA Demo MAIL 3-10-2008
4/1/2008	6466	CO STAR Category 2 EA Demo 3-31-2008
9/26/2008	6470	LAPC STAR Corresp Approval EA Demo
10/13/2008	6471	LAPC STAR Corresp Approval
10/28/2008	6472	CO STAR Corresp 6-Month Extension MAIL
12/5/2008	6467	CO Revised Category 1 & 2 TAC EA Demo
12/5/2008	6473	LAPC STAR Corresp Approval 6-Month Extension
12/5/2008	6476	STAR Revised EA Demo Attach A
12/15/2008	6188	Coal Mill Feeder Belt Application
2/27/2009	6541	STAR Stack Test Dec 9-11, 2008 & Protocol
3/12/2009	6296	RE Extension Request for Construction Permit
5/15/2009	6320	Dust Collector Application AP-0308 Generic Process
5/20/2009	6192	Clinker Feeder DC K-953 1-5 (U19) Mail
5/29/2009	6193	K-974 Application Mail
6/8/2009	6294	Kosmos Permit Monitoring Revision Request
7/10/2009	6299	Corresp Email Mortar Mixing Mill System Process U22 Notification

Date	Doc ID	Description
7/13/2009	6207	Notification operation Change
5/3/2010	6194	Tire Derived Fuel Construction Application
5/3/2010	6444	Tire Derived Fuel Construction Application
9/21/2010	6195	Raw Mill A Separator DC Application K-421
10/12/2010	6196	Modification to Application Raw Mill A Separator
10/14/2010	6197	Revised Raw Mill Application
10/18/2010	6198	CO Request Change Language TAC Condition
1/11/2011	6208	Request Operation Flexibility Mail
1/18/2011	6204	Kosmos Revised O&M Plan
1/18/2011	6205	Revised Operation Maintenance Plan
1/27/2011	6199	Clinker DC Application K-949-5
2/1/2011	6209	CO Response Revised Operational Flexibility Notification
2/1/2011	6210	LAPC Approval Response Proceed with Operation
2/1/2011	6211	LAPC Response to Revised Operational Flexibility Notification
2/1/2011	6212	Operational Flexibility Notification Elec
2/1/2011	6214	FW Revised Kosmos Operational Flexibility Notification
2/3/2011	6213	Revised Operational Flexibility Mail
2/25/2011	27558	Plant Wide Operation & Maintenance Plan Rev 14
2/28/2011	6206	CO Revision 14 O&M Plan
4/4/2011	27559	Approval FW O&M Plan Rev14
4/20/2011	28468	4158B Kosmos Individual Figures U19-A (8-17-09)
4/20/2011	28472	Revised PFD for Process U19 Clinker Handling and Reclaim
7/23/2011	31245	156-97 TV Oil Water Injection
8/9/2011	31271	Oily Water Mixture
10/4/2011	32712	South Load Spout 1485 and DC 1487 application
10/4/2011	32717	Revised TV application
10/31/2011	33630	LMAPCD Request Additional Application Information
11/4/2011	33881	CO Request Correction to P-31758-11-C
8/7/2012	42149	Revised So Load Spout 1485 and DC 1487 application
1/17/2013	53481	Co Notification Operational Flexibility -Tire Derived Fuel
1/18/2013	53518	RE Spout interface (closure) to vehicle hatch
1/30/2013	53724	Co Fuel System Port Installation Notification
6/17/2013	56236	TDF increase from 6tph to 9tph application
6/18/2013	56245	Process Change U13 Operational Flexibility
6/25/2013	56353	Co Notification IA- TDF Feed System and Storage
6/26/2013	56425	Cover Ltr only Notification for Petroleum Produsts Residual
6/26/2013	56426	Tire Derived Fuel Operation Flexibility Notification
6/26/2013	57430	RE Proposed Residual Oil and Shredded Tire use
6/26/2013	58076	Proposed Residual Oil and Shredded Tire use
7/12/2013	57237	Application Refuse Derive Fuels
7/29/2013	58252	Application Sand - Bottom Ash
8/19/2013	58856	RDF Facility-Wide Cumulative Risk Comparison
9/19/2013	59247	LMAPCD Response to 2007 Coal Mill Construction Application
9/19/2013	59248	Co Response to Withdraw 2007 Coal Mill Construction Application
9/23/2013	59360	RDF TDF permit STAR question
10/16/2013	60206	REVISED RDF TDF EA Demo info
11/1/2013	60520	Sand & Bottom Ash Questions
11/18/2013	60865	Summary of Meeting with EPA for MACT and NSPS questions
12/4/2013	61069	Regulation 5 21 BAC Changes
12/4/2013	68119	Regulation 5 21 BAC Changes (7)

Date	Doc ID	Description
12/4/2013	68120	5 21 BAC Changes
1/31/2014	63514	Sand and Bottom Ash questions
2/7/2014	62275	Questions regarding Kosmos Title V application
3/13/2014	63513	Sand and Bottom Ash Application Follow Up
4/24/2014	64441	Co Response to APCD Questions
5/23/2014	65214	Updated TV forms Syn Gyp EP#s
5/23/2014	65215	Syn Gyp system application
6/25/2014	65682	Construction Application Deficiency
7/7/2014	65901	Notice of Deficiency Application AP-100A
7/10/2014	65937	Co Notification of Operational Flexibility
7/14/2014	66032	Sand Screening Operations Notification
7/15/2014	66031	Confidential Temporary Exemption Sand Screening Application
7/17/2014	66082	Operational Flexibility Notification
7/17/2014	66083	Construction Application AP-100A for Sand Screening
7/21/2014	66172	Construction PTE for SynGyp Project
7/30/2014	66207	2 03 DEFICIENCY
7/30/2014	66251	Construction Application SynGyp Project
7/30/2014	66252	Construction Deficiency Letter
7/31/2014	66301	Application Construction New HE Separators
8/4/2014	66331	Additional Info for SynGyp Application
8/4/2014	66333	Revised EA Demo 2014
8/5/2014	70097	Revised EAD and CD
8/6/2014	66361	Co Notice of Deficiency response
8/18/2014	66570	PTE Point Source Uncontrolled
8/19/2014	66913	Revised Plant-wide PTE and Title V application forms for HE separators U20 & 21
8/20/2014	66604	MSDS for TAC de minimis Determination
8/22/2014	66670	Company Submitted Dust Control Plan
8/25/2014	70098	Revised EAD with CD
8/27/2014	66719	Revised EA Demo and CD
9/10/2014	66914	Company Response to SynGyp Questions
9/15/2014	66983	Co Response Regarding Synthectic Gypsum Project
9/22/2014	67363	Separator Construction Application Initial Review
9/30/2014	67364	High Efficiency Separator
10/1/2014	67386	Metcoke Operational Flexibility Notification
10/1/2014	67416	Metcoke Operational Flexibility Notification
10/3/2014	67475	High Efficiency Separator
10/17/2014	67609	DRAFT Response to APCD high efficiency separator questions
10/20/2014	67610	RE DRAFT Response to APCD high efficiency separator questions
10/21/2014	68605	Seperator PTE information Cement speciation study
10/27/2014	67736	Co Notification Operational Flexibility Unit U-18 Baghouse K-94
10/28/2014	67769	Unit18 Baghouse K924 for LLL op flex notice
10/30/2014	67805	Raw Mill B Draft Line Modification
10/31/2014	67803	Revised app for High Efficiency Separators and DCs U20/21
10/31/2014	67813	U9 draft line mod op flex
11/3/2014	67798	K-924 operational flexibility modification
11/3/2014	67817	Revised app for High Efficiency Separators and DCs U20/21
11/14/2014	68629	Operational flexibility for Unit 9 and request for TV papers
11/14/2014	87386	Operational flexibility for Unit 9 email acceptance
12/17/2014	68426	Revised EA Demo and 100Ds for High Efficiency Separators
12/19/2014	75509	Unit 20,21 EA Demo Question

Date	Doc ID	Description
1/5/2015	68778	Co Request for Extension of LLL Compliance
1/14/2015	69458	MACT LLL extension request
1/22/2015	69077	100A, K, L and 900 B for LLL extension app
1/27/2015	69135	MACT extension request
1/30/2015	69459	Extension request
2/10/2015	69327	CAM Plan Cooler Extension of Compliance 3L
2/20/2015	69460	40 CFR 63 Subpart LLL extension request
3/6/2015	69953	Extension of Compliance Cooler (EOC) Baghouse
4/20/2015	70825	Storage tank question
5/11/2015	71108	EA Demo question
5/27/2015	71920	Storage tank question
5/29/2015	71854	Extension of Compliance Reg
9/3/2015	73342	Additional information request for TV permit
9/14/2015	73432	Operation and Maintenance Plan
9/21/2015	73530	CAM and STAR Additional Information
11/17/2015	74358	Insignificant Activities
11/17/2015	74380	CAM plan for Kiln at stack 945
11/20/2015	74399	Response to District
12/8/2015	75177	Kosmos EMSL Analytical QC (project TRI Analysis 2015)
12/11/2015	74609	High Efficiency Separator renewal app
12/15/2015	74679	Operational Flexibility Notice and PTE Spreed Sheet
12/17/2015	74692	STAR Clinker analysis 2012 2013
12/17/2015	75178	KosmosTrace Metals Analysis
1/8/2016	74784	STAR analysis of Clinker reports 2015 2014 2013
1/8/2016	74785	STAR data Hg analysis and others 2015
1/11/2016	74812	Airslide 1468, Load Spout 1485 and DC 1487 app
1/18/2016	74907	Co Request to Update Application
1/21/2016	74972	Co Request South Loadout Spout Permit Application
2/10/2016	75181	Request for Ky Secretary Certificate
2/10/2016	75182	Company response KY Secretary Certificiate
4/12/2016	76369	Co Response Re STAR Pollutants Reported 2014
8/26/2016	79121	Clinker Tunnel Fan Monitoring Procedures
9/9/2016	79374	Clinker Monitoring Procedures Update
10/13/2016	80028	Regulation 5.21 BAC Changes
12/2/2016	80712	LMAPCD Response to Co Regarding CEMS data request
12/6/2016	80751	RO Change
12/9/2016	80782	Co Response to 5-21 BAC Change
12/12/2016	80797	Approved Plantwide PTE
12/20/2016	80924	Co NOF U-24 Airslide Replacement
12/22/2016	80990	APCD operational flexibility request
1/9/2017	81320	Info regarding operational flexibility request
1/25/2017	81455	Operational flexibility approval
5/22/2017	84367	Kosmos forms request
6/7/2017	84612	100A Form and info for Title V
6/8/2017	84636	Certificate of Authority verification request response
6/9/2017	84706	Requst for Kosmos Meeting
6/15/2017	84809	SNCR application 2005 and PTE
6/19/2017	85043	Info request for crusher
6/23/2017	84929	Kosmos Cement Company LSI
6/26/2017	84978	Lime Silo routing change

Date	Doc ID	Description
6/27/2017	84996	Reply about lime routing
6/27/2017	84997	Response to reply about lime routing
6/27/2017	85000	Approval of Lime injection proposed routing change
6/28/2017	85042	Crusher for clinker construction permit 53-04-C
7/17/2017	85135	ACI PAC applicaton
7/21/2017	85376	Kosmos Notification of Raw Material Substitute.msg
7/24/2017	85407	Notification of Raw Material Subitution for Mill Scale
7/26/2017	85433	SNCR Construction Operating TV Application 100A
7/27/2017	85601	District Response to Raw Material Change Mill Scale
8/18/2017, 9/05/2017	86114, 86877	Draft permit sent to company for review
9/07/2017, 9/26/2017, 9/27/2017, 9/29/2017	87199, 87575, 87576, 87701	Company: Questions/Comments Regarding C-0060-1054-17-V
9/12/2017	87110	Company comments for Draft SNCR and consent decree review
10/10/2017	87970	District Questions regarding 7/13/2009 Operational Flexibility request for Mortar Mixing Mill System
10/11/2017	87971	Draft Title V for company review
10/12/2017	88020	Regulation 5 21 BAC Changes
11/06/17	88786	Waste Management Plan CISWI NESHAP
12/26/2017	89772	Company response to BAC changes
1/3/2018	89872	NESHAP applicability message
1/31/2018	90313	Company comments to draft Title V in Word
1/31/2018	90312	Company comments to draft Title V in PDF
2/1/2018	90347	NSPS OOO and F applicability
2/20/2018	90792	Operational Flexibility Denial
2/20/2018	90792	Operational Flexibility Denial
2/28/2018	90933	Withdraw of EA Demo
3/1/2018	90932	Request for CAM for Silos K-319 and K-360
3/6/2018	91033	Mill Scale Supplier Change
3/9/2018	91155	APCD response to Mill Scale Suppler Change
3/12/2018	91179	Co Mill Scale Supplier Change
3/15/2018	91170	Reply to March 15 Mill Scale Notice
3/16/2018	91206	Regarding Action Required by April 2, 2018 CAM Request
3/16/2018	91212	Pre Draft Title V Comments
3/19/2018	91220	LMAPCD Response Regulation 7.02 and 7.08 Standards
3/19/2018	91229	Example Fugitive Sources at other Title V Facilities
3/26/2018	91305	Company IA Form 3000 gal tank
4/2/2018	91369	CAM PLAN for Silos
4/5/2018	91430	IA Form 100P for tanks
5/14/2018	92003	Company Comments on public noticed TV permit
10/22/2019	OB122639	District Response to Formal Comments

Construction Permit History:

Permit No.	Effective Date	Description
309-75-C	4/14/1998	One (1) bag collector, make Amerex, model RP-14-272D6, for control of emissions from the clinker cooler. Collection eff. - 99.8%. Kosos equip. Item # K924.

Permit No.	Effective Date	Description
310-75-C	4/14/1998	One (1) clinker cooler & drag conveyor, make Humboldt Wedag, model PSC2-081.12, with 10 fans & dampers, plus heat exchanger (for upset conditions). Kosmos equip. K909, K910-1 thru K910-14 inclusive and K918.
311-75-C	4/14/1998	One (1) bag collector, make Wheelabrator, model 60KW92, consisting of 16 compartments, to control particulates from the kiln and ball mill. (Raw mill) Collection eff. - 99.8%. Kosmos Equipment #945.
312-75-C	4/14/1998	One (1) rotary kiln with four-stage preheater tower, a pre calciner tower, make Humboldt Wedag, model PR8250, and in-line ball mill (Raw mil), to grind kiln feed into a fine powder. Item K800
60-98-C	4/14/1998	One (1) finish material grinding mill, make Fuller Traylor, model # 4.6Mx13.5M, for continuous grinding clinker and gypsum into finished product - cement, one (1) separator, Sepax 450 classifier and elevator, Kosmos equipment # K1141.
62-98-C	4/14/1998	One (1) coal/coke mill make Raymond, model 943, with a dynamic classifier. Kosmos equipment # K855.
63-98-C	4/14/1998	Three (3) dust collectors, make Amerex, model RPC13-300D4, to control emissions from coal/coke mill system. Collection eff. - 99.8% Items K857-1, K857-2, and K857-3.
64-98-C	4/14/1998	One (1) dust collector, make Amerex, model RP-12525D6, and associated fans and ducting to control particulates from finish mill. Collection eff. - 99.8%. Item K1152.
65-98-C	4/14/1998	Two (2) dust collectors, make Amerex, model RP-12-1040D6, and associated fans and ducting to control dust from separator and pneumatic pumps. Collection eff. - 99.8%. Kosmos equipment # K1160 & K1162.
67-98-C	4/14/1998	One (1) clinker bin (250 tons capacity) and one (1) gypsum bin (120 tons capacity). Kosmos equipment numbers K-1136 & K-1137.
68-98-C	4/14/1998	One (1) clinker bin dust collector, make IAC, model 72TB, and one (1) gypsum bin dust collector, make IAC, model 72TB, to control particulates from clinker and gypsum bins. Collection eff. - 99.8%. Kosmos equipment numbers K1136-2 and K-1316.
69-98-C	4/14/1998	One (1) dust collector, make IAC, model 120TB, for controlling emissions from cement storage silo. Collection eff. - 99.8%. Item K1321.
72-98-C	4/14/1998	Four (4) dust collectors, make IAC, model 72TB, for controlling particulates from six (6) belt conveyors for limestone transfer from river barges to storage. Collection eff. - 99.8%. Kosmos equipment numbers K133, K134, K136, and K145.
75-98-C	4/14/1998	Three (3) dust collectors, make Amerex, models RP-8-25, RP-8-36, and RP-8-16 respectively, at kiln feed transfer points. Kosmos equipment numbers K640, K642, and K647.
76-98-C	4/14/1998	Three (3) bin vent dust collectors, make IAC, model 72TB, to control emissions from raw meal handling conveyor system. Kosmos equipment numbers K559, K564, and K560-4.
77-98-C	4/14/1998	Two (2) dust collectors make IAC, model 72TB, at transfer points between clinker and gypsum bins and finish mill. Kosmos equipment numbers K1135 and K1317
78-98-C	4/14/1998	Three (3) dust collectors, make IAC, model 72TB, to control emissions from clinker conveyor between clinker cooler and clinker storage. Kosmos Equipment Numbers K961, K937, and K958.

Permit No.	Effective Date	Description
84-98-C	4/14/1998	One (1) cement storage dome. Kosmos equipment # K1602.
85-98-C	4/14/1998	Four (4) dust collectors, make IAC, model 120TB, for controlling particulates from cement storage dome and at river loadout. Kosmos equipment numbers K-1601, K-1603, K-1628, and K-1629. Capacities are 15,000 acfm, 4250 acfm, 3000 acfm, and 3000 acfm.
90-98-C	4/14/1998	One (1) coal/coke storage bin. Kosmos equipment # K902.
91-98-C	4/14/1998	One (1) dust collector, make Amerex, model RP-8-49, to control emissions from coal/coke storage bin. Kosmos equipment number K902-1.
140-00-C	7/12/2000	Two (2) bin vent dust collectors, make IAC, models 72TB and 26PE, for K406 and K434 bins (A/B finish mills feed). Kosmos equipment numbers K510 and K511.
141-00-C	7/12/2000	One (1) fine coal bin.
142-00-C	7/12/2000	Fine coal bin dust collector (250 cfm), make Aeropulse, model RB-14-5-N.
148-00-C	7/12/2000	Kiln feed conveying and handling system.
149-00-C	7/12/2000	Raw meal conveying and handling system.
150-00-C	7/12/2000	Clinker and gypsum conveying and handling system.
157-02-C	7/2/2002	Portable clinker crusher number TCC1 to process weathered clinker.
211-02-C	8/23/2002	Secondary crusher make Hazemag model # APSM-1320/S
212-02-C	8/23/2002	One (1) dust collector to control emissions from uncontrolled transfer point to secondary crusher and modification dust collectors (K-162 and K-158) make Norblo.
76-03-C	2/23/2003	Three (3) pulse-jet baghouses (E334a, K-334b, K-334c) to control emissions from three clay silos (K-315, K-316, K-317) in Emission Unit 5
260-03-C	7/25/2004	One (1) 6-pack cement silo withdrawal system and 16" high-capacity transport Claudius Peters Airslides. (Dome Bypass Project)
261-03-C	7/31/2004	One (1) pulse jet fabric filter/receiver (K-1635) with air-to-cloth ratio of 4:1 and an air flow of 13,200 cfm, to control particulates from load transfer operations. (Dome Bypass Project)
146-05-C	4/15/2005	Pilot plant test of Selectiv Non-Catalytic Reduction (SNCR) to control emissions from the kiln preheater (E-81)
53-04-C	4/30/2005	One (1) Finish mill (crusher) for crushing clinkers, one (1) screening operation, and one (1) conveyor transfer point.
206-05-C	6/1/2005	One (1) Sand Storage Building with three (3) under pile feeders (50 tph each) (K-351, K-352, K-353), Sand Belt Conveyor (150 tph)(K-358), Sand Storage Bin (K-356) with weigh belt feeder (40 tph)(K-358), Fly Ash Air Slide (40 tph) (K-358) with fly ash metering system (K-375), and Fly Ash/Sand Conveyor (K-359)
207-05-C	6/1/2005	2 Fabric Filter dust collectors; 1 fabric filter (K-355) for the Sand Storage Building with 3 under pile feeders (K-351, K-352, K-353)(50 tph each) and 1 Fabric filter (K-357) for the Sand Belt Conveyor (K-354)(150 tph) with Weigh Belt feeder (K-358)(40 tph), Fly Ash Air slide (K-366)(40 tph), fly ash metering system (K-375) and Fly Ash/Sand Conveyor (K-359).

Permit No.	Effective Date	Description
208-05-C	6/30/2005	One (1) Fly Ash Silo (K-360) with three (3) offloading blowers (K-367, K-368, K-359) (40 tph each) controlled by fly ash silo dust collector (K-392).
221-05-C	6/30/2005	One (1) Fabric Filter Dust Collector (K-392) controlling one (1) Fly Ash Silo (K-360) with three (3) offloading blowers (K-367, K-368, & K-369) (40 tph each).
184-06-C	6/30/2007	Four (4) Sand Screens (400 tph each) (F2, F3. F5, and F7) and three (3) Belt Conveyors (400 tph each) (F4, F6, and F8).
102-08-C	2/15/2008	Two (2) baghouses (K-454 and K-451) controlling Raw Mill "B" Separator (K-429).
425-06-C	3/31/2008	Two (2) dust collectors to control emissions from the sand belt conveyors.
59-07-C	3/31/2008	A modification for an existing Fuller dust collector (K-231) model 96-14-14,000, rated at 4500 acfm, to control emissions from the existing clay silos (K-317, K-318, K-316).
101-08-C	2/28/2009	Two (2) baghouses (K-421 and K-424) controlling Raw Mill "A" Separator (K-411).
185-06-C	3/31/2009	Selective Non-Catalytic Reduction (SNCR) to control emissions from the Kiln (K901) (E-81).
125-09-C	8/31/2009	Six (6) Clinker Feeders (K951-1 through K951-6)(100 tph each) transfer clinker on to the Conveyor Belt (K952) located in the enclosed Clinker Reclaim tunnel. Six Process Baghouses (K953 through K953-5) assist in the transfer by capturing the clinker fines in the feeders and placing them on the Conveyor Belt (K952) adjacent to the feeder discharge.
7-09-C	1/31/2010	One (1) Gypsum Hopper (15 tph), one (1) Gypsum Feeder (15 tn/hr), and one (1) Gypsum Conveyor Belt (27 tph) (K-1140-X) in Unit U19.
8-09-C	1/31/2010	One (1) Coal Mill Feeder Belt (40 tph) (K850) in Unit U16.
195-04-C(R1)	10/1/2010	One (1) Baghouse (K974) to control the Clinker Storage Building (E-105a) and one (1) Baghouse (K915-4) to control the Hot Tank (E-101). Baghouse (K915-4) replaces Baghouse (C-37).
77-10-C	11/23/2010	One (1) Kiln (K901) revision to increase the Tire Derived Fuel (TDF) limit from 1.1 ton/hr to 6 ton/hr
29658-10-C	1/5/2011	One (1) pulse jet baghouse (K421), make ETA Engineering, model 4212X96, with an air flow rate of 45,000 acfm, controlling emissions from existing separator (K411), bucket elevator (K409) for Raw Mill A (U8).
31758-11-C(R1)	5/27/2011	Dust Collector for Clinker Handling (U19) (appl 11759) (DM 26356 cover, 26357 SOB, 26295 conditions), Modification of One (1) pulse jet baghouse (K949-5), make ETA Engineering, model 66X98 BV, with an air flow rate of 2,700 acfm at 275 degF, controlling the conveying of clinker from the existing elevator (K912) to the existing belt conveyor (K949). One (1) pulse jet baghouse (K949A), make ETA Engineering, model 44x39 BV, with an air flow rate of 1,500 acfm at 275 degF, controlling the conveying of clinker from the existing belt conveyor (K949) to the belt conveyor (K949-3). One (1) pulse jet baghouse (K949B), make ETA Engineering, model 44x39 BV, with an air flow rate of 1,500 acfm at 275 degF, controlling the conveying of clinker from the existing belt conveyor (K949-3) to the belt conveyor (K950).
36017-13-C	1/15/2014	Replacing South load spout (K1485) with new load spout with dedicated dust collection system. DM# 32712, revised application DM# 42149

Permit No.	Effective Date	Description
76-07-C(R1)	6/19/2014	One (1) Sand and Bottom Ash Storage Building with three (3) under pile feeders (50 tph) (K-351, K-352, K-353), Sand and Bottom Ash Belt Conveyor (150 tph)(K-354), Sand and Bottom Ash Storage Bin (K-356) with Sand and Bottom Ash Belt Feeder (85 tpy) (K-358), Fly Ash Air Slide (40 tph) (K-366) with Fly Ash Metering System (K-375), Fly Ash/Sand/Bottom Ash Conveyor (K-359), and Pug Screw (125 tph)(K-386). This permit is to increase the feed rate of the Sand and Bottom Ash Storage Bin and Sand and Bottom Ash Belt Feeder as well as to allow for the use of Bottom Ash in the equipment as indicated.
TV-13-1001-C	6/19/2014	Company request to increase TDF raw material usage limit from 6 ton/hr to 9 ton/hr. DM# 56236. Company request to burn RDF (Refuse Derived Fuel) at 10 tpy.
1-05-C(R1)	5/8/2015	One (1) Clinker Cooler (E-97) modification controlled by baghouse C-35 (K-924).
C-0060-1052-14-V	1/302015	Two (2) new Separators K-1008 in Unit 20 and K-1023 in Unit 21 to be controlled respectively by two (2) new replacement baghouses K-1014 and K-1030.
C-0060-1052-14-V(R1)	12/17/2015	Two (2) new Separators K-1008 in Unit 20 and K-1023 in Unit 21 to be controlled respectively by two (2) new replacement baghouses K-1014 and K-1030.
C-0060-1053-16-V	3/15/2016	One (1) airslide (U24: K-1468) to rail loading spout, make Vortex, model TBD, capacity 9,251 ft^3/hr, 278 tons/hr. This airslide replaces existing airslide K-1468; One (1) rail loading spout (U24: K-1485) to rail car or truck, make Vortex, model TBD, capacity 400 ft^3/hr, 720 tons/hr. This loading spout replaces existing rail loading spout K-1485; One (1) baghouse (U24: C-1487) controlling emissions from K-1468 and K-1485, make Vortex, model VFS-70-A-A-E77546. This baghouse replaces existing baghouse C-1487.
C-0060-1055-17-V	10/17/2017	Installation of Selective Non-Catalytic Reduction (SNCR) to control emissions from the Kiln (K-901) to comply with the Consent Decree, *United States District Court for the Eastern District of Tennessee at Knoxville*. The issuance of this construction permit does not invalidate any requirements contained in construction permit number TV-13-1001-C for the Kiln. The requirements in this permit are in addition to the requirements contained in construction permit number TV-13-1001-C.
C-0060-1054-17-V	11/02/2017	Activated Carbon Injection (ACI) system for control of mercury emissions by injection of dry Powdered Activated Carbon (PAC) and/or other similar adsorbent materials into the kiln exhaust system prior to control by the baghouse. ACI system includes tubular steel support frame, electric chain hoist with trolley, bulk bag lifting adapter, volumetric feeder, feeder hopper, pneumatic blower & educator, pressure switches, and system control panel. The ACI system used to control mercury emissions is designated as control device C-ACI. The PAC material handling equipment is designated as equipment K-PAC (emission point E-PAC).
C-0060-1052-14-V(R2)	6/1/2018	Two (2) new Separators K-1008 in Unit 20 and K-1023 in Unit 21 to be controlled respectively by two (2) new replacement baghouses K-1014 and K-1030.

Operational Flexibility Approvals

Document Number	Date Approved	Description of the Approved Request
6207	7/13/2009*	Mortar Mixing Mill System notification to switch bin used to feed cement into 1129 Mortar Mixing Mill from K-1114 "Mortar Bin" controlled by K-1113 to K-1105 "Lime Bin" controlled by K-1103
6208, 6209, 6210, 6211, 6212, 6213, 6214	2/3/2011**	U1 Barge Unloading and Transfer to begin unloading coal and pet coke using barge unloading and transfer system associated with limestone unloading using radial stacker K-142
56245, 56425, 57429, 57430, 58076	6/26/2013**	Combustion of Residual Fuel Oil in the Kiln and handling equipment for tire shreds
65937, 66032, 66082	7/17/2014**	Temporary operation of a replacement for our primary sand screener
67386, 67416	10/1/2014**	Met coke Operational Flexibility Notification
67736, 67769, 67798	11/3/2014**	Operational Flexibility Notification for Planned Modification to Emission Unit U-18 Baghouse K-924
67813, 68629, 87386	11/14/2014**	Draft line configuration modification in U-9 from screw 438, modification of ducting of baghouses K-448 and K-454
80924, 80990, 81320, 81455	1/25/2017**	Operational Flexibility for Airslides K-1460, K-1462, K-1463, and K-1465 – equipment replacement
84072, 84164	5/15/2017**	Operational Flexibility for raw material substitution for hydrated lime
84929, 84978, 84996, 84997, 85000	6/27/2017**	Operational Flexibility for Lime – sorbent injection system alternative flow pathways
85042, 85043	6/28/2017**	Operational Flexibility for U19 Crusher – alternative raw materials

* No specific approval notice on file
** Approval notice document listed

Abbreviations and Acronyms

AP-42	- AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
HCl	- Hydrogen chloride
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO_x	- Nitrogen oxides
PM	- Particulate Matter
PM_{10}	- Particulate Matter less than 10 microns
$PM_{2.5}$	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO_2	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

Title V of the Clean Air Act Amendments of 1990 (the Act) required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are: (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Louisville Metro Air Pollution Control District (LMAPCD or APCD) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations."

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit General Conditions define requirements that are generally applicable to all Title V companies under the jurisdiction of LMAPCD. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the General Conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The General Conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The owner or operator's Title V permit may include a current table of "insignificant activities."

Insignificant activities are defined in District Regulation 2.16 section 1.23, as of the date the permit was proposed for review by U.S. EPA, Region 4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.

General Conditions

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State, and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan. [Regulation 2.16, sections 4.1.3, 4.1.13.1, and 4.1.13.7]

2. **Compliance Certification** - The owner or operator shall certify, annually, or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification (Form 9400-O) directly to the EPA and to the District, as set forth in Regulation 2.16, section 4.3.5.4, at the following addresses:

   US EPA - Region IV
   Air Enforcement Branch
   Atlanta Federal Center
   61 Forsyth Street
   Atlanta, GA 30303-8960

   Air Pollution Control District
   Suite 303
   701 W. Ormsby Avenue
   Louisville, KY 40203-3137

   This certification must be postmarked by 15 April of the year following the year for which the certification is being submitted, or other such due date as required by another applicable regulation.

3. **Compliance Schedule** - The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:

   a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.

   b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, they shall,

upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

5. **Emergency Provision**

   a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations if the conditions in Regulation 2.16 are met. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

      i. An emergency occurred and that the owner or operator can identify the cause of the emergency;

      ii. The permitted facility was at the time being properly operated;

      iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and

      iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

   b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

   c. This condition is in addition to any emergency or upset provision contained in an applicable requirement. [Regulation 2.16, sections 4.7.1 through 4.7.4]

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08, section 12.3. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. [Regulation 2.08, section 12.2.4]

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **Enforceability Requirements** - Except for the conditions that are specifically designated as District-Only Enforceable Conditions, all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. [Regulation 2.16, sections 4.2.1 and 4.2.2]

9. **Enforcement Action Defense**

   a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the

permitted activity in order to maintain compliance with the conditions of this permit.

b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation.
[Regulation 2.16, sections 4.1.13.2 and 4.1.13.3]

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit.
[Regulation 2.16, section 4.1.13.6]

If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA at the address shown in General Condition 35.b. [Regulation 2.07, section 10.2]

12. **Insignificant Activities** - The owner or operator shall:

a. Notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. [Regulation 2.16, section 5]

b. Submit a current list of insignificant activities by April 15 of each year with the annual compliance certification, including an identification of the additions and removals of insignificant activities that occurred during the preceding year. [Regulation 2.16, section 4.3.5.3.6]

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:
[Regulation 2.16, section 4.3.2]

a. Enter the premises to inspect any emissions-related activity or records required in this permit.

b. Have access to and copy records required by this permit.

c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.

d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.

14. **Monitoring and Related Record Keeping and Reporting Requirement** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month. The owner or operator shall submit all required monitoring reports at least once every six months,

unless more frequent reporting is required by an applicable requirement. The reporting period shall be 1 January through 30 June and 1 July through 31 December of each calendar year. All reports shall be sent to the District at the address shown in paragraph 2 of these General Conditions and must be postmarked by the 60th day following the end of each reporting period, unless specified elsewhere in this permit. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All semi-annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

Reporting Period	Report Due Date
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, section 5. [Regulation 2.16, section 4.1.5]

16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.

17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, section 5.4.

18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.

20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16,

sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.

21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. [Regulation 2.16, section 4.1.16]

22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.

23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and Permit renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.

24. **Permit Termination and Revocation by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1 through 5.11.6. For purposes of section 5.11.1, substantial or unresolved noncompliance includes, but is not limited to:

    a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment;

    b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District;

    c. Knowingly making any false statement in any permit application;

    d. Noncompliance with Regulation 1.07, section 4.2; or

    e. Noncompliance with KRS Chapter 77.

25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.

26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.

27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.

28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, section 1; and 2.16, sections 5.1.1.2 and 5.5.4.

29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.

30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.

31. **Risk Management Plan (112(r))** - For each process subject to section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.

32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. [Regulation 2.16, section 4.1.12]

33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Upset Conditions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **Submittal of Reports, Data, Notifications, and Applications**

    a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.3, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.12 shall be submitted to:

    Air Pollution Control District
    Suite 303
    701 W. Ormsby Avenue
    Louisville, KY 40203-3137

    b. Documents that are specifically required to be submitted to EPA, as set forth in Regulation 2.16 sections 3.3 and 5.8.5 shall be mailed to EPA at:

    US EPA - Region IV
    APTMD - 12th floor
    Atlanta Federal Center
    61 Forsyth Street
    Atlanta, GA 30303-3104

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions

Regulation	Title
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

District Only Enforceable Regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
5.00	Definitions
5.01	General Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants

37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

    a. Any facility having any refrigeration equipment that normally contains fifty (50) pounds of refrigerant or more must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added, according to 40 CFR 82.166;

    b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;

    c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;

    d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

    e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

    f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;

    g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40 CFR 82 Subpart A, Production and Consumption Controls.
    [Regulation 2.16, section 4.1.5]

Emission Unit Plantwide

Plantwide Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

Plantwide Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **Opacity**

i. No owner or operator subject to this regulation shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is equal to or greater than 20% opacity. (Regulation 6.09, section 3.1)

ii. No owner or operator shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is equal to or greater than 20% opacity. (Regulation 7.08, section 3.1.1)

iii. No person shall cause or permit the discharge of fugitive emissions in excess of 20% opacity. (Regulation 1.14, section 2.3)

iv. No person shall cause or permit the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)

b. **TAC**

i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21)

ii. The owner or operator shall perform a new Environmental Acceptability (EA) Demonstration or de minimis determination when the following events occur and submit the EA Demonstration on the schedule noted in the reporting section:[1]

1) An application to construct or modify a process or process equipment is submitted to the District pursuant to Regulation 2.03, 2.04 or 2.05. [Regulation 5.21, section 4.22.1]

2) A modification of any physical modeling parameters such as fence lines or building heights that are not otherwise subject to the requirements in this permit that affects the demonstration of compliance. [Regulation 5.21, section 4.22.2]; or

[1] Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to perform a new Environmental Acceptability Demonstration.

3) A change occurs in the process or process equipment, including raw material or fuel type substitution [Regulation 5.21, section 4.22.3].

iii. When a new TAC is introduced or for any existing TAC which does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values as part of any aforementioned EA Demonstration. The form, located in Appendix L, may be used for determining BAC and *de minimis* values.
(Regulation 5.20, Sections 3 and 4)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a monthly visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

1) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

2) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **TAC**

i. The owner or operator shall maintain records that include either the (M)SDS from the supplier for each purchased material or beginning July 1, 2020, monthly lab analysis of the TAC content for each material including Cement, Masonry Cement, Clay, Clinker, Coal/Coke, Natural Gypsum, Synthetic Gypsum, Limestone, Mill Scale, Raw Meal, and Sand to determine the TAC concentrations of Arsenic, Cadmium, Chromium

III, Chromium VI, Nickel, Cobalt, Copper, Lead, Manganese, Beryllium, Mercury, and Selenium. [2]

ii. Starting July 1, 2020, the owner or operator shall, monthly, maintain records of TAC content (Arsenic, Cadmium, Chromium III, Chromium VI, Nickel, Cobalt, Copper, Lead, Manganese, Beryllium, Mercury, and Selenium) that shall be kept for each raw material and product at the facility including Cement, Masonry Cement, Clay, Clinker, Coal/Coke, Natural Gypsum, Synthetic Gypsum, Limestone, Mill Scale, Raw Meal, and Sand.

iii. Starting August 1, 2020, the owner or operator shall, monthly, using the records of TAC content (Arsenic, Cadmium, Chromium III, Chromium VI, Nickel, Cobalt, Copper, Lead, Manganese, Beryllium, Mercury, and Selenium) that was kept for each raw material and product at the facility including Cement, Masonry Cement, Clay, Clinker, Coal/Coke, Natural Gypsum, Synthetic Gypsum, Limestone, Mill Scale, Raw Meal, and Sand, during the preceding month start calculating the 12 month rolling average calculation according to the following criteria depending on the type of material:

1) For purchased materials the company shall monthly chose to do one of three options for each of the materials. The12 month rolling average shall be made with values that come from either (M)SDS, lab analysis of that material only, or lab analysis of raw meal. A record shall be made each month for which source of TAC content is used for each material.

2) For non-purchased raw materials before treatment in the kiln the 12 month rolling average shall consist of monthly values that may come from either lab analysis of the material itself or lab analysis of raw meal. A record shall be made each month for which source of TAC content is used for each material.

3) For materials produced at the facility (Clinker, Cement, and Masonary Cement) the 12 month rolling average shall consist of monthly values that come from lab analysis of the material itself.

iv. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to, (M)SDS, analysis of emissions, and/or modeling results.

[2] Total chrome may be analyzed instead of chromium III and chromium VI in which case the total chrome will be assumed to be 66% chromium III and 34% chromium VI unless the chrome is shown to meet the criteria of MACT Source Code 0304, 0305, or 0308 in which case the total chrome may be assumed to be 97% chromium III and 3% chromium VI per the EPA's National-scale Air Toxics Assessment document, "*An Overview of Methods for EPA's National-Scale Air Toxics Assessment*".

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **Opacity**

i. The owner or operator shall report the following information in the semi-annual compliance reports:

1) Any failure to perform opacity monitoring at the specified frequency

2) Emission unit ID number and emission point ID number

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) The number of surveys where visible emissions were observed

5) Description of any corrective action taken for each exceedance of an opacity standard.

b. **TAC**

i. The owner or operator shall report any failure to record the results or the source used to calculate the monthly 12 month rolling average TAC content for Cement, Masonry Cement, Clay, Clinker, Coal/Coke, Natural Gypsum, Synthetic Gypsum, Limestone, Mill Scale, Raw Meal, and Sand.

ii. The owner or operator shall submit new EA Demonstrations involving applications to construct or modify with the construction permit application. [Regulation 5.21, section 4.22.1]

iii. The owner or operator shall submit new EA Demonstrations involving modification of any physical modeling parameter, such as fence lines or building heights, that are not otherwise subject to the permit requirements for that facility that affects the demonstration of compliance with the operating permit renewal application. [Regulation 5.21, section 4.22.2]

iv. The owner or operator shall submit new EA Demonstrations involving a change in a process or process equipment, including raw material or fuel type substitution before making the change.
[Regulation 5.21, section 4.22.3]

1) Prior approval by the District is not required if the change does not result in emissions that exceed an EA goal, does not cause emissions of a TAC to no longer be de minimis, and a permit modification is not required. In this case, the new EA Demonstration shall be submitted within 6 months of the change.

S4. **Testing** (Regulation 2.16, section 4.3.1)

a. **General Requirements**

(Applies to all testing unless superseded by requirements listed in the individual emission Unit)

i. Devices of adequately similar design may be represented by a common performance test contingent upon review and approval of the testing protocol by the District.

ii. For control devices not hard piped to the process equipment, the owner or operator shall perform a capture efficiency test using EPA guidelines. In lieu of performing a capture efficiency test, the owner or operator may submit a reasonable estimate of capture efficiency with thorough justification subject to approval by the District in the written test plan (stack test protocol).

iii. Before conducting a performance test, the owner or operator shall submit a written test plan (protocol). The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 calendar days prior to the actual date of the performance test. Appendix K - Protocol Checklist for a Performance Test to this permit provides information that must be submitted in the protocol.

iv. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples, to demonstrate compliance with the source's emission regulation. The audit samples shall be available for verification by the District during the on-site testing.

v. The owner or operator shall provide the District at least 10 working days prior notice of any performance test to afford the District the opportunity to have an observer present.

vi. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 calendar days following the actual date of completion of the performance test.

Emission Unit U1: Barge Unloading and Transfer

Either limestone or coal and coke are unloaded by clam unloader or similar method.

U1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart OOO	Standards of Performance for Nonmettalic Mineral Processing Plants	60.670, 60.671, 60.672, 60.673, 60.674, 60.675, and 60.676
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U1 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation[3]	Control ID	Release ID
K-Barge	E-Barge	Barge to Clam Shell Unloader (Capacity: 620 TPH)	1.14, STAR*	NA	F-Barge
K-ClamShell	E-Clam Shell	Clam Shell Unloader to Hopper K-100 (Capacity: 620 TPH)	1.14, STAR*	NA	F-Clam Shell
K-100	E-100	Hopper K-100 to Belt K-101 (Capacity: 620 TPH)	7.08, STAR*	NA	F-100
K-101	E-101	Belt K-101 to Belt K-102 (Make: Barber Greene; Capacity: 620 TPH; Installed: 1961)	1.14, STAR*	NA	F-101
K-102	E-102	Belt K-102 to Belt K-103 (Make: Barber Greene; Model: 72; Capacity: 620 TPH; Installed: 1961)	1.14, STAR*	NA	F-102
K-103	E-103	Belt K-103 to Belt K-104 (Make: Barber Greene; Model: Unknown; Capacity: 620 TPH; Installed: 1961)	1.14, STAR*	NA	F-103
K-104	E-104	Belt K-104 to Belt K-137 (Make: Barber Greene; Model: Unknown; Capacity: 620 TPH; Installed: 1971)	2.05, 6.09, STAR*	C-133	S-133
K-137	E-137	Belt K-137 to Diverter K-137-1 (Make: Barber Greene; Model: Unknown; Capacity: 620 TPH; Installed: 1971)	1.14, STAR*	NA	F-137
K-137-1	E-137-1a	Diverter K-137-1 to Stacker K-142 (Capacity: 620 TPH; Installed: 1998)	2.05, 7.02, 7.08, STAR*, 40CFR60-OOO	C-145	S-145
	E-137-1b	Diverter K-137-1 to Belt K-140 (Capacity: 620 TPH; Installed: 1998)		C-136	S-136
K-142	E-142	Belt Stacker K-142 to Limestone Pile (outside) to U2/3 Feeder Belt K-143 (Capacity: 350 TPH)	1.14, 7.02, 7.08, STAR*, 40CFR60-OOO	NA	F-142
K-140	E-140	Belt K-140 to Indoor Pile (Make: Rexnard; Capacity: 620 TPH; Installed: 1973) (total enclosure no emissions)	1.14, STAR*	NA	NA

[3] 40 CFR 60 Subpart OOO applies to equipment listed in 40 CFR 60.670(a)(1) constructed or modified after August 31, 1983 as referenced in 40 CFR 60.670(e).

Equipment ID	Emission Point ID	Description	Applicable Regulation[3]	Control ID	Release ID
K-inlspile	E-In LS Pile	Indoor Pile to Miag Feeder K-144	1.14, 7.08, STAR*	NA	F-In LS Pile
K-144	E-144	Miag Feeder K-144 to Belt K-146		NA	F-144
K-146	E-146	Belt K-146 to Belt K-148 (Capacity: 350 TPH)	2.05, 7.08, STAR*	C-134	S-134
K-148	E-148	Belt K-148 to Belt K-167 (total enclosure no emissions)	7.08, STAR*	NA	NA

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U1 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-133	Pulse jet baghouses (Make: IAC; Model: 72 TB; Capacity: 2,000 acfm each)	VEs	S-133
C-145			S-145
C-136			S-136
C-134			S-134

U1 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **Opacity**

i. For K-Barge, K-ClamShell, K-100, K-101, K-102, K-103, K-104, K-137, K-140, K-inlspile, K-144, K-146, and K-148 see Emission Unit Plantwide.[4]

ii. For K-142 see Emission Unit Plantwide for Regulation 1.14 requirements.

iii. For K-142 the owner or operator shall not allow or cause the opacity from this emission unit to exceed 10%. (40 CFR §60.672 (b))

iv. For K-137-1 at the C-145 baghouse stack S-145 and C-136 baghouse stack S-136 the owner or operator shall not allow the discharge of visible emissions to exceed 7%; (40 CFR §60.672 (a))

b. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U1" based on actual operating hours in a calendar day.

Table 1 Hourly PM Standards U1

Equipment	Standard (lb/hr)	Reg. Citation
K-100[5,6]	48.42	7.08, section 3.1.2
K-104[5, 6]	71.56	6.09, section 3.2
K-137-1[5, 6]	48.43	7.08, section 3.1.2
K-146[5, 6]	48.43	7.08, section 3.1.2
K-104[5, 7]	1.4 combined	2.05 and 72-98-C
K-137-1[5,7]		
K-146[5,7]		
K-142[5,6]	44.19	7.08, section 3.1.2
K-inlspile[5,6]	48.42	7.08, section 3.1.2

For K-142 and K-137-1 since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart OOO, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[5] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[6] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[7] This limit is for PSD avoidance.

Equipment	Standard (lb/hr)	Reg. Citation
K-144[5,6]	44.19	7.08, section 3.1.2
K-148[5,6]	46.78	7.08, section 3.1.2

ii. For K-104, K-137-1, and K-146 combined the owner or operator shall not allow PM emissions to exceed 5.5 tons per consecutive 12 month period. (Regulation 2.05 and 72-98-C, Effective 4/1/1998)[7,8]

c. **TAC**

i. See Emission Unit Plantwide.[9]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. For K-Barge, K-ClamShell, K-100, K-101, K-102, K-103, K-104, K-137, K-137-1, K-142, K-inlspile, K-144, and K-146 see Emission Unit Plantwide.[10]

ii. For C-133, C-145, C-136, and C-134 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

[8] These emission points cannot exceed the tons per consecutive 12 month PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[9] The equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

[10] K-140 and K-148 have a total enclosure and no monitoring, recordkeeping or reporting is required.

b. **PM**

i. For C-133, C-145, C-136, and C-134 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

c. **TAC**

i. See Emission Unit Plantwide.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **Opacity**

i. For K-Barge, K-ClamShell, K-100, K-101, K-102, K-103, K-104, K-137, K-137-1, K-142, K-inlspile, K-144, and K-146 see Emission Unit Plantwide.

ii. For C-133, C-145, C-136, and C-134:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

b. **PM**

i. For C-133, C-145, C-136, and C-134 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

c. **TAC**

i. See Emission Unit Plantwide.

Emission Unit U2/U3: Limestone Handling and Crushing

Limestone is crushed, screened, and conveyed to storage.

U2/U3 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart OOO	Standards of Performance for Nonmettalic Mineral Processing Plants	60.670, 60.671, 60.672, 60.673, 60.674, 60.675, and 60.676
1.14	Control of Fugitive Particulate Emissions	1, 2, 2.3 and 2.4
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U2/U3 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation[11]	Control ID	Release ID
K-143	E-143	Feeder Belt K-143 to Belt K-149 (Capacity: 400 TPH; Installed: 1961)	1.14, STAR*	NA	F-143
K-167	E-167	Belt K-167 to Belt K-149 (Capacity: 500 TPH)	1.14, 7.02, 7.08, STAR*, 40CFR60-OOO	NA	F-167
K-149	E-149	Belt K-149 to Box K-150 (Capacity: 620 TPH; Installed: 1974)	6.09, STAR*	C-162	S-162
K-150	E-150a	Box K-150 to Screen K-152 (Capacity: 500 TPH)	1.14, 7.02, 7.08, STAR*, 40 CFR 60-OOO	NA	F-150a
	E-150b	Box K-150 to Screen K-151 (Capacity: 500 TPH)		NA	F-150b
K-151	E-151	Screen K-151 to Belts K-165 & 159 or Stone Box K-153 (Make: Link-Belt; Model: VP-138-E; Capacity: 500 TPH; Installed: 1961)	6.09, STAR*	C-162	S-162
K-152	E-152	Screen K-152 to Belts K-165 & 159 or Stone Box K-153 (Make: Link-Belt; Model: VP-138-E; Capacity: 500 TPH; Installed: 1961)	6.09, STAR*	C-162	S-162
K-159	E-159	Belt K-159 to Spillage Screw K159-1 (Make: Bakler-Bohnert; Model: 36”; Capacity: 600 TPH; Installed: 1981)	7.08, STAR*	C-162	S-162
K-159-1	E-159-1	Spillage Screw K159-1 to Belt K-160 (Capacity: 500 TPH)	7.02, 7.08, STAR*, 40CFR60-OOO	C-162	S-162
K-160	E-160	Belt K-160 to Crushed Limestone Pile to U-4 (K309-312)/U-6 (K-517) Feeders (Capacity: 500 TPH)	1.14, 7.02, 7.08, STAR*, 40CFR60-OOO	NA	F-160
K-LS-Loader	E-LS OVERS	Limestone Loader (Capacity: 500 TPH)	1.14, 7.08, STAR*	NA	F-LS-OVERS

[11] 40 CFR 60 Subpart OOO applies to equipment listed in 40 CFR 60.670(a)(1) constructed or modified after August 31, 1983 as referenced in 40 CFR 60.670(e).

Equipment ID	Emission Point ID	Description	Applicable Regulation[11]	Control ID	Release ID
K-153	E-153	Stone Box K-153 to Secondary Crusher K-156 (Capacity: 500)	7.02, 7.08, STAR*, 40CFR60-OOO	C-162	S-162
K-156	E-156	Limestone Secondary Crusher K-156 to (Make: Hazemag; Model: APSM 1320/S; Capacity: 500 TPH; Installed: 2003) Belt K-157	7.02, 7.08, STAR*, 40CFR60-OOO	C-162	S-162
K-157	E-157	Belt K-157 to Belt K-149 (Make: Unknown; Model: 30”; Capacity: 600 TPH; Installed: 1961)	6.09, STAR*	C-158	S-158
K-165	E-165	Belt K-165 to Limestone Overs Pile to Outdoor Limestone Pile U-1 (Capacity: 500 TPH)	1.14, 7.02, 7.08, STAR*, 40CFR60-OOO	NA	F-165

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U2/U3 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-158	Pulse jet baghouse (Make: Norblo; Capacity: 2,000 DSCFM)	VEs	S-158
C-162	Pulse jet baghouse (Make: Norblo; Model: 648A; Capacity: 23,000 DSCFM)	VEs	S-162

U2/U3 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **Opacity**

i. For K-LS Loader, K-143, K-167, K-149, K-151, K-152, K-159, and K-153 see Emission Unit Plantwide. [12]

ii. For K-167, K-150, K-160, and K-165 see Emission Unit Plantwide for Regulation 1.14 requirements.

iii. For K-150, K-160, K-165, and K-167 the owner or operator shall not allow or cause the opacity from this emission unit to exceed 10%; (40 CFR §60.672 (b))

iv. For K-153, K-156 and K-159-1 at the C-162 baghouse stack S-162 the owner or operator shall not allow the discharge of visible emissions to exceed 7%; (40 CFR §60.672 (a))

b. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U2/U3" based on actual operating hours in a calendar day

Table 2 Hourly PM Standards U2/U3

Equipment	Standard (lb/hr)	Reg. Citation
K-167[13,14]	46.78	7.08, section 3.1.2
K-149[13,14]	71.56	6.09, section 3.2
K-150[13,14]	46.78	7.08, section 3.1.2
K-151[13,14]	68.96	6.09, section 3.2
K-152[13,14]	68.96	6.09, section 3.2
K-159[13,14]	48.17	7.08, section 3.1.2
K-160[13,14]	46.78	7.08, section 3.1.2
K-LS-Loader[13,14]	46.78	7.08, section 3.1.2

[12] For K-150, K-160, K-165, K-167, K-156, and K-159-1 since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart OOO, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02 section 5.

[13] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[14] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-157[13,14]	71.56	6.09, section 3.2
K-165[13,14]	46.78	7.08, section 3.1.2

ii. For K-153, K-156, and K-159-1 at the C-162 baghouse stack S-162 the owner or operator shall not allow PM emissions to exceed 0.05 g/dscm (0.022 gr/dscf). (40 CFR §60.672(a)(1))[15][16]

c. **TAC**

i. See Emission Unit Plantwide.[17]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. For K-LS Loader, K-143, K-167, K-149, K-150, K-151, K-152, K-159, K-159-1, K-160, K-153, K-156, K-157, and K-165 see Emission Unit Plantwide.

ii. For C-158 and C-162 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

[15] PM testing of baghouse K-162 was performed on May 29-30, 2003, and retested on June 26, 2007, which demonstrated compliance with the standard.

[16] Since the PM emission limit in the NSPS (40 CFR 60 Subpart OOO) is more stringent than the lb/hr PM emission limit in Regulation 7.08, the emission limit from Regulation does not apply to these emission points, in accordance with Regulation 7.02, section 5.

[17] The equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

b. **PM**

i. For C-158 and C-162 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

c. **TAC**

i. See Emission Unit Plantwide.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **Opacity**

i. For K-LS Loader, K-143, K-167, K-149, K-150, K-151, K-152, K-159, K-159-1, K-160, K-153, K-156, K-157, and K-165 see Emission Unit Plantwide.

ii. For C-158 and C-162:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

b. **PM**

i. For C-158 and C-162 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

c. **TAC**

i. See Emission Unit Plantwide.

Emission Unit U4: Limestone Storage and Reclaim

Crushed limestone is stored in covered and outside storage piles. Weigh feeders and conveyors transport crushed limestone to raw material handling systems.

U4 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U4 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-309-312	E-309	Weigh Feeder E-309 to Belt E-313	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-309
K-313	E-313	Belt K-313 to Limestone Silo K-314 (Make: Rexnord; Model: 30”; Capacity: 201.6 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-332	S-332
K-314	E-314	Limestone Silo K-314 to Feeder K-320 (Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-332	S-332
K-320	E-320	Feeder K-320 to Belt K-401	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-332	S-332

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U4 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-332	Pulse jet baghouse (Make: Norblo; Model: 160AS Capacity: 2,500 DSCFM)	VEs	S-332

U4 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP (40 CFR 63 Subpart LLL (MACT))**

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 60 Subpart F see Appendix B.[18]

ii. For K-309-312 see Emission Unit Plantwide for Regulation 1.14 requirements.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U4" based on actual operating hours in a calendar day.

Table 3 Hourly PM Standards U4

Equipment	Standard (lb/hr)	Reg. Citation
K-309-312[19,20]	41.17	7.08, section 3.1.2
K-313[19,20]	40.45	7.08, section 3.1.2
K-314[19,20]	46.78	7.08, section 3.1.2
K-320[19,20]	46.78	7.08, section 3.1.2

d. **TAC**

i. See Emission Unit Plantwide.[21]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

[18] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[19] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[20] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[21] The equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For C-332 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-332 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-309-312, K-313, K-314, and K-320 sources subject to 40 CFR 60

Subpart F other than kilns; clinker coolers; new and reconstructed raw material dryers see Emission Unit Plantwide and Appendix B.

ii. For C-332:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-332 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

Emission Unit U5: Raw Material Handling

Raw materials are conveyed, weighted and distributed to the raw material silos. Clay is also dried by a clay dryer in this process.

U5 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
40 CFR 64	Compliance Assurance Monitoring	64.1 through 64.10
1.14	Control of Fugitive Particulate Emissions	1, 2, 2.3 and 2.4
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.10	Standard of Performance for Existing Process Gas Streams	Sections: 1, 2, 4, 6.2
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U5 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-Clay Loader	E-Clay Loader	Clay Loader	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Clay Loader
K-201	E-201	Clay Hopper K-201 to Feeder K-202 (Make: Service Fabrication; Capacity: 100 TPH; Installed: 1994)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-201
K-202	E-202	Feeder K-202 to Belt K-209 (Make: Stephen-Adamson; Model: AD; Capacity: 100 TPH; Installed: 1961)	1.14, 5.02, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-202
K-210	E-210a	Clay Handling Screen K-210 to Belt K-209 (Make: FMC, Model: 62; Capacity: 201.6 TPH; Installed: 1961)	5.02, 7.02, 6.09, STAR*, 40CFR60-F, 40CFR63-LLL	C-210-1	S-210-1
	E-210b	Screen K-210 to Screw K-208 (Make: FMC; Model: 62; Capacity: 201.6 TPY; Installed: 1961)		C-239	S-239
K-209	E-209	Belt K-209 to Crusher K-203 (Capacity: 100 TPH)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-209
K-203	E-203	Crusher K-203 to Belt K-204 (Make: Williams; Model: #230 Type S; Capacity: 100 TPH)	7.02, 7.08, STAR*, 40CFR60-F	C-239	S-239
K-204	E-204	Belt K-204 to Belt K-205 (Make: Merrick; Capacity: 100 TPH; Installed: 1961)	1.14, 5.02, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-204
	E-204b	Belt K-204 to Belt K-250		NA	F-204
K-205	E-205	Belt K-205 to Dryer K-206 (Make: Stephen-Adamson; Model: 24”; Capacity: 100 TPH; Installed: 1961)	1.14, 5.02, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-205
K-206	E-ClayDry	Dryer K-206 to Elevator K-207 (Make: Combustion Equip.; Model: 65MKB; Capacity: 65 TPH; Installed: 1971)	5.02, 6.09, 6.10, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-231	S-231
	E-206			C-216 / C-231	S-231

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-207	E-207	Elevator K-207 to Screen K-210 (Make: Rexnord; Model: 2118-01; Capacity: 100 TPH; Installed: 1975)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-239	S-239
K-208	E-208	Screw K-208 to Elevator K-213	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-239	S-239
K-213	E-213	Elevator K-213 to Screw K-215 (Make: Rex Chainbelt; Model: 2116-02; Capacity: 100 TPH; Installed: 1961)	1.14, 5.02, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-213
K-250	E-250	Belt K-250 to Belt K-520	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-401-4	S-401-4
K-315	E-215a	Raw material Silo 2 K-315 unloading from Screw K-215	5.02, 7.02, 7.08 STAR*, 40CFR60-F, 40CFR63-LLL	C-231	S-231
	E-315			C-402	S-402
K-317	E-215b	Raw material Silo 3 K-317 unloading from Screw K-215	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-231	S-231
	E-317			C-402	S-402
K-316	E-217a	Raw material Silo 3 (limestone) K-316 unloading from Screw K-217	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-231	S-231
	E-316			C-402	S-402
K-318	E-217b	Raw material Silo 4 (limestone) K-318 unloading from Screw K-217	5.02, 7.02, 7.08 STAR*, 40CFR60-F, 40CFR63-LLL	C-231	S-231
	E-318			C-402	S-402
K-354	E-351	Belt K-354 from Sand Building Feeders K-351 through K-353 (installed 2007)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-355	S-355
K-356	E-356	Sand and Bottom Ash bin K-356 to Belt Feeder (85 tph)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-356

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-359	E-386	Fly Ash/Sand/Bottom Ash Conveyor (K-359)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-357	S-357
K-375	E-366	Fly Ash Metering System (K-375)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-357	S-357
K-366	E-360	Fly Ash Air Slide (40 tph) (K-366) (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-360	E-Fly Ash Load	Flyash Silo K-360	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL; 40CFR64	C-392	S-392
K-319	E-319	Hydrated Lime Silo K-319 with Rotary Feeder K-329 (Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL; 40CFR64	C-335	S-335
K-215	E-215	Screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*,40CFR60-F, 40CFR63-LLL	NA	NA
K-217	E-217	Screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-351-353	E-Sand	Sand Building Feeders K-351 through K-353 to Belt K-354 (Capacity: 50 TPH (each); Installed: 2007) (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-358-1	E-358-1	Feeder (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-386	E-375	Pug Screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-329	E-329	Rotary Feeder and hopper (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-324	E-324	Drag Feeder 3 K-324 (Capacity: 760 ton; Installed: 1961)	5.02, 6.09, 7.02 STAR*, 40CFR60-F, 40CFR63-LLL	C-402	S-402
K-322	E-322	Drag Feeder 2 K-322 (Capacity: 760 ton; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-402	S-402
K-321	E-321	Drag Feeder 1 K-321 (Capacity: 760 ton; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-402	S-402
K-323	E-323	Weigh Feeder K-323	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-401-2	S-401-2
K-325	E-325	Weigh Feeder K-325	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-402	S-402
K-327	E-327	Silo 4 Weigh Feeder K-327	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-401-2	S-401-2
K-401	E-401	Belt K-401 to Belt K-520 (Capacity: 201.6 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-401-4	S-401-4

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U5 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-210-1	Cartridge dust collector capturing emissions from K-210 screen to the K-209 belt (Make: Wheelabrator; Model: 32 WCC MOD36PULSE; Capacity: 400 DSCFM)	VEs	S-210-1
C-239	Dust collector capturing emissions from elevator (K-213), screw (K-208), crusher (K-203), and the transfer of material from the (K-207) elevator to the (K-210) screen (Make: Norblo; Model: 324-A; Capacity: 7,000 DSCFM)	VEs	S-239
C-401-2	Dust collector capturing emissions from weigh feeder (K-227) and belt (K-401) (Make: WFI; Capacity: 2,500 DSCFM)	VEs	S-401-2
C-401-4	Dust collector capturing emissions from belt (K-401) to belt (K-520) (Make: WFI; Capacity: 2,500 DSCFM)	VEs	S-401-4
C-402	Dust collector capturing emissions from various feeders in the raw material handling process (Make: WFI; Capacity: 4,000 DSCFM)	VEs	S-402
C-216	Cyclone utilized to separate fines form the clay dryer. Smaller fines, not returned to the process are subsequently captured by baghouse C-231 and exhausted through the clay dryer stack. (Make: Buell; Model: 6 series 43A)	VEs	S-231
C-231	Dust collector capturing emission from various screws and the clay dryer and associated cyclone (Make: Fuller; Model: 96-14-14000; Capacity: 37,760 DSCFM)	VEs	S-231
C-335	Dust collector capturing emissions from trucks transferring lime to the hydrated lime silo (K-319) (Make: Fuller; Model: 24; Capacity: 18,000 DSCFM)	VEs	S-335
C-355	Dust collector capturing emissions from feeders (K-351 through K-353) (Capacity: 1,500 DSCFM)	VEs	S-355
C-392	Dust collector capturing emissions from trucks unloading into fly ash silo (K-360) (Capacity: 6,305 DSCFM)	VEs	S-392
C-357	Dust collector capturing emissions from the fly ash meter and pug screw (Capacity: 5,000 DSCFM)	VEs	S-357

U5 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-Clay Loader, K-201, K-202, K-210, K-209, K-204, K-205, K-206, K-207, K-208, K-213, K-250, K-315, K-317, K-316, K-318, K-354, K-356, K-359, K-375, K-366, K-360, K-319, K-215, K-217, K-351-353, K-358-1, K-386, K-329, K-324, K-322, K-321, K-323, K-325, K-327, and K-401 sources subject to 40 CFR 63 Subpart LLL see Appendix B. [22]

ii. For Raw Material Dryer K-206 see Appendix A.

b. **Opacity**

i. For K-203, K-208, K-250, K-315, K-317, K-316, K-318, K-354, K-359, K-375, K-366, K-360, K-215, K-217, K-351-353, K-358-1, K-386, K-329, and K-401 sources subject to 40 CFR 60 Subpart F see Appendix B.[23]

ii. For K-Clay Loader, K-201, K-202, K-209, K-204, K-205, K-213, and K-356 see Emission Unit Plantwide for Regulation 1.14 requirements and Appendix B for 40 CFR 60 Subpart F requirements.

iii. For K-206, K-207, K-210, K-319, K-324, K-322, K-321, K-323, K-325, and K-327 see Emission Unit Plantwide for Regulation 6.09 requirements and Appendix B for 40 CFR 60 Subpart F requirements.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U5" based on actual operating hours in a calendar day.

Table 4 Hourly PM Standards U5

Equipment	Standard (lb/hr)	Reg. Citation
K-Clay Loader[24,25]	36.16	7.08, section 3.1.2
K-201[24,25]	36.16	7.08, section 3.1.2
K-210[24,25]	58.59	6.09, section 3.2
K-209[24,25]	36.16	7.08, section 3.1.2

[22] K-203 Crusher is not covered by 40 CFR 63 Subpart LLL per section 63.1340(c).

[23] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[24] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[25] Except for K-360 these emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-203[24,25]	36.16	7.08, section 3.1.2
K-206[24,25]	47.05	6.09, section 3.2
K-207[24,25]	51.28	6.09, section 3.22
K-208[24,25]	36.16	7.08, section 3.1.2
K-250[24,25]	36.17	7.08, section 3.1.2
K-315[24,25]	36.17	7.08, section 3.1.2
K-317[24,25]	36.17	7.08, section 3.1.2
K-316[24,25]	36.17	7.08, section 3.1.2
K-318[24,25]	36.17	7.08, section 3.1.2
K-354[24,25]	38.58	7.08, section 3.1.2
K-356[24,25]	35.24	7.08, section 3.1.2
K-359[24,25]	37.48	7.08, section 3.1.2
K-375[24,25]	31.23	7.08, section 3.1.2
K-366[24,25]	31.23	7.08, section 3.1.2
K-360[25,26]	36.17	7.08, section 3.1.2
K-319[25,26]	51.28	6.09, section 3.2
K-215[24,25]	36.16	7.08, section 3.1.2
K-217[24,25]	36.16	7.08, section 3.1.2
K-351-353[24,25]	32.36	7.08, section 3.1.2
K-358-1[24,25]	35.23	7.08, section 3.1.2
K-386[24,25]	35.23	7.08, section 3.1.2
K-329[24,25]	36.16	7.08, section 3.1.2
K-324[24,25]	74.09	6.09, section 3.2
K-322[24,25]	74.09	6.09, section 3.2
K-321[24,25]	74.09	6.09, section 3.2
K-323[24,25]	51.28	6.09, section 3.2

[26] The lb/hr limit cannot be exceeded controlled; therefore, bypass monitoring and reporting is required to demonstrate compliance.

Equipment	Standard (lb/hr)	Reg. Citation
K-325[24,25]	51.28	6.09, section 3.2
K-327[24,25]	51.28	6.09, section 3.2
K-401[24,25]	40.45	7.08, section 3.1.2

ii. For K-360 the owner or operator shall not allow the PM emissions to exceed 25 tons per 12 consecutive months each. (Regulation 2.05)[27,28]

iii. For K-360 the owner or operator shall not allow the PM_{10} emissions to exceed 15 tons per 12 consecutive months each. (Regulation 2.05)[27, 28]

d. **SO_2**

i. The owner or operator shall not allow or cause the emissions of SO_2 from Dryer K-206 to exceed 2000 ppm by volume at 0% oxygen. (Regulation 6.10, Section 4)[29]

e. **TAC**

i. See Emission Unit Plantwide.[30]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U5". (Regulation 5.21, section 4.2 and section 4.3)

Table 5 Modeled TAC Emissions U5

Equipment ID	Stack or Release ID	As	Cr6
		lb/12 consecutive month period	
K-323 and K-327 combined	S-401-2	1.09E-02	3.63E-03
K-401 (E-250 and E-401) combined	S-401-4	1.09E-02	3.63E-03
K-315 (E-315), K-316 (E-316), K-317 (E-317), K-318 (E-318), K-321, K-322, K-323, K-324, and K-325,combined	S-402	3.49E-02	1.17E-02
K-315 (E-215a), K-316 (E-215b), K-317 (E-217a), K-318 (E-217b), and K-206 combined	S-231	4.71E-02	1.55E-02
K-210 (E-210b), K-203, K-207,	S-239	1.75E-02	5.76E-03

[27] This emission point cannot exceed the tons per consecutive 12 month PM limit controlled; therefore, there is monitoring or recordkeeping for this standard.

[28] This limit is for PSD avoidance.

[29] The standard cannot be exceeded uncontrolled since the heater uses only Natural Gas per the company application submitted 11/17/15; therefore, there is no monitoring, record keeping, or reporting required for this standard.

[30] Other than limits listed specified in this unit for the equipment listed, the rest of the equipment cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Equipment ID	Stack or Release ID	As	Cr6
		lb/12 consecutive month period	
and K-208 combined			
K-319	S-335	2.25E-02	5.40E-03
K-354	S-355	3.02E-03	1.88E-03
K-359 and K-375 combined	S-357	1.91E-02	2.45E-02
K-201	F-201	6.60E-05	2.17E-05
K-202	F-202	6.60E-05	2.17E-05
K-210 (E-210a)	S-210-1	1.75E-03	5.76E-04
K-209, K-204, and K-213 combined	F-209, F-204, and F-213 combined	4.59E-04	1.51E-04

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U5". (Regulation 5.21, section 4.2 and section 4.3)

Table 6 *De Minimis* TAC Standards U5

Equipment ID	Ni	Co	Mn	Cd	Cu	Be
K-203			*			
K-206	*	*	*	*	*	*
K-210	*	*	*			
K-323		*				
K-325		*				
K-327	*	*	*	*	*	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-203, K-206, K-210, K-323, K-325, and K-327 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-Clay Loader, K-201, K-202, K-210, K-209, K-204, K-205, K-206, K-207, K-208, K-213, K-250, K-315, K-317, K-316, K-318, K-354, K-356, K-359, K-375, K-366, K-360, K-319, K-215, K-217, K-351-353, K-358-1, K-386, K-329, K-324, K-322, K-321, K-323, K-325, K-327, and K-401 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[31]

ii. For Raw Material Dryer K-206 see Appendix A.

b. **Opacity**

i. For K-Clay Loader, K-201, K-202, K-210, K-209, K-203, K-204, K-205, K-206, K-207, K-208, K-213, K-250, K-315, K-317, K-316, K-318, K-354, K-356, K-359, K-375, K-366, K-360, K-319, K-215, K-217, K-351-353, K-358-1, K-386, K-329, K-324, K-322, K-321, K-323, K-325, K-327, and K-401 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[31]

ii. For C-210-1, C-239, C-401-2, C-401-4, C-402, C-216, C-231, C-335, C-355, C-392, and C-357 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-210-1, C-239, C-401-2, C-401-4, C-402, C-216, C-231, C-335, C-355, C-392, and C-357 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

ii. If there is any time that a control device for K-360 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

[31] K-215, K-217, K-351-353, K-358-1, K-386, K-329, and K-366 have a total enclosure and no monitoring, recordkeeping or reporting is required.

3) Identification of the control device and process equipment;

4) Emissions of PM and PM_{10} during the bypass event in lb/hr;

5) The 12 consecutive month total emissions of PM, and PM_{10} for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iii. For Compliance Assurance Monitoring of baghouses C-335 and C-392 controlling silos K-319 and K-360 respectively the owner or operator shall conduct a daily visible emissions survey, during silo loading, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.[32]

1) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

2) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given calendar day, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

d. **SO_2**

i. There are no monitoring or record keeping requirements for this pollutant.

e. **TAC**

i. See Emission Unit Plantwide.

[32] Kosmos submitted a Compliance Assurance Monitoring Plan for Silos K-319 and K-360 on 4/2/2018 which has been modified by the District.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U5". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-203, K-206, K-210, K-323, K-325, or K-327 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U5" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U5" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-206, K-210, K-323, K-325, or K-327.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-Clay Loader, K-201, K-202, K-210, K-209, K-204, K-205, K-206, K-207, K-208, K-213, K-250, K-315, K-317, K-316, K-318, K-354, K-356, K-359, K-375, K-366, K-360, K-319, K-215, K-217, K-351-353, K-358-1, K-386, K-329, K-324, K-322, K-321, K-323, K-325, K-327, and K-401 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[31]

ii. For Raw Material Dryer K-206 see Appendix A.

b. **Opacity**

i. For K-Clay Loader, K-201, K-202, K-210, K-209, K-203, K-204, K-205, K-206, K-207, K-208, K-213, K-250, K-315, K-317, K-316, K-318, K-

354, K-356, K-359, K-375, K-366, K-360, K-319, K-215, K-217, K-351-353, K-358-1, K-386, K-329, K-324, K-322, K-321, K-323, K-325, K-327, and K-401 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[31]

ii. For C-210-1, C-239, C-401-2, C-401-4, C-402, C-216, C-231, C-335, C-355, C-392, and C-357:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-210-1, C-239, C-401-2, C-401-4, C-402, C-216, C-231, C-335, C-355, C-392, and C-357 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

ii. The owner or operator shall report the following information regarding bypass activity for K-360 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated PM, and PM_{10}, emissions in lb/bypass event and the 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance.

iii. For Compliance Assurance Monitoring of baghouses C-335 and C-392 controlling silos K-319 and K-360 respectively the owner or operator shall report the following information in the semi-annual compliance reports:

1) Any failure to perform opacity monitoring at the specified frequency;

2) Emission unit ID number and emission point ID number;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none);

4) The number of surveys where visible emissions were observed; and

5) Description of any corrective action taken for each exceedance of an opacity standard.

d. **SO_2**

i. There are no reporting requirements for this pollutant.

e. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U5":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-203, K-206, K-210, K-323, K-325, or K-327 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and the 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U5"

Emission Unit U6: Raw Material Transfer System

The raw materials are conveyed from their respective storage and handling equipment by belt conveyors through either a diverter gate or by another belt to their respective storage bins for further processing in the raw mills and kiln.

U6 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U6 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-519	E-519	Fly Ash Transfer Belt K-519 to Diverter Gate K-405 (Make: Rexnord; Model: 36”; Capacity: 300 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-510	S-510
K-520-1	E-520a	Diverter Gate K-520-1 to Belt K-519 (Make: Rexnord; Model: 36”; Capacity: 500 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-522	S-522
	E-520b	Diverter Gate K-520-1 to Belt K-521 (Installed: 1987)		C-522	S-522
K-520	E-520	Belt K-520	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-511	S-511
K-Raw Loader	E-Raw Loader	Loader to Hopper K-516	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Raw Loader
K-516	E-516	Hopper K-516 to Feeder K-517 (Capacity: 500 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-522	S-522
K-517	E-517	Feeder K-517 to Elevator K-518 (Make: Syntron; Model: MF-200-B; Capacity: 500 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-522	S-522
K-518	E-518	Elevator K-518 to Belt K-521 (Make: Rexnord; Model: 1600; Capacity: 500 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-522	S-522

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U6 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-510	Pulse jet collector used to control particulates form Belt K-519 (Make: IAC; Model: 72 TB; Capacity: 2,000 DSCFM)	VEs	S-510
C-511	Pulse jet collector used to control particulates form Belt K-520 (Make: IAC; Model: 26 PE; Capacity: 2,000 DSCFM)	VEs	S-511

ID	Description	Performance Indicator	Stack ID
C-522	Pulse jet collector used to control particulates form Belt K-521 (Make: WFI; Model: Jet III 1064BA; Capacity: 6,000 DSCFM)	VEs	S-522

U6 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-519, K-520-1, K-520, K-Raw Loader, K-516, K-517, and K-518 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-519, K-520-1, K-520, K-Raw Loader, K-516, K-517, and K-518 sources subject to 40 CFR 60 Subpart F see Appendix B.[33]

ii. For K-Raw Loader see Emission Unit Plantwide for Regulation 1.14 requirements.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U6" based on actual operating hours in a calendar day.

Table 7 Hourly PM Standards U6

Equipment	Standard (lb/hr)	Reg. Citation
K-519[34,35]	43.12	7.08, section 3.1.2
K-520-1[34,35]	46.79	7.08, section 3.1.2
K-520[34,35]	46.79	7.08, section 3.1.2
K-Raw Loader[34,35]	46.79	7.08, section 3.1.2
K-516[34,35]	46.79	7.08, section 3.1.2
K-517[34,35]	46.79	7.08, section 3.1.2
K-518[34,35]	46.79	7.08, section 3.1.2

d. **TAC**

i. See Emission Unit Plantwide.[36]

[33] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[34] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[35] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[36] Other than limits specified in this unit, the equipment (K-519 and K-Raw Loader) in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

ii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U6". (Regulation 5.21, section 4.2 and section 4.3)

Table 8 *De Minimis* TAC Standards U6

Equipment ID	As	Cr6
K-519		*
K-520	*	*
K-520-1	*	*
K-516	*	*
K-517	*	*
K-518	*	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iii. For K-519, K-520, K-520-1, K-516, K-517, and K-518 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-519, K-520.1, K-520, K-Raw Loader, K-516, K-517, and K-518 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-519, K-520-1, K-520, K-Raw Loader, K-516, K-517, and K-518 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For C-510, C-511, and C-522 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-510, C-511, and C-522 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. If there is any time that a control device for K-519, K-520, K-520-1, K-516, K-517, or K-518 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U6" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U6" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iii. The owner or operator shall daily record the hours of operation for K-519, K-520, K-520-1, K-516, K-517, and K-518.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-519, K-520.1, K-520, K-Raw Loader, K-516, K-517, and K-518 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-519, K-520.1, K-520, K-Raw Loader, K-516, K-517, and K-518 see Emission Unit Plantwide and Appendix B.

ii. For C-510, C-511, and C-522:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-510, C-511, and C-522 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding bypass activity for K-519, K-520, K-520-1, K-516, K-517, and K-518 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and the 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table “De Minimis Value Standards U6”.

Emission Unit U8: Raw Mill "A"

The raw materials are fed into Mill "A" for the initial grinding process. The Mill, separator, elevator, and conveyors are served by baghouse dust collectors.

U8 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.10	Standard of Performance for Existing Process Gas Streams	1, 2, 4, 6.2
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U8 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-406	E-406	Bin K-406 to Feeder K-407 (Installed: before 9/1/1976)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-415	S-415
K-407	E-407	Feeder K-407 to Elevator K-408 (Make: Ramsey; Model: 32”; Capacity: 450 TPH; Installed: 1964)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-415	S-415
K-408	E-408	Elevator K-408 to Belt K-409 (Make: Rex; Model: ES 856; Capacity: 350 TPH; Installed: 1964)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-421	S-421
K-409	E-409	Conveyor Belt K-409 to Separator K-411 (Make: Continental; Model: 36”; Capacity: 350 TPH; Installed: 1971)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-421	S-421
K-411	E-411	Separator K-411 with, 20 MMBtu Direct-Fired Furnace (Dryer A) (Make: Raymond; Model: 16’ S.W.; Capacity: 350 TPH; Installed: 1961)	5.02, 6.09, 6.10, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-421	S-421
K-412	E-412	Screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-413	E-413	Mill "A" K-413 to Elevator K-408 (Make: Allis Chalmers; Model: 11’6”; Capacity: 100.8 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-415	S-415
K-414	E-414	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-428	E-428	Airslide S-945 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U8 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-415	A three (3) compartment dust controlling particulates from the Raw Mill “A”. (Make: Norblo; Model: 423-A Series 54-9; Capacity 6,000 DSCFM)	VEs	S-415
C-421	A one (1) compartment dust collector controlling particulates from the Raw Mill “A” separator and furnace. (Make: ETA Engineering; Model: 4212X96; Capacity: 27,500 DSCFM; Installed: 2010)	VEs	S-421

U8 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-406, K-407, K-408, K-409, K-411, K-412, K-413, K-414, and K-428 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

ii. For Raw Material Dryer A, K-411, see Appendix A.

b. **Opacity**

i. For K-406, K-407, K-408, K-409, K-411, and K-413 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-412, K-414, and K-428 sources subject to 40 CFR 60 Subpart F see Appendix B.[37]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U8" based on actual operating hours in a calendar day.

Table 9 Hourly PM Standards U8

Equipment	Standard (lb/hr)	Reg. Citation
K-406[38,39]	67.70	6.09, section 3.2
K-407[38,39]	67.70	6.09, section 3.2
K-408[38,39]	64.8	6.09, section 3.2
K-409[38,39]	64.8	6.09, section 3.2
K-411[38,39]	36.16	102-08-C
K-412[38,39]	44.19	7.08, section 3.1.2
K-413[38,39]	51.35	6.09, section 3.2
K-414[38,39]	44.19	7.08, section 3.1.2
K-428[38,39]	36.16	7.08, section 3.1.2

[37] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[38] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[39] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

d. **SO_2**

i. The owner or operator shall not allow or cause the emissions of SO_2 from K-DryerA to exceed 2000 ppm by volume at 0% oxygen. (Regulation 6.10, Section 4)[40]

e. **TAC**

i. See Emission Unit Plantwide.[41]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U8". (Regulation 5.21, section 4.2 and section 4.3)

Table 10 Modeled TAC Emissions U8

Equipment ID	Stack or Area ID	As	Cr6
		lb/12 consecutive month period	
K-406, K-407, and K-413 combined	S-415	2.61E-02	8.71E-03
K-408, K-409, and K-411 combined	S-421	1.20E-01	3.99E-02

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U8". (Regulation 5.21, section 4.2 and section 4.3)

Table 11 *De Minimis* TAC Standards U8

Equipment ID	Co	Cd
K-406	*	
K-407	*	
K-408	*	
K-409	*	
K-411	*	*
K-413	*	

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-406, K-407, K-408, K-409, K-411, and K-413 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with

[40] The standard cannot be exceeded uncontrolled since the heater uses only Natural Gas per the company application submitted 11/17/15; therefore, there is no monitoring, record keeping, or reporting required for this standard.

[41] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-406, K-407, K-408, K-409, K-411, and K-413 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[42]

ii. For Raw Material Dryer A, K-411, see Appendix A.

b. **Opacity**

i. For K-406, K-407, K-408, K-409, K-411, and K-413 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[42]

ii. For C-415 and C-421 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-415 and C-421 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **SO_2**

i. There are no monitoring or record keeping requirements for this standard.

[42] K-412, K-414, and K-428 have a total enclosure and no monitoring, recordkeeping or reporting is required.

e. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U8". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-406, K-407, K-408, K-409, K-411, or K-413 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U8" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U8" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-406, K-407, K-408, K-409, K-411, and K-413.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-406, K-407, K-408, K-409, K-411, and K-413 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[42]

ii. For Raw Material Dryer A, K-411, see Appendix A.

b. **Opacity**

i. For K-406, K-407, K-408, K-409, K-411, and K-413 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[42]

ii. For C-415 and C-421:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-415 and C-421 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **SO_2**

i. There are no reporting requirements for this standard.

e. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U8":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-406, K-407, K-408, K-409, K-411, and K-413 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U8".

Emission Unit U9: Raw Mill "B"

The raw materials are fed into Mill "B" for the initial grinding process. The Mill, separator, elevator, and conveyors are served by baghouse dust collectors.

U9 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.10	Standard of Performance for Existing Process Gas Streams	1, 2, 4, 6.2
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U9 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-429	E-429	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-430	E-430	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-434	E-434	Bin K-434 to Feeder K-435 (Installed: “before 9/1/1976”)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-448	S-448
K-435	E-435	Feeder K-435 to Elevator K-436 (Make: Ramsey; Model: 32”; Capacity: 450 TPH; Installed: 1964)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-448	S-448
K-436	E-436	Elevator K-436 to Belt K-437 (Make: Rex; Model: ES 856; Capacity: 350 TPH; Installed: 1964)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-448	S-448
K-437	E-437	Conveyor Belt K-437 to Separator K-439 (Make: Continental; Model: 36”; Capacity: 350 TPH; Installed: 1971)	5.02, 6.09, 7.02 STAR*, 40CFR60-F, 40CFR63-LLL	C-448	S-448
K-439	E-439	Separator K-439 with, 20 MMBtu Direct-Fired Furnace (Dryer B) (Make: Raymond; Model: 16’ S.W.; Capacity: 350 TPH; Installed: 1961)	5.02, 6.09, 6.10, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-454/ C-451	S-454/ S-451
K-440	E-440	Screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-441	E-441	Mill "B" K-441 to Elevator K-436 (Make: Allis Chalmers; Model: 11’6”; Capacity: 100.8 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-445	S-445

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-442	E-442	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U9 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-445	A dust collector controlling particulates from the Raw Mill "B". (Make: Norblo; Model: 324-A Series 54-9; Capacity 6,000 DSCFM)	VEs	S-445
C-448	A dust collector controlling particulates form the Raw Mill "B" K-434 bin, K-435 feeder, K-436 elevator, and K-437 belt. (Make: AAF International; Capacity: 6,000 DSCFM)	VEs	S-448
C-451	A six (6) compartment dust collector controlling particulates from the Raw Mill "B" separator (K-439) and furnace. (Make: AAF International; Capacity: 15,000 DSCFM; Installed: 2008)	VEs	S-451
C-454	A six (6) compartment dust collector controlling particulates from the Raw Mill "B" separator (K-439) and furnace. (Make: AAF International; Capacity: 15,000 DSCFM; Installed: 2008)	VEs	S-451

U9 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-429, K-430, K-434, K-435, K-436, K-437, K-439, K-440, K-441, and K-442 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

ii. For Raw Material Dryer B, K-439, see Appendix A.

b. **Opacity**

i. For K-434, K-435, K-436, K-437, K-439, and K-441 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-429, K-430, K-440, and K-442 sources subject to 40 CFR 60 Subpart F see Appendix B.[43]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U9" based on actual operating hours in a calendar day.

Table 12 Hourly PM Standards U9

Equipment	Standard (lb/hr)	Reg. Citation
K-429[44,45]	36.27	7.08, section 3.1.2
K-430[44,45]	36.27	7.08, section 3.1.2
K-434[44,45]	67.70	6.09, section 3.2
K-435[44,45]	67.70	6.09, section 3.2
K-436[44,45]	64.76	6.09, section 3.2
K-437[44,45]	64.76	6.09, section 3.2
K-439[44,45]	36.16	101-08-C
K-440[44,45]	44.19	7.08, section 3.1.2
K-441[44,45]	51.35	6.09, section 3.2
K-442[44,45]	44.19	7.08, section 3.1.2

[43] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[44] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[45] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

d. **SO_2**

i. The owner or operator shall not allow or cause the emissions of SO_2 from K-439 (Dryer B) to exceed 2,000 ppm by volume at 0% oxygen. (Regulation 6.10, Section 4)[46]

e. **TAC**

i. See Emission Unit Plantwide.[47]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U9". (Regulation 5.21, section 4.2 and section 4.3)

Table 13 Modeled TAC Emissions U9

Emission Point	Stack or Area ID	As	Cr6
		lb/12 consecutive month period	
K-441	S-445	2.61E-02	8.71E-03
K-434, K-435, K-436, and K-437 combined	S-448	2.61E-02	8.71E-03
K-439	S-454/ S-451	1.31E-01	4.36E-02

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U9". (Regulation 5.21, section 4.2 and section 4.3)

Table 14 De Minimis TAC Standards U9

Equipment ID	Co	Cd
K-434	*	
K-435	*	
K-436	*	
K-437	*	
K-439	*	*
K-441	*	

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

[46] The standard cannot be exceeded uncontrolled since the heater uses only Natural Gas per the company application submitted 11/17/15; therefore, there is no monitoring, record keeping, or reporting required for this standard.

[47] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

iv. For K-434, K-435, K-436, K-437, K-439, and K-441 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-434, K-435, K-436, K-437, K-439, and K-441 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[48]

ii. For Raw Material Dryer B, K-439, see Appendix A.

b. **Opacity**

i. For K-434, K-435, K-436, K-437, K-439, and K-441 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[48]

ii. For C-445, C-448, C-451, and C-454 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-445, C-448, C-451, and C-454 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as

[48] K-429, K-430, K-440 and K-442 have a total enclosure and no monitoring, recordkeeping or reporting is required.

needed. The owner or operator shall maintain monthly records of the results.

d. **SO_2**

i. There are no monitoring or record keeping requirements for this standard.

e. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U9". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-434, K-435, K-436, K-437, K-439, or K-441 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U9" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U9" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-434, K-435, K-436, K-437, K-439, and K-441.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-434, K-435, K-436, K-437, K-439, and K-441 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[48]

ii. For Raw Material Dryer B, K-439, see Appendix A.

b. **Opacity**

i. For K-434, K-435, K-436, K-437, K-439, and K-441 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[48]

ii. For C-445, C-448, C-451, and C-454:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-445, C-448, C-451, and C-454 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **SO_2**

i. There are no reporting requirements for this standard.

e. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U9":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-434, K-435, K-436, K-437, K-439, and K-441 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table “De Minimis Value Standards U9”.

Emission Unit U11: Kiln Feed Silos

Raw meal can be pumped to silos (K-601W, K-602E) from all three mills, although this not the primary flow of material. From these silos, material is then pumped to the kiln feed silos in process U-12. Material from the kiln feed silos in process U-12 can also be pumped to the North, South and Center Silos (K-554, K-555, and K-556, respectively). Material from these three silos is either loaded into a truck or pumped to the Kosmos Mortar Mill (U-22) for masonry cement and synthetic gypsum manufacturing.

U11 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U11 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-601W	E-443a / E-625d	Pump K-443 or Pump K-625 to West Kiln Feed Silo K-601W (Capacity: 500 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-600	S-600
K-602E	E-443b / E-625c	Pump K-443 or Pump K-625 to East Kiln Feed Silo K-602E (Capacity: 500 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-600	S-600
K-601	E-601	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-602	E-602	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-554	E-625a	Pump K-625 to North Silo K-554 (Capacity: 500 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-557	S-557
	E-554	North Silo K-554 to Truck Loadout (Capacity: 500 TPH; Installed: 1974)		C-557	S-557
K-555	E-625b	Pump K-625 to Center Silo K-555 (Capacity: 500 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-557	S-557
	E-555	Center Silo K-555 to Truck Loadout (Capacity: 500 TPH; Installed: 1974)		C-557	S-557
K-556	E-625c	Pump K-625 to South Silo K-556 (Capacity: 500 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-557	S-557
	E-556	South Silo K-556 to Truck Loadout (Capacity: 500 TPH; Installed: 1974)		C-557	S-557

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U11 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-600	This is a single compartment pulse jet dust collector serving blending silos (K-601W and K-602E) (Make: Wheelabrator; Model:132 Series 6P; Capacity 22,000 DSCFM)	VEs	S-22

ID	Description	Performance Indicator	Stack ID
C-557	One hundred sixty-nine (169) compartment baghouse controlling emissions from the North, Center, and South slurry silos. (Make: Wheelabrator; Model: Jet III; Capacity: 18,000 DSCFM)	VEs	S-421

U11 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-601W, K-602E, K-601, K-602, K-554, K-555, and K-556 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-601W, K-602E, K-554, K-555, and K-556 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-601 and K-602 sources subject to 40 CFR 60 Subpart F see Appendix B.[49]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U11" based on actual operating hours in a calendar day.

Table 15 Hourly PM Standards U11

Equipment	Standard (lb/hr)	Reg. Citation
K-601W[50,51]	68.95	6.09, section 3.2
K-602E[50,51]	68.95	6.09, section 3.2
K-601[50,51]	44.39	7.08, section 3.1.2
K-602[50,51]	44.39	7.08, section 3.1.2
K-554[50,51]	68.95	6.09, section 3.2
K-555[50,51]	68.95	6.09, section 3.2
K-556[50,51]	68.95	6.09, section 3.2

d. **TAC**

i. See Emission Unit Plantwide.[52]

[49] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[50] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[51] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[52] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U11". (Regulation 5.21, section 4.2 and section 4.3)

Table 16 Modeled TAC Emissions U11

Emission Point	Stack or Area ID	As	Cr6	Co
		lb/12 consecutive month period		
K-554, K-555, and K-556 combined	S-557	1.57E-01	5.23E-02	1.22E-01
K-601W and K-602E combined	S-600	1.92E-01	6.39E-02	1.49E-01

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U11". (Regulation 5.21, section 4.2 and section 4.3)

Table 17 *De Minimis* TAC Standards U11

Equipment ID	Cd
K-554	*
K-555	*
K-556	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-554, K-555, and K-556 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-601W, K-602E, K-554, K-555, and K-556 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[53]

b. **Opacity**

i. For K-601W, K-602E, K-554, K-555, and K-556 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[53]

[53] K-601 and K-602 have a total enclosure and no monitoring, recordkeeping or reporting is required.

ii. For C-600 and C-557 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-600 and C-557 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U11".[54] (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-554, K-555, and K-556 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U11" during the bypass in lb/hr and

[54] For this Unit all equipment have modeled limits and corresponding 12 month emission limits with monitoring and record keeping; therefore, no bypass record keeping requirements are required.

lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U11" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-554, K-555, and K-556.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-601W, K-602E, K-554, K-555, and K-556 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[53]

b. **Opacity**

i. For K-601W, K-602E, K-554, K-555, and K-556 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[53]

ii. For C-600 and C-557:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-600 and C-557 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U11":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-554, K-555, and K-556 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U11".

Emission Unit U12: Kiln Feed System

Raw meal is taken from two (2) kiln feed storage silos and conveyed pneumatically to the preheater. Additionally, hydrated lime from process U-5 is conveyed into this process for leveling prior to entering the pre-heat tower in process U-7/U-13. Finally, fines collected in baghouse K-945 (U-7/U-13) are re-circulated back through the kiln feed system (leveled and weighed) for blending in the U-11 silos or back to the preheat tower in process U-7/U-13.

U12 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U12 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Stack ID
K-616	E-616	Kiln Feed Silos (U11) to Airslide K-561 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-618	S-618
K-561	E-561	Airslide K-561 to South Kiln Feed Silo K-616 (Capacity: 360 TPH; Installed: 1974)	2.05, 5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-564	S-564
K-560	E-560	Elevator K-560 to Airslide K-621-3 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-564	S-564
K-560-7	E-560-7	Screw conveyor K-992/Airslide K-560-7 to Elevator K-560 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-559	S-559
K-560-2	E-560-2	Airslide K-560-2 to Airslide K-560-7 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-560-4	S-560-4
	E-541B	Cyclone K-541 (U7/U13) to Airslide K-560-2 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-560-4	S-560-4
K-617	E-617	North Kiln Feed Silo K-617 to Airslide K-621-3 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-618-3	S-618-3
K-562	E-562	Airslide K-562 to North Kiln Feed Silo K-617 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-564	S-564
K-621-3	E-621-3	Baghouse K-945 (U7/U13) to Level bin K-623 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-627	S-627
K-623	E-623	Level bin K-623 to Airslide K-623-3 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-627	S-627

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Stack ID
K-623-3	E-623-3	Airslide K-623-3 to Weigh feeder K-624 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-627	S-627
K-624	E-624	Weigh feeder K-624 to Pump K-625 (Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-627	S-627
K-622	E-622	Airslide (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-328-1	E-328-1	Rotary Feeder from Hydrated Lime Silo K-319 (U5) to Elevator K-645 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-640	S-640
K-645	E-645	Elevator K-645 to Airslide K-639 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-640	S-640
K-639	E-639	Airslide K-639 to Level bin K-637 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-642	S-642
K-637	E-637	Level bin K-637 to Elevator K-648 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-642	S-642
K-648	E-648	Elevator K-648 to Airslide K-651 (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-647	S-647
K-651	E-651	Airslide K-651 to Preheat Tower K-900 (U7/U13) (Capacity: 360 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-647	S-647

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U12 Control Devices:

ID	Description	Performance Indicator	Stack ID

ID	Description	Performance Indicator	Stack ID
C-618	A three (3) compartment baghouse serving the south kiln feed silo (K-616) (Make: Wheelabrator; Model: 72-108; Capacity: 5,100 DSCFM)	VEs	S-618
C-564	A pulse jet dust collector that controls emissions associated with the kiln feed raw meal handling system (Make: IAC; Model: 72 TB; Capacity: 2,000 DSCFM)	VEs	S-564
C-559	A pulse jet dust collector that controls emissions associated with the kiln feed raw meal handling system (Make: IAC; Model: 72 TB; Capacity: 2,000 DSCFM)	VEs	S-559
C-560-4	A pulse jet dust collector that controls emissions associated with the kiln feed raw meal handling system (Make: IAC; Model: 72 TB; Capacity: 2,000 DSCFM)	VEs	S-560-4
C-618-3	A pulse jet dust collector serving the north kiln feed silo (K-617) (Make: Wheelabrator; Model: 72-108; Capacity: 5,100 DSCFM)	VEs	S-618-3
C-627	A pulse jet dust collector, with 32 bags, serving various transfer points in the kiln feed system (Make: WFI; Capacity: 3,000 DSCFM)	VEs	S-627
C-640	A nuisance dust collector serving various transfer pints in the kiln feed system (Make: Amerex; Model: RP-8-25; Capacity: 1,500 DSCFM)	VEs	S-640
C-642	A nuisance dust collector serving various transfer pints in the kiln feed system (Make: Amerex; Model: RP-8-36; Capacity: 2,200 DSCFM)	VEs	S-642
C-647	A nuisance dust collector serving various transfer pints in the kiln feed system (Make: Amerex; Model: RP-8-16; Capacity: 2,200 DSCFM)	VEs	S-647

U12 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-616, K-561, K-560, K-560-7, K-560-2, K-617, K-562, K-621-3, K-623, K-623-3, K-624, K-622, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-616, K-561, K-617, K-562, K-621-3, K-623, K-623-3, K-624, and K-622, sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-560, K-560-7, K-560-2, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 60 Subpart F see Appendix B. [55]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U12" based on actual operating hours in a calendar day.

Table 18 Hourly PM Standards U12

Equipment	Standard (lb/hr)	Reg. Citation
K-616[56,57]	65.08	6.09, section 3.2
K-561[56]	65.08	6.09, section 3.2
K-560[56]	44.39	7.08, section 3.1.2
K-560-7[56]	44.39	7.08, section 3.1.2
K-560-2[56]	44.39	7.08, section 3.1.2
K-561[58,59]	1.3 combined	2.05 and 76-98-C
K-560[58, 59]		
K-560-7[58,59]		

[55] Since these emission points are subject to more stringent opacity standards in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance wth Regulation 7.02, section 5.

[56] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[57] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[58] This limit is for PSD avoidance.

[59] These emission points cannot exceed the lb/hr PM limit controlled, monitoring, recordkeeping and reporting are required.

Equipment	Standard (lb/hr)	Reg. Citation
K-560-2[58,59]		
K-617[56,57]	65.08	6.09, section 3.2
K-562[56,57]	65.08	6.09, section 3.2
K-621-3[56,57]	65.08	6.09, section 3.2
K-623[56,57]	65.08	6.09, section 3.2
K-623-3[56,57]	65.08	6.09, section 3.2
K-624[56,57]	65.08	6.09, section 3.2
K-622[56,57]	65.08	6.09, section 3.2
K-328-1[56]	44.39	7.08, section 3.1.2
K-645[56]	44.39	7.08, section 3.1.2
K-639[56]	44.39	7.08, section 3.1.2
K-637[56]	44.39	7.08, section 3.1.2
K-648[56]	44.39	7.08, section 3.1.2
K-651[56]	44.39	7.08, section 3.1.2
K-328-1[58, 59]	0.8 combined	2.05 and 75-98-C
K-645[58, 59]		
K-639[58, 59]		
K-637[58, 59]		
K-648[58, 59]		
K-651[58, 59]		

ii. For K-328-1, K-645, K-639, K-637, K-648, and K-651 combined the owner or operator shall not allow the PM emissions to exceed 3.2 tons per 12 consecutive months. (Regulation 2.05 and 75-98-C, Effective 4/1/1998)[58, 60]

[60] These emission points can exceed the tons per consecutive 12 month PM limit uncontrolled; therefore, there is monitoring or recordkeeping for this standard.

iii. For K-561, K-560, K-560-7, and K-560-2 combined the owner or operator shall not allow the PM emissions to exceed 5.2 tons per 12 consecutive months. (Regulation 2.05 and 76-98-C, Effective 4/1/1998) [58,61]

d. **TAC**

i. See Emission Unit Plantwide.[62]

ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards listed in the following table "Modeled TAC emissions U12". (Regulation 5.21, section 4.2 and section 4.3)

Table 19 Modeled TAC Emissions U12

Equipment ID	Stack or Area ID	As	Cr6
		lb/12 consecutive month period	
K-560-7	S-559	1.74E-02	5.81E-03
K-560-2	S-560-4	1.74E-02	5.81E-03
K-561, K-560, and K-562 combined	S-564	1.74E-02	5.81E-03
K-616	S-618	4.44E-02	1.48E-02
K-617	S-618-3	4.44E-02	1.48E-02
K-621-3, K-623, K-623-3, and K-624 combined	S-627	2.61E-02	8.71E-03
K-645 and K-328-1 combined	S-640	1.31E-02	4.35E-03
K-639 and K-637 combined	S-642	1.92E-02	6.39E-03
K-648 and K-651 combined	S-647	7.58E-03	2.52E-03

iii. The owner or operator shall not allow TAC emissions to exceed *de minimis* values for the equipment as indicated in the following table "*De Minimis* TAC Standards U12". (Regulation 5.21, section 4.2 and section 4.3)

Table 20 De Minimis TAC Standards U12

Equipment ID	Cd	Co	Mn	Ni
K-616		*		
K-560		*		
K-560-7		*		

[61] These emission points cannot exceed the tons per consecutive 12 month PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[62] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Equipment ID	Cd	Co	Mn	Ni
K-560-2		*		
K-617		*		
K-621-3		*		
K-623		*		
K-623-3		*		
K-624	*	*	*	*
K-645		*		
K-328-1		*		
K-639		*		
K-637		*		
K-648		*		
K-651		*		

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-616, K-560, K-560-7, K-560-2, K-617, K-621-3, K-623, K-623-3, K-624, K-645, K-328-1, K-639, K-637, K-648, and K-651 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-616, K-561, K-560, K-560-7, K-560-2, K-617, K-562, K-621-3, K-623, K-623-3, K-624, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[63]

b. **Opacity**

i. For K-616, K-561, K-560, K-560-7, K-560-2, K-617, K-562, K-621-3, K-623, K-623-3, K-624, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[63]

ii. For C-618, C-564, C-559, C-560-4, C-618-3, C-627, C-640, C-642, and C-647 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

[63] K-622 has a total enclosure and no monitoring, recordkeeping or reporting is required.

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. If there is any time that a control device for K-328-1, K-645, K-639, K-637, K-648, and K-651 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For K-328-1, K-645, K-639, K-637, K-648, and K-651 the owner or operator shall daily record the hours of operation of the equipment.

iii. For K-328-1, K-645, K-639, K-637, K-648, and K-651 combined the owner or operator shall monthly calculate and record the 12 consecutive month PM emissions. (See Appendix F for Calculation Methodology)

iv. If there is any time that a control device for K-561, K-560, K-560-7, or K-560-2 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

v. For K-561, K-560, K-560-7, and K-560-2 the owner or operator shall daily record the hours of operation of the equipment.

vi. For C-618, C-564, C-559, C-560-4, C-618-3, C-627, C-640, C-642, and C-647 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U12". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-616, K-560, K-560-7, K-560-2, K-617, K-621-3, K-623, K-623-3, K-624, K-645, K-328-1, K-639, K-637, K-648, or K-651 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U12" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U12" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-616, K-560, K-560-7, K-560-2, K-617, K-621-3, K-623, K-623-3, K-624, K-645, K-328-1, K-639, K-637, K-648, and K-651.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-616, K-561, K-560, K-560-7, K-560-2, K-617, K-562, K-621-3, K-623, K-623-3, K-624, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[63]

b. **Opacity**

i. For K-616, K-561, K-560, K-560-7, K-560-2, K-617, K-562, K-621-3, K-623, K-623-3, K-624, K-328-1, K-645, K-639, K-637, K-648, and K-651 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[63]

ii. For C-618, C-564, C-559, C-560-4, C-618-3, C-627, C-640, C-642, and C-647:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-328-1, K-645, K-639, K-637, K-648, and K-651 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 consecutive month standard;

5) Description of any corrective action taken for each exceedance.

ii. The owner or operator shall report the following information regarding bypass activity for K-561, K-560, K-560-7,and K-560-2 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Description of any corrective action taken for each exceedance.

iii. For C-618, C-564, C-559, C-560-4, C-618-3, C-627, C-640, C-642, and C-647 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U12":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-616, K-560, K-560-7, K-560-2, K-617, K-621-3, K-623, K-623-3, K-624, K-645, K-328-1, K-639, K-637, K-648, and K-651 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U12".

Emission Unit U7/U13: Raw Mill "D" and Preheater/PrecalcinerKiln

Raw materials sent to the mill and silos, then pre-heated and sent to the kiln. Raw Mill "D" is used for the initial raw material grinding process. Emissions are controlled by a baghouse and cyclone, and vented through the kiln stack. Raw meal is conveyed to the kiln via the preheaters. Kiln combustion gases and hot air from the clinker cooler are used to pre-heat raw meal before entering the kiln. Raw meal is heated in hot air at temperatures of 2,600°F to 3,000°F as it travels through the kiln to form clinker. Emissions are captured by a baghouse and vented through the kiln stack. Separate baghouses are used to collect emissions from the dust tank and the kiln feed airslide.

U7/U13 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 60 Subpart DDDD	Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units	60.2700, 60.2710, 60.2635, 60.2670, 60.2675, 60.2690, 60.2730, 60.2740, 60.2745
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
40 CFR 64	Compliance Assurance Monitoring	64.1 through 64.10
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1 through 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U7/U13 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-521	E-521	Belt K-521 to Belt K-523	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-523	E-523	Belt K-523 to Feeder Belt K524	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-524	E-524	Feeder Belt K-524 to Raw Mill "D" K-526 (Make: Merrick: Model: 465; Capacity: 400 TPH; Installed: 1987)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-526	E-526	Raw Mill "D" K-526 to Elevator K-536 (Make: F.L. Smidth; Model: 16'; Capacity: 310 TPH; Installed: 1987)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-536	E-536	Elevator	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-538	E-538	Separator K-538 to Cyclone K-541 (Make: O-Sepa; Model: N-4000; Capacity: 580 TPY; Installed: 1987)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-541, C-545	S-945
K-541	E-541	Cyclone K-541 to Airslide K-560-2 (Capacity: 400 TPH)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-545	S-945
K-945-27	E-945-27	Dust Tank K-945-27 to Baghouse K-945-32/Cyclone K-541 (Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-945-32	S-945-32
K-540-1	E-540-1	Separator transfer back to Raw Mill D (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-560-2	E-560-2	Airslide from K-541 Cyclone (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-945-29	E-945-29	Screw to K-945-30 screw (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-945-30	E-945-30	Screw to Unit 12 K-622 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-990	E-990	Screw Conveyor from Spray Tower K-840 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-992	E-992	Screw Conveyor to Unit 12 Elevator K-560 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-900/901	E-900	Preheat Tower K-900 to Kiln K-901 to Clinker cooler K-909 (Make: Humboldt Wedag; Model: PR8250; Capacity: 400 TPH; Installed: 2000)	2.05, 5.02, 6.42, 7.02, 7.08, STAR*, 40CFR64, 40CFR60-F, 40CFR60-DDDD, 40CFR63-LLL	C-945 & SNCR	S-945
	E-901a				
	E-901b				
K-AF 4	E-AF 4	Loader	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-AF 4
K-AF 5	E-AF 5	Hopper/Feeder	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1
K-AF 6	E-AF 6	Conveyance	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1
K-AF 7	E- AF 7	Elevator	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-AF 8	E- AF 8	Conveyance	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC2	S-AF-DC2
K-AF 9	E- AF 9	Feed Bin	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC2	S-AF-DC2
K-AF 1	E-AF 1	Loader	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-AF 1
K-AF DS	E-AF DS	AF Docking Station	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1
K-AF 2	E-AF 2	Conveyance	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1
K-AF ELEV	E-AF ELEV	Bucket Elevator	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC1	S-AF-DC1
K-AF 3	E-AF 3	Conveyance	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC2	S-AF-DC2
K-AF Bin	E-AF Bin	Buffer Bin	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-AF-DC2	S-AF-DC2
K-PAC	E-PAC	PAC Material Handling Equipment consisting of: ACI system includes tubular steel support frame, electric chain hoist with trolley, bulk bag lifting adapter, volumetric feeder, feeder hopper, pneumatic blower & educator, pressure switches, and system control panel.	7.08, STAR*	NA	NA-

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U7/U13 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-541	Cyclone	VEs	S-945
C-545	An eighteen compartment reverse air baghouse, following cyclone K-541, serving Raw Mill “D”. Exhaust from this baghouse exits through the main kiln stack. (Make: Fuller; Model: 18 Module 7500; Capacity: 182,400 DSCFM	COM & CEMs	S-945
SNCR	Selective non-catalytic reduction (SNCR), utilizing an ammonia solution to control NOx emissions from the cement kiln when deemed necessary under normal operating conditions. Injection points are located at the pre-heat tower	COM & CEMs	S-945
C-945	Sixteen (16) compartment bag collector controlling particulates from the kiln and Raw Mill “D”. Exhaust exits the main kiln stack. (Make: Wheelabrator; Model: 60KW92; Capacity: 217,500 DSCFM)	COM & CEMs	S-945
C-945-32	A twenty-five (25) compartment baghouse serving dust tank K-945-27. (Make: Wheelabrator-Frye; Model: Jet III 1083 M; Capacity: 1,700 DSCFM)	VEs	S-945-32
C-AF-DC1	Alternate fuel DC 1 (Flow rate 3000 DSCFM,)	VEs	S-AF-DC1
C-AF-DC2	Alternate fuel DC 2 (Flow rate 3000 DSCFM,)	VEs	S-AF-DC2
C-ACI	Activated Carbon Injection (ACI) system for control of mercury emissions by injection of dry Powdered Activated Carbon (PAC) and/or other similar adsorbent materials	CEMS	S-945

U7/U13 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **CO**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall not allow CO emissions to exceed 308 lb/hr on a 30 day rolling average. (Regulation 2.05)(Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[64]

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the CO emissions to less than 1,240 tons per 12 consecutive month period. (Regulation 2.05)(Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[64]

iii. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

b. **Fuel**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall only be allowed to burn coal, met coke, pet coke, natural gas, #2 fuel oil, used oil, on and off specification waste oil, residual oil, tire derived fuel, and refuse derived fuel. (District permit TV-13-1001-C) (Operational Flexibility Request – approved 10/01/2014)

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall only use waste oil if it meets the following specs: (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)

1) For on-spec waste oil, the allowables are:

(a)	Arsenic	= 5 ppm maximum
(b)	Cadmium	= 2 ppm maximum
(c)	Chromium	= 10 ppm maximum
(d)	Lead	= 100 ppm maximum
(e)	Total halogens	= 1000 ppm maximum
(f)	PCB's	= 2 ppm maximum
(g)	Flash Point	= 100 deg F minimum
(h)	Heat content	= 10,000 Btu/lb minimum
(i)	Suspended solids	= 15% maximum
(j)	pH	= 5 -10
(k)	Chlorinated solids	= 0.1% maximum

[64] This limit is for PSD avoidance.

(l)	Ash	= 5% maximum
(m)	Sulfur	= 3% maximum

2) For off-spec waste oil, the allowables are:

(a)	Arsenic	= 5 ppm maximum
(b)	Cadmium	= 2 ppm maximum
(c)	Chromium	= 10 ppm maximum
(d)	Lead	= 100 ppm maximum
(e)	Total halogens	= 4000 ppm maximum
(f)	PCB's	= 2 ppm maximum
(g)	Flash Point	= 100 deg F minimum
(h)	Heat content	= 10,000 Btu/lb minimum
(i)	Suspended solids	= 15% maximum
(j)	pH	= 5 -10
(k)	Chlorinated solids	= 0.1% maximum
(l)	Ash	= 5% maximum
(m)	Sulfur	= 3% maximum

iii. For the Kiln with preheat tower (K-900/901) the owner or operator shall combust 9 tons per hour or less of Tire Derived Fuel (TDF). (District permit TV-13-1001-C)

iv. For the Kiln with preheat tower (K-900/901) the owner or operator shall combust 10 tons per hour or less of Refuse Derived Fuel (RDF). (District permit TV-13-1001-C)

v. For the Kiln with preheat tower (K-900/901) the owner or operator shall not use Tire Derived Fuel (TDF) or Refuse Derived Fuel (RDF) during startups and shutdowns. (District Permit 77-10-C)

vi. For the Kiln with preheat tower (K-900/901) the owner or operator shall only use Tire Derived Fuel (TDF) or Refuse Derived Fuel (RDF) if the Kiln feed rate is 280 tons per hour or greater. (District Permit 77-10-C)

vii. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

c. **HAP (40 CFR 63 Subpart LLL (MACT))**

i. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 63 Subpart LLL see Appendix B.

ii. For 40 CFR 63 Subpart LLL and 40 CFR 60 Subpart DDDD conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

d. **NO_x**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall not allow NO_x emissions to exceed 721 lb/hr based on a 30 day rolling average. (Regulation 2.05)(Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[64]

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the NO_x emissions to less than 2,906 tons per 12 consecutive month period. (Regulation 2.05)(Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[64]

iii. For the Kiln with preheat tower (K-900/901) the owner or operator shall not exceed 4.755 lb of NO_x per ton of clinker produced on a 30 day rolling average. (Regulation 6.42) (See Appendix G)

iv. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

v. See Appendix O for SNCR requirements from the Consent Decree filed on 11/29/2016.

e. **Opacity**

i. For K-945-27 and K-PAC: See Emission Unit Plantwide. [65]

ii. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-540-1, K-560-2, K-945-29, K-945-30, K-990, K-992, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 60 Subpart F see Appendix B.

iii. For K-AF 4 see Emission Unit Plantwide for Regulation 1.14 requirements.

iv. For the Kiln with preheat tower (K-900/901) see Emission Unit Plantwide for Regulation 7.08 requirements.[66]

f. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U7/U13" based on actual operating hours in a calendar day.

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[65] Since emission points For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-540-1, K-560-2, K-945-29, K-945-30, K-990, K-992, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin are subject to a more stringent opacity standard in Regulaton 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[66] Regulation 7.08 20% opacity standard applies to the Kiln with preheat tower (K-900/901) since 40 CFR 60 Subpart F does not have an opacity standard for this equipment.

Table 21 Hourly PM Standards U7/U13

Equipment	Standard (lb/hr)	Reg. Citation
K-521[67,68]	45.14	7.08, section 3.1.2
K-523[67,68]	45.14	7.08, section 3.1.2
K-524[67,68]	45.14	7.08, section 3.1.2
K-526[67,68]	43.34	7.08, section 3.1.2
K-536[67,68]	43.34	7.08, section 3.1.2
K-538[67,68]	47.91	7.08, section 3.1.2
K-541[67,68]	45.14	7.08, section 3.1.2
K-945-27[67,68]	66.31	6.09, section 3.2
K-540-1[67,68]	45.14	7.08, section 3.1.2
K-560-2[67,68]	45.14	7.08, section 3.1.2
K-945-29[67,68]	45.14	7.08, section 3.1.2
K-945-30[67,68]	45.14	7.08, section 3.1.2
K-990[67,68]	45.14	7.08, section 3.1.2
K-992[67,68]	45.14	7.08, section 3.1.2
K-900/901[67,68]	45.14	7.08, section 3.1.2
K-AF 4[67,68]	14.02	7.08, section 3.1.2
K-AF 5[67,68]	14.02	7.08, section 3.1.2
K-AF 6[67,68]	14.02	7.08, section 3.1.2
K-AF 7[67,68]	14.02	7.08, section 3.1.2
K-AF 8[67,68]	14.02	7.08, section 3.1.2
K-AF 9[67,68]	14.02	7.08, section 3.1.2
K-AF 1[67,68]	23.0	7.08, section 3.1.2
K-AF DS[67,68]	23.0	7.08, section 3.1.2
K-AF 2[67,68]	23.0	7.08, section 3.1.2

[67] Except for K-900/901 these emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, monitoring and recordkeeping will only be required for the K-900/901 lb/hr standard.

[68] Except for K-526, K-538, and K-900/901 these emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-AF ELEV[67,68]	23.0	7.08, section 3.1.2
K-AF 3[67,68]	23.0	7.08, section 3.1.2
K-AF Bin[67,68]	23.0	7.08, section 3.1.2
K-PAC[67,68]	2.34	7.08, section 3.1.2

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the PM emissions to less than 162.9 tons per 12 consecutive months. (Regulation 2.05) (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[69,70]

iii. For K-526 and K-538 the owner or operator shall not allow the PM emissions to exceed 25 tons per 12 consecutive months combined. (Regulation 2.05)[69,70]

iv. For K-526 and K-538 the owner or operator shall not allow the combined PM_{10} emissions to exceed 15 tons per 12 consecutive months combined. (Regulation 2.05) [69,70]

v. For the Kiln with preheat tower (K-900/901):

1) On and after the date on which the performance test required to be conducted by § 60.8 is completed, you may not discharge into the atmosphere from any kiln any gases which (40 CFR 60.62(a)):

(a) Contain particulate matter (PM) in excess of:
(40 CFR 60.62(a)(1))

(i) 0.30 pounds per ton of feed (dry basis) to the kiln for kilns constructed, reconstructed, or modified after August 17, 1971 but on or before June 16, 2008. (40 CFR 60.62(a)(1)(i) [71]

(b) If the kiln has a separated alkali bypass stack and/or an inline coal mill with a separate stack, you must combine the PM emissions from the bypass stack and/or the inline coal mill stack with the PM emissions from the main kiln exhaust to determine total PM emissions.
(40 CFR 60.62(b)(3))

[69] These emission points can exceed the tons per 12 consecutive month PM or PM_{10} limits uncontrolled but not controlled; therefore, bypass monitoring, recordkeeping, and reporting are required.

[70] This limit is for PSD avoidance.

[71] The lb/hr PM emission limit in Regulation 7.08 is more stringent that the PM emission rate contained in 40 CFR 60 Supbart F for the Kiln (K-900/901). The District will have both emission limits listed in the permit as there are specific montoring, record keeping, reporting, and testing requirements for the NSPS (40 CFR 60 Subpart F).

vi. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

g. **Regulation 5.15 (Risk Management Plan 112(r))**

i. The owner or operator shall limit the ammonia concentration of the reducing agent to less than 20% in order to be exempt from Regulation 5.15. (District permit 185-06-C)

h. **SO_2**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall not allow SO_2 emissions to exceed 122 lb/hr based on a 30 day rolling average. (Regulation 2.05) (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[70]

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the SO_2 emissions to less than 491 tons per 12 consecutive month period. (Regulation 2.05) (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[70]

iii. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

iv. See Appendix O for requirements from the Consent Decree filed on 11/29/2016.

i. **TAC**

i. See Emission Unit Plantwide.[72]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U7/U13". (Regulation 5.21, section 4.2 and section 4.3)

[72] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Table 22 Modeled TAC Emissions U7/U13

Equipment ID	Stack ID	As	Cd	Cr3	Cr6	Ni	Cu
		lb/12 consecutive month period					
K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-900/901, K-909 (E-901a), and K-909-4 combined	S-545/945	19.89	2.21	77.09	4.30	171.70	33.46
K-945-27	S-945-32	1.48E-02	1.83E-03	3.60E-02	4.93E-03	1.10E-02	1.00E-02

Equipment ID	Stack ID	Mn	Pb	Be	Benzene	Formaldehyde
		lb/12 consecutive month period				
K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-900/901, K-909 (E-901a), and K-909-4 combined	S-545/945	294.34	119.14	2.21	2014.8	3241.2
K-945-27	S-945-32	2.30E-01	2.30E-02	1.16E-03		

Equipment ID	Stack ID	Naphthalene	2,3,7,8-TCDD	HCL	NH3	Dibenzofuran
		lb/12 consecutive month period				
K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-900/901, K-909 (E-901a), and K-909-4 combined	S-545/945	438	1.05E-04	57290	61320	113.88

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U7/U13". (Regulation 5.21, section 4.2 and section 4.3)

Table 23 *De Minimis* TAC Standards U7/U13

Equipment ID	Co
K-900/901	*
K-526	*
K-538	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-900/901, K-526, and K-538 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

j. **Unit Operation**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the hours of operation to 8064 hours per 12 consecutive month period. (Regulation 2.05)[73]

ii. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

k. **VOC and THC**

[73] This limit is for PSD avoidance.

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall not allow VOC emissions to exceed 32 lb/hr based on a 24 hour averaging period. (Regulation 2.05) (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)[73]

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the VOC emissions to less than 130 tons per 12 consecutive month period. (Regulation 2.05) (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000) [73]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **CO**

i. The owner or operator shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) in accordance with 40 CFR §60.13 and 40 CFR §60 Appendix C, PS-4 or 4A to measure the CO emissions discharged into the atmosphere from S-11. (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)

1) The CO CEMS shall be operated and data recorded during all periods of operation of the cement kiln except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks and zero and span adjustments.

2) The 1-hour average CO emission rates measured by the CEMS shall be expressed in pounds per hour and shall be used to calculate the average emission rates. For a full operating hour, at least four valid data points shall be used to calculate each 1-hour average.

3) The span value for the CO CEMS shall be determined so that all expected concentrations can be measured.

4) The Quality Assurance Procedures in 40 CFR §60 Appendix F shall be followed.

5) When CO emission data or flow monitor data (if a flow monitor is used) are not obtained because of CEMS breakdowns, repairs, calibration checks, or zero and span adjustments, emission data shall be obtained by using one of the following options to provide emission data for a minimum of 75% of the operating hours in each kiln operating day, in at least 22 out of 30 successive cement kiln operating days.

6) Standby monitoring systems, 40 CFR §60 Appendix A Method 10 or 10B, or other approved reference methods, or data substitution as follows:

(a) If the missing data period is 6 hours or less, then substitute an average of the quality assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data; and

(b) If the missing data period is greater than 6 hours, then substitute the greatest emission rate or flow (if a flow monitor is used) recorded during the previous 168 quality assured monitor operating hours at a clinker production rate that is within 10% of the current operating rate. If there are not enough data to satisfy this requirement, then substitute data from a higher clinker production rate or the maximum design flow or emission rate.

ii. The owner or operator shall keep records for each operating day including the following information:

1) Calendar date,

2) The 30-day average hourly CO emission rates, expressed as pounds per hour, calculated at the end of each cement kiln operating day from the measured hourly CO emission rates for the preceding 30 cement kiln operating days. The average shall not include data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments,

3) Identification of the cement kiln operating days when the calculated rolling 30-day average hourly CO emission rates are in excess of the CO emissions standard,

4) Identification of the cement kiln operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken,

5) Identification of the times when emission data have been excluded from the calculation of average emission rates, the reasons for excluding data, and description of corrective action taken,

6) Identification of times when hourly averages have been obtained based on 40 CFR §Part 60 Appendix A Method 10 or Method 10B,

7) Identification of times which the CEMS (including all monitors) was inoperative, including the date and time and the nature of the system repairs or adjustments except for zero and span checks,

8) Identification of the times when the pollutant concentration exceeded full span of the CEMS,

9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with 40 CFR §Part 60 Appendix C Performance Specification 4,

10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR §Part 60 Appendix F Procedure 1.

iii. The owner or operator shall monthly calculate and record the CO emission rate expressed as tons per 12 consecutive month period. (See Appendix F for Calculation Methodology)

iv. For monitoring and record keeping requirements pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

b. **Fuel**

i. For waste oil, the owner or operator shall either upon receipt of the waste oil obtain an analysis from the shipper or perform an analysis of the waste oil before the waste oil is combusted. The analysis shall specify the following parameters; 1) Arsenic (ppm), 2) Cadmium (ppm), 3) Chromium (ppm), 4) Lead (ppm), 5) Total halogens (ppm), 6) PCB=s (ppm), 7) Flash Point (deg F), 8) Heat content (Btu/lb), 9) Suspended solids (%), 10) pH, 11) Chlorinated solids (%), 12) Ash (%), and 13) Sulfur (%).

ii. The owner or operator shall keep a record of the material analysis for each shipment of off-spec waste oil and on-spec waste oil.

iii. The owner or operator shall keep a record of the type and amount of each fuel that is combusted during each hour on a 24 hour basis.

iv. The owner or operator shall keep a record of the kiln feed rate for every hour of operation of the kiln or a declaration that the kiln did not operate.

v. For monitoring and record keeping requirements pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

c. **HAP (40 CFR 63 Subpart LLL (MACT))**

i. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 63 Subpart LLL see Appendix B.[74]

ii. For 40 CFR 63 Subpart LLL and 40 CFR 60 Subpart DDDD conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

d. **NO_x**

[74] K-540-1, K-560-2, K-945-29, K-945-30, K-990, and K-992 have a total enclosure and no monitoring, recordkeeping or reporting is required.

i. The owner or operator shall keep records for each operating day including the following information:

1) Calendar date,

2) The average hourly NO_x emission rates measured, expressed as pounds per ton of clinker produced by the cement kiln,

3) The 30-day average NO_x emission rates, expressed as pounds per ton clinker produced by the cement kiln, calculated at the end of each cement kiln operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 cement kiln operating days. The average shall not include data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments,

4) Identification of the cement kiln operating days when the calculated rolling 30-day average NO_x emission rates are in excess of the NO_x emissions standard of the NO_x RACT Plan - Amendment 2. (See Appendix G)

5) Identification of the cement kiln operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken,

6) Identification of the times when emission data have been excluded from the calculation of average emission rates, the reasons for excluding data, and description of corrective action taken,

7) Identification of times when hourly averages have been obtained based on 40 CFR §Part 60 Appendix A Method 7 or Method 7a,

8) Identification of times which the CEMS (including all monitors) was inoperative, including the date and time and the nature of the system repairs or adjustments except for zero and span checks,

9) Identification of the times when the pollutant concentration exceeded full span of the CEMS,

10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with 40 CFR §Part 60 Appendix C Performance Specification 2,

11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR §Part 60 Appendix F Procedure 1,

12) Results of the quarterly raw materials conversion factor testing, and

13) Clinker production rates used to determine the pounds of NO_x per ton of clinker produced by the cement kiln.

ii. The owner or operator shall monthly calculate and record the NO_x emission rate expressed as tons per 12 consecutive month period. (See Appendix F for Calculation Methodology)

iii. For monitoring and record keeping requirements pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

iv. See Appendix O for SNCR requirments from the Consent Decree filed on 11/29/2016.

e. **Opacity**

i. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-900/901, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, K-AF Bin, and K-PAC See Emission Unit Plantwide.[75]

ii. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 60 Subpart F see Appendix B.[75]

iii. For C-541, C-545, C-945, C-945-32, C-AF-DC1, C-AF-DC2 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

[75] K-540-1, K-560-2, K-945-29, K-945-30, K-990, and K-992 have a total enclosure and no monitoring, recordkeeping or reporting is required.

f. **PM**

i. If there is any time that a control device for K-900/901 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr; (See Appendix F for Calculation Methodology)

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For K-900/901 the owner or operator shall daily record the hours of operation of the equipment.

iii. For K-900/901 the owner or operator shall monthly calculate and record the 12 consecutive month PM emissions. (See Appendix F for Calculation Methodology)

iv. For C-541, C-545, C-945, C-945-32, C-AF-DC1, C-AF-DC2 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

v. If there is any time that a control device for K-526 or K-538 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM and PM10 during the bypass in lb/bypass event; (See Appendix F for Calculation Methodology)

5) For K-526 and K-538 combined the 12 consecutive month total emissions of PM and PM_{10} for each set of consecutive

12 month periods which includes the bypass event;[76] (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

vi. **Clinker production monitoring requirements**. For any kiln subject to an emissions limitation on PM, NO_X, or SO_2 emissions (lb/ton of clinker), you must: (40 CFR 60.63(b))

1) Determine hourly clinker production by one of two methods: (40 CFR 60.63(b)(1))

(a) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates of the amount of clinker produced in tons of mass per hour. The system of measuring hourly clinker production must be maintained within ± 5 percent accuracy or
(40 CFR 60.63(b)(1)(i))

(b) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates of the amount of feed to the kiln in tons of mass per hour. The system of measuring feed must be maintained within ± 5 percent accuracy. Calculate your hourly clinker production rate using a kiln specific feed-to-clinker ratio based on reconciled clinker production rates determined for accounting purposes and recorded feed rates. This ratio should be updated monthly. Note that if this ratio changes at clinker reconciliation, you must use the new ratio going forward, but you do not have to retroactively change clinker production rates previously estimated.
(40 CFR 60.63(b)(1)(ii))

(c) For each kiln operating hour for which you do not have data on clinker production or the amount of feed to the kiln, use the value from the most recent previous hour for which valid data are available. (40 CFR 60.63(b)(1)(iii))

2) Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production rates or feed rates before initial use (for new sources) or by the effective compliance date of this rule (for existing sources).

[76] K-526 is not included in the NSR PM2.5 avoidance limit because it cannot exceed the PM2.5 significant threshold uncontrolled.

During each quarter of source operation, you must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production rates or feed rates. (40 CFR 60.63(b)(2))

3) If you measure clinker production directly, record the daily clinker production rates; if you measure the kiln feed rates and calculate clinker production, record the daily kiln feed and clinker production rates. (40 CFR 60.63(b)(3))

vii. **PM Emissions Monitoring Requirements.** (40 CFR 60.63(c))

1) For each kiln or clinker cooler subject to a PM emissions limit in § § 60.62(a)1(ii) and 60.62(a)1(iii) or 60.62(b)(1)(i) and 60.62(b)(1)(ii), you must demonstrate compliance through an initial performance test. You will conduct your performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM CPMS. (40 CFR 60.63(c)(1))

2) For your PM CPMS, you will establish a site-specific operating limit. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit equivalent to 75 percent of the standard. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test demonstrating compliance with the PM limit to establish your operating limit. You will use the PM CPMS to demonstrate continuous compliance with your operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR 60.63(c)(2))

(a) Your PM CPMS must provide a 4-20 milliamp or digital signal output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or the monitors digital equivalent. (40 CFR 60.63(c)(2)(i))

(b) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to two times your allowable emission limit. If your PM

CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.
(40 CFR 60.63(c)(2)(ii))

(c) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs). (40 CFR 60.63(c)(2)(iii))

3) Determine your operating limit as specified in paragraphs (c)(4)(i) through (c)(5) of this section. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit, you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit, you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR 60.63(c)(3))

4) If the average of your three Method 5 or 5I compliance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or 5I compliance test with the procedures in (c)(4)(i)(A) through (D) of this section. (40 CFR 60.63(c)(4))

(a) Determine your PM CPMS instrument zero output with one of the following procedures. (40 CFR 60.63(c)(4)(i))

(i) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.
(40 CFR 60.63(c)(4)(i)(A))

(ii) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air. (40 CFR 60.63(c)(4)(i)(B))

(iii) The zero point can also can be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept. (40 CFR 60.63(c)(4)(i)(C))

(iv) If none of the steps in paragraphs (c)(4)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer. (40 CFR 60.63(c)(4)(i)(D))

(b) Determine your PM CPMS instrument average in milliamps or digital equivalent and the average of your corresponding three PM compliance test runs, using equation 1. (40 CFR 60.63(c)(4)(ii))

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1 \,, \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 1)}$$

Where:

X_1 = The PM CPMS data points for the three runs constituting the performance test,

Y_1 = The PM concentration value for the three runs constituting the performance test, and

n = The number of data points.

(c) With your PM CPMS instrument zero expressed in milliamps or a digital value, your three run average PM CPMS milliamp or digital signal value, and your three run average PM concentration from your three PM performance test runs, determine a relationship of lb/ton-clinker per milliamp or digital signal with equation 2. (40 CFR 60.63(c)(4)(iii))

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 2)}$$

Where:

R = The relative lb/ton clinker per milliamp or digital equivalent for your PM CPMS.

Y_1 = The three run average PM lb/ton clinker.

X_1 = The three run average milliamp or digital signal output from your PM CPMS.

z = The milliamp or digital equivalent of your instrument zero determined from (c)(4)(i) of this section.

(d) Determine your source specific 30-day rolling average operating limit using the lb/ton-clinker per milliamp or digital signal value from Equation 2 above in Equation 3, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit. (40 CFR 60.63(c)(4)(iv))

$$O_l = z + (0.75(L)) / R \qquad \text{(Eq. 3)}$$

Where:

O_l = The operating limit for your PM CPMS on a 30-day rolling average, in milliamps or the digital equivalent.

L = Your source emission limit expressed in lb/ton clinker.

z = Your instrument zero in milliamps or a digital equivalent, determined from (1)(i).

R = The relative lb/ton-clinker per milliamp or digital equivalent, for your PM CPMS, from Equation 2.

5) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit, you must determine your operating limit by averaging the PM CPMS milliamp or digital equivalent output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 4.
(40 CFR 60.63(c)(5))

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i \qquad \text{(Eq. 4)}$$

Where:

X_1 = The PM CPMS data points for all runs i.

n = The number of data points.

O_h = Your site specific operating limit, in milliamps or digital equivalent.

6) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating, and use all the PM CPMS data for calculations when the source is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or the digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 5 to determine the 30 kiln operating day average. (40 CFR 60.63(c)(6))

$$30\text{kiln operating day average} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 5)}$$

Where:

Hpvi = The hourly parameter value for hour i.

n = The number of valid hourly parameter values collected over the previous 30 kiln operating days.

7) Use EPA Method 5 or Method 5I of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct at least three separate runs each while the mill is on and the mill is off under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs to determine compliance. You need not determine the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. (40 CFR 60.63(c)(7))

8) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp or digital

signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run. (40 CFR 60.63(c)(8))

viii. For each CPMS or CEMS required under paragraphs (c) through (e) of this section: (40 CFR 60.63(g))

1) You must operate the monitoring system and collect data at all required intervals at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). (40 CFR 60.63(g)(1))

2) You may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. An owner or operator must use all the data collected during all other periods in reporting emissions or operating levels. (40 CFR 60.63(g)(2))

3) You must meet the requirements of § 60.13(h) when determining the 1-hour averages of emissions data. (40 CFR 60.63(g)(3))

ix. You must install, operate, calibrate, and maintain instruments for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere for each kiln subject to the PM emissions limits in § 60.62(a)(1)(ii) and (iii) and (b)(1)(i) and (ii), the NO_X emissions limit in § 60.62(a)(3), or the SO_2 emissions limit in § 60.62(a)(4) according to the requirements in paragraphs (h)(1) through (10), where appropriate, of this section. (40 CFR 60.63(h))

1) The owner or operator must install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the NO_X and/or SO_2 CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the

volumetric flow rate and generates an output proportional to that flow rate. (40 CFR 60.63(h)(1))

2) The flow rate monitoring system must be designed to measure the exhaust gas flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust gas flow rate. (40 CFR 60.63(h)(2))

3) The flow rate monitoring system must have a minimum accuracy of 5 percent of the flow rate. (40 CFR 60.63(h)(3))

4) The flow rate monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (h)(2) of this section. (40 CFR 60.63(h)(4))

5) The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system must be compatible with the output signal of the flow rate sensors used in the monitoring system. (40 CFR 60.63(h)(5))

6) The flow rate monitoring system must be designed to measure a minimum of one cycle of operational flow for each successive 15-minute period. (40 CFR 60.63(h)(6))

7) The flow rate sensor must be able to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in appendix B to this part for a discussion of CD). (40 CFR 60.63(h)(7))

(a) Conduct the CD tests at two reference signal levels, zero (*e.g.*, 0 to 20 percent of span) and upscale (*e.g.*, 50 to 70 percent of span). (40 CFR 60.63(h)(7)(i))

(b) The absolute value of the difference between the flow monitor response and the reference signal must be equal to or less than 3 percent of the flow monitor span. (40 CFR 60.63(h)(7)(ii))

8) You must perform an initial relative accuracy test of the flow rate monitoring system according to section 8.2 of Performance Specification 6 of appendix B to this part, with the exceptions noted in paragraphs (h)(8)(i) and (ii) of this section. (40 CFR 60.63(h)(8))

(a) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system. (40 CFR 60.63(h)(8)(i))

(b) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data. (40 CFR 60.63(h)(8)(ii))

9) You must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in paragraph (h)(8) of this section. (40 CFR 60.63(h)(9))

10) You must operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments. (40 CFR 60.63(h)(10))

x. **Development and Submittal (Upon Request) of Monitoring Plans.**
To demonstrate compliance with any applicable emissions limit through performance stack testing or other emissions monitoring (including PM CPMS), you must develop a site-specific monitoring plan according to the requirements in paragraphs (i)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 60.13(3)(i). If you use a bag leak detector system (BLDS), you must also meet the requirements specified in paragraph § 63.1350(m)(10) of this chapter.
(40 CFR 60.63(i))

1) For each continuous monitoring system (CMS) required in this section, you must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (i)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 30 days before the initial performance evaluation of your CMS.
(40 CFR 60.63(i)(1))

(a) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (40 CFR 60.63(i)(1)(i))

(b) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and (40 CFR 60.63(i)(1)(ii))

(c) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations). (40 CFR 60.63(i)(1)(iii))

2) In your site-specific monitoring plan, you must also address paragraphs (i)(2)(i) through (iii) of this section. (40 CFR 60.63(i)(2))

(a) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (c)(3), and (c)(4)(ii); (40 CFR 60.63(i)(2)(i))

(b) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and (40 CFR 60.63(i)(2)(ii))

(c) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i). (40 CFR 60.63(i)(2)(iii))

3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (40 CFR 60.63(i)(3))

4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. (40 CFR 60.63(i)(4))

xi. For conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

xii. For compliance assurance monitoring (CAM) of K-900/901 see Appendix M.

g. **Regulation 5.15 (Risk Management Plan 112(r))**

i. The owner or operator shall maintain a copy of the MSDS for the ammonia used.

h. **SO_2**

i. For Stack S-11 the owner or operator shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) in accordance with 40 CFR §60.13 and 40 CFR §60 Appendix C, PS-2. (Construction Permit 312-75-C, dated April 14, 1998, revised application received May 16, 2000)

1) The SO_2 CEMS shall be operated and data recorded during all periods of operation of the cement kiln except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks and zero and span adjustments.

2) The 1-hour average SO_2 emission rates measured by the CEMS shall be expressed in pounds per hour and shall be

used to calculate the average emission rates. For a full operating hour, at least four valid data points shall be used to calculate each 1-hour average.

3) The span value for the SO_2 CEMS shall be determined so that all expected concentrations can be measured.

4) The Quality Assurance Procedures in 40 CFR §60 Appendix F shall be followed.

5) When SO_2 emission data or flow monitor data (if a flow monitor is used) are not obtained because of CEMS breakdowns, repairs, calibration checks, or zero and span adjustments, emission data shall be obtained by using one of the following options to provide emission data for a minimum of 75% of the operating hours in each kiln operating day, in at least 22 out of 30 successive cement kiln operating days.

6) Standby monitoring systems, 40 CFR §60 Appendix A Method 6, 6A, or 6C, or other approved reference methods, or data substitution as follows:

(a) If the missing data period is 6 hours or less, then substitute an average of the quality assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data; and

(b) If the missing data period is greater than 6 hours, then substitute the greatest emission rate or flow (if a flow monitor is used) recorded during the previous 168 quality assured monitor operating hours at a clinker production rate that is within 10% of the current operating rate. If there are not enough data to satisfy this requirement, then substitute data from a higher clinker production rate or the maximum design flow or emission rate.

ii. The owner or operator shall keep records for each operating day including the following information:

1) Calendar date,

2) The 30-day average hourly SO_2 emission rates, expressed as pounds per hour, calculated at the end of each cement kiln operating day from the measured hourly SO_2 emission rates for the preceding 30 cement kiln operating days. The average shall not include data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments,

3) Identification of the cement kiln operating days when the calculated rolling 30-day average hourly SO_2 emission rates are in excess of the SO_2 emissions standard,

4) Identification of the cement kiln operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken,

5) Identification of the times when emission data have been excluded from the calculation of average emission rates, the reasons for excluding data, and description of corrective action taken,

6) Identification of times when hourly averages have been obtained based on 40 CFR §Part 60 Appendix A Method 6 or Method 6A,

7) Identification of times which the CEMS (including all monitors) was inoperative, including the date and time and the nature of the system repairs or adjustments except for zero and span checks,

8) Identification of the times when the pollutant concentration exceeded full span of the CEMS,

9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with 40 CFR §Part 60 Appendix C Performance Specification 2,

10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR §Part 60 Appendix F Procedure 1.

iii. The owner or operator shall monthly calculate and record the SO_2 emission rate expressed as tons per 12 consecutive month period. (See Appendix F for Calculation Methodology)

iv. For monitoring and record keeping requirements pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

v. See Appendix O for requirements from the Consent Decree filed on 11/29/2016.

i. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U7/U13". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-900/901, K-526, and K-538 is bypassed or not in operation when the process equipment associated

with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U7/U13" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U7/U13" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-900/901, K-526, and K-538.

j. **Unit Operation**

i. The owner or operator shall keep a daily record of the hours of operation of the Kiln (K-900/901).

ii. The owner or operator shall calculate the monthly and 12 consecutive month hours of operation for each month.

iii. The owner or operator must keep a record of the applicability determinations made in accordance with 40 CFR §60.10(b)(3) each time the regulations applicable to the kiln changes. The applicability determinations must include an analysis that demonstrates why either the PCMACT or CISWI regulations are or are not applicable at a given time. The record of the applicability determination must be signed by the person making the determination and retained onsite for at least 5 years.

k. **VOC and THC**

i. The owner or operator shall monthly calculate and record the average hourly, monthly and 12 consecutive month VOC emissions. (See Appendix F for Calculation Methodology)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **CO**

i. Emission unit ID number and emission point ID number;

ii. The monthly and 12 consecutive month CO emissions and standards for each month in the reporting period;

iii. Identification of all periods of exceedance of the CO emission limits; and

iv. The daily average pound per hour CO emissions for each exceedance in the reporting period.

v. For conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

b. **Fuel**

i. Emission unit ID number and emission point ID number;

ii. Time, date, amount of each fuel deviating from permit limits, and the standard for each hour on a 24 hour basis where the amount exceeded any of the limits; and

iii. Time, date, and amount of waste oil that was combusted that did not meet the required specifications.

iv. While complying with 40 CFR 63 Subpart LLL, if the owner or operator plans to commence utilization of solid waste as a fuel, a fuel-to-waste switch is to be implemented. The effective date of the fuel-to-waste switch is the first day solid waste is to be introduced to the combustion chamber of the Kiln with preheat tower (K-900/901). The owner or operator must provide 30 days prior notice of the effective date of the fuel-to-waste switch. The notification must address the items listed in 40 CFR §60.2710(a)(4). (See Appendix D)

c. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 63 Subpart LLL see Appendix B.

ii. For 40 CFR 63 Subpart LLL and 40 CFR 60 Subpart DDDD conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

d. **NO_x**

i. Emission unit ID number and emission point ID number;

ii. The monthly and 12 consecutive month NO_x emissions and standards for each month in the reporting period;

iii. The daily average pound per hour NO_x emissions and standards and the daily average pound per ton of feed for each exceedance in the reporting period; and

iv. The owner or operator shall submit excess emission reports for any excess emissions that occurred during the reporting period. This report shall include the magnitude of the excess emissions in pounds per ton of clinker produced and the date and time of the commencement and completion of each period of excess emissions as well as the nature and cause of each period of excess emissions and any corrective actions taken or preventive measures adopted.

v. For conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

vi. See Appendix O for SNCR requirements from the Consent Decree filed on 11/29/2016.

e. **Opacity**

i. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-900/901, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, K-AF Bin, and K-PAC See Emission Unit Plantwide.[77]

ii. For K-521, K-523, K-524, K-526, K-536, K-538, K-541, K-945-27, K-AF 4, K-AF 5, K-AF 6, K-AF 7, K-AF 8, K-AF 9, K-AF 1, K-AF DS, K-AF 2, K-AF ELEV, K-AF 3, and K-AF Bin sources subject to 40 CFR 60 Subpart F see Appendix B.[77]

iii. For C-541, C-545, C-945, C-945-32, C-AF-DC1, C-AF-DC2:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none); and

4) Description of any corrective action taken for each exceedance.

f. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-900/901 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

[77] K-540-1, K-560-2, K-945-29, K-945-30, K-990, and K-992 have a total enclosure and no monitoring, recordkeeping or reporting is required.

4) Description of any corrective action taken for each exceedance.

ii. For K-900/901 the owner or operator shall report the 12 consecutive month PM emissions for each month in the reporting period.

iii. For C-541, C-545, C-945, C-945-32, C-AF-DC1, C-AF-DC2 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

iv. The owner or operator shall report the following information regarding bypass activity for K-526 or K-538 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated PM and PM_{10}, emissions[78] in lb/hr and the 12 month total for each bypass and identification of any exceedance of the standards;

4) Description of any corrective action taken for each exceedance.

v. **Recordkeeping and reporting requirements**. (40 CFR 60.65)

1) Each owner or operator required to install a CPMS or CEMS under sections § 60.63(c) through (e) shall submit reports of excess emissions. The content of these reports must comply with the requirements in § 60.7(c). Notwithstanding the provisions of § 60.7(c), such reports shall be submitted semiannually. (40 CFR 60.65(a))

2) Each owner or operator of facilities subject to the provisions of § 60.63(c) through (e) shall submit semiannual reports of the malfunction information required to be recorded by § 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere.
(40 CFR 60.65(b))

3) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, 42 U.S.C. 7411, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that

[78] K-526 is not included in the NSR PM2.5 avoidance limit because it cannot exceed the PM2.5 significant threshold uncontrolled.

they comply with the requirements established by the State. (40 CFR 60.65(c))

vi. For conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

vii. For Clinker Cooler (K-900/901) the owner or operator shall report any failure to perform Compliance Assurance Monitoring (CAM).

g. **Regulation 5.15 (Risk Management Plan 112(r))**

i. Emission unit ID number and emission point ID number

ii. Any deviation from the standard.

h. **SO_2**

i. Emission unit ID number and emission point ID number;

ii. The monthly and 12 consecutive month SO_2 emissions and standards for each month in the reporting period;

iii. Identification of all periods of exceedance of the SO_2 emission limits; and

iv. The daily average pound per hour SO_2 emissions and standards for each exceedance in the reporting period.

v. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

vi. See Appendix O for requirements from the Consent Decree filed on 11/29/2016.

i. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC emissions U7/U13":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-526, K-538, and K-900/901 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U7/U13".

j. **Unit Operation**

i. Emission unit ID number and emission point ID number

ii. Monthly and 12 consecutive month hours of operation for each month in the reporting period.

iii. For additional conditions pertaining to the Kiln with preheat tower (K-900/901) see Appendix C.

k. **VOC and THC**

i. Emission unit ID number and emission point ID number;

ii. The average lb/hr VOC emissions and standards for each month in the reporting period;

iii. The monthly and 12 consecutive month VOC emissions and standards for each month in the reporting period; and

iv. The owner or operator shall comply with the THC reporting requirements in 40 CFR 63 Subpart LLL.

S4. **Testing** (Regulation 2.16, section 4.3.1)

a. **General Requirements**

i. See Emission Unit Plantwide.

b. **Ammonia**

i. Within 180 days of the effective date of this permit the owner or operator shall perform an EPA Reference Method 350.1 performance test on the inlet and outlet of the Kiln stack S-945. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

c. **PM Test methods and procedures. (40 CFR 60.64)**

i. In conducting the performance tests and relative accuracy tests required in § 60.8, you must use reference methods and procedures and the test methods in appendix A of this part or other methods and procedures as

specified in this section, except as provided in § 60.8(b).
(40 CFR 60.64(a))

1) You must demonstrate compliance with the PM standards in § 60.62 using EPA method 5 or method 5I.
(40 CFR 60.64(b)(1))

2) Use Method 9 and the procedures in § 60.11 to determine opacity. (40 CFR 60.64(b)(2))

3) Within 60 days after the date of completing each performance test (see § 60.8) as required by this subpart you must submit the results of the performance tests conducted to demonstrate compliance under this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the CBI, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13.
(40 CFR 60.64(d)(1))

4) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value

equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.
(40 CFR 60.64(d)(3))

d. **TAC**

i. By no later than December 16, 2021, the owner or operator shall perform EPA Methods 5, 201A, 23, 29, SW846-0030, and SW846-0061 on the inlet and outlet of the control device. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

e. **VOC**

i. Within 180 days of the effective date of this permit the owner or operator shall perform an EPA Reference Method 25 performance test on the inlet and outlet of the Kiln stack S-945. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

Emission Unit U16: Coal Handling and Coal Mill

Coal and coke are fed to the process by dumping them into an unloading hopper and feeder, and then conveyed to a radial stacker. From the radial stacker, material is conveyed by belt to a raw coal bin and feeder to the coal mill. Once ground, material is transferred to a fine coal bin for storage before being blown into the kiln as a fuel.

U16 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 60 Subpart Y	Standards of Peformance for Coal Preparation and Processing Plants	60.250, 60.251, 60.252, 60.253, 60.254, 60.255, 60.256, 60.257, and 60.258
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U16 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-Coal2	F-Coal2	Coal Pile to Hopper K-1302	1.14, 7.02, 7.08, STAR*, 40CFR60-Y	NA	F-Coal2
K-PC2	F-PC2	Pet Coke Pile to Hopper K-1302	1.14, 7.02, 7.08, STAR*, 40CFR60-Y	NA	F-PC2
K-1302a	F-1302a	Hopper K-1302 to Feeder K-1302-1 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1302a
K-1302b	F-1302b	Hopper K-1302 to Feeder K-1302-2 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1302b
K-1302-1	F-1302-1	Feeder K-1302-1 to Belt K-1303 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1302-1
K-1302-2	F-1302-2	Feeder K-1302-2 to Belt K-1303 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1302-2
K-1303	F-1303	Belt K-1303 to Radial Stacker K-1304-1 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1303
K-1304-1	F-1304-1	Radial Stacker K-1304-1 to Pile (Capacity: 300 TPH; Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-F	NA	F-1304-1
K-1306-1	F-1306-1	Feeder K-1306-1 to Belt K-1307 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1306-1
K-1307	F-1307	Belt K-1307 to Belt K-1309 (Installed: 1974)	1.14, 7.02, STAR*, 40CFR60-Y	NA	F-1307
K-1309	E-1309	Belt K-1309 to Raw Coal Bin K-902 (Installed: 1974)	6.09, 7.02, STAR*, 40CFR60-Y	C-902-1	S-902-1
K-902	E-902	Raw Coal Bin K-902 to Belt K-849 (Capacity: 360 TPH; Installed: 2000)	2.05, 7.02, 7.08, STAR*, 40CFR60-Y	C-902-1	S-902-1

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-849	F-849	Belt K-849 to Belt K-850 (Installed: 2000)	1.14, 7.02, 7.08, STAR*, 40CFR60-Y	NA	F-849
K-850	F-850	Belt K-850 to Posimetric Feeder (Capacity: 40 TPH; Installed: 2000)	1.14, 7.02, 7.08, STAR*, 40CFR60-Y	NA	F-850
K-855	E-855	Coal Mill, Raw Coal Bin & Fine Coal Bin: Coal Mill K-855 to Capacity: 30 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-857-1, 2, 3	S-857-1, 2, 3
K-857-1, 2, 3	E-857	Baghouse K-857-1,2,3 to Fine Coal Bin K-865 (Make: Amerex; Model: RPC13-300D4; Installed: 2000)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-865-5	S-865-5
K-865	E-865	Fine Coal Bin K-865 to Kiln K-901 (Capacity: 110 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-865-5	S-865-5

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U16 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-865-5	A twenty (20) compartment baghouse controlling emissions from the fine coal bin. (Make: Aeropulse; Model: RB-14-5-N; Capacity: 250 DSCFM)	VEs	S-865-5
C-857-1, 2, 3	Three dust collectors, venting to one stack, controlling emissions from the coal mill. (Make: Amerex; Model: RPC13-300D4; Capacity: 35,364 DSCFM)	VEs	S-857-1,2,3
C-902-1	One forty-nine (49) compartment baghouse controlling emissions from the coal/pet coke raw storage bin. (Make: Amerex; Model: RP-8-49; Capacity: 3,000 DSCFM)	VEs	S-902-1

U16 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-855, K-857-1, 2, 3, and K-865 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-Coal2, K-PC2, K-1302a, K-1302b, K-1302-1, K-1302-2, K-1303, K-1304-1, K-1306-1, K-1307, K-849, and K-850, See Emission Unit Plantwide for Regulation 1.14 requirements.

ii. For K-1309 see Emission Unit Plantwide for Regulation 6.09 requirements.

iii. For K-855, K-857-1, 2, 3 and K-865 sources subject to 40 CFR 60 Subpart F see Appendix B. [79]

iv. For K-Coal2, K-PC2, K-1302a, K-1302b, K-1302 1, K-1302 2, K-1303, K-1304 1, K-1306 1, K-1307, K-1309, K-902, K-849, and K-850 the owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (40 CFR §60.254(a))[80]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U16" based on actual operating hours in a calendar day.

Table 24 Hourly PM Standards U16

Equipment	Standard (lb/hr)	Reg. Citation
K-Coal2[81,82]	36.17	7.08, section 3.1.2
K-PC2[81,82]	36.17	7.08, section 3.1.2
K-1309[81,82]	65.08	6.09, section 3.2
K-902[81]	44.39	7.08, section 3.1.2

[79] Since emission points K-855, K-857-1, 2, 3 and K-865 are subject to a more stringent opacity standard in 40 CFR 60 Subpart F, the 20% opacity standard in Regulaiton 7.08 does not applyin accordance with Regulation 7.02, section 5.

[80] Since emission points K-Coal2, K-PC2, K-1302a, K-1302b, K-1302 1, K-1302 2, K-1303, K-1304 1, K-1306 1, K-1307, K-902, K-849, and K-850 are subject to 40 CFR 60 Subpart Y, the 20% opacity standard in Regulaiton 7.08 does not apply in accordance with Regulation 7.02, section 5.

[81] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[82] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-902[81,83]	0.5	2.05 and 91-98-C
K-849[81,82]	36.17	7.08, section 3.1.2
K-850[81,82]	31.23	7.08, section 3.1.2
K-855[79]	36.17	7.08, section 3.1.2
K-855[81]	7.4	2.05 and 63-98-C
K-857-1, 2, 3[81,82]	36.72	7.08, section 3.1.2
K-865[79]	36.72	7.08, section 3.1.2
K-865[81,83]	0.1	2.05 and 142-00-C

ii. For K-902, the owner or operator shall not allow PM emissions to exceed 2.1 tons per 12 consecutive month period. (Regulation 2.05 and 91-98-C, Effective 4/1/1998)[83 ,84]

iii. For K-865, the owner or operator shall not allow PM emissions to exceed 0.3 tons per 12 consecutive month period. (Regulation 2.05 and 142-00-C, Effective 7/1/2000)[83,84]

iv. For Emission Point K-855, the owner or operator shall not allow PM emissions to exceed 24.2 tons per 12 consecutive month period. (Regulation 2.05 and 63-98-C, Effective 4/1/1998)[83,85]

d. **TAC**

i. See Emission Unit Plantwide.[86]

ii. The owner or operator shall not allow TAC emissions to exceed *de minimis* values for the equipment as indicated in the following table "*De Minimis* TAC Standards U16". (Regulation 5.21, section 4.2 and section 4.3)

Table 25 De Minimis TAC Standards U16

Equipment ID	Cr6	Ni	As	Co
K-855	*	*	*	*

[83] This limit is for PSD avoidance.

[84] These emission points cannot exceed the tons per consecutive 12 month PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[85] The tons per 12 consecutive month limit can be exceeded uncontrolled; therefore, monitoring, recordkeeping, and reporting are required for the controls.

[86] The equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iii. For K-855 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-855, K-857-1, 2, 3, and K-865 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-Coal2, K-PC2, K-1302a, K-1302b, K-1302-1, K-1302-2, K-1303, K-1304-1, K-1306-1, K-1307, K-1309, K-902, K-849, K-850, K-855, K-857-1, 2, 3 and K-865 See Emission Unit Plantwide. For K-855, K-857-1, 2, 3 and K-865 sources subject to 40 CFR 60 Subpart F see Appendix B.

ii. For C-865-5; C-857-1, 2, 3; and C-902-1 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. If there is any time that a control device for K-855 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The 12 consecutive month total emissions of each PM for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For C-865-5; C-857-1, 2, 3; and C-902-1 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. If there is any time that a control device for K-855 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U16" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U16" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iii. The owner or operator shall daily record the hours of operation for K-855.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-855, K-857-1, 2, 3, and K-865 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-Coal2, K-PC2, K-1302a, K-1302b, K-1302-1, K-1302-2, K-1303, K-1304-1, K-1306-1, K-1307, K-1309, K-902, K-849, K-850, K-855, K-857-1, 2, 3, and K-865 see Emission Unit Plantwide.

ii. For K-855, K-857-1, 2, 3 and K-865 sources subject to 40 CFR 60 Subpart F see Appendix B

iii. For C-865-5; C-857-1, 2, 3; and C-902-1:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-855 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Identification of any exceedance of the any 12 month standard;

4) Description of any corrective action taken for each exceedance; and

ii. For C-865-5; C-857-1, 2, 3; and C-902-1 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding bypass activity for K-855 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U16".

Emission Unit U18: Clinker Cooler

Clinker is cooled after exiting the kiln and sent on to clinker handling.

U18 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
40 CFR 64	Compliance Assurance Monitoring	64.1 through 64.10
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U18 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-909	E-909a	Clinker Cooler K-909 to Drag Chains K-911 and K-911-1 (Make: Humbolt Wedag; Model: PSC2-081.12; Capacity: 225 TPH; Installed: 2001)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR64, 40CFR60-F, 40CFR63-LLL	C-924	S-924
	E-909b			C-924	S-924
K-909-4	E-909-4	Drag Chain K-909-4 to Elevators K-912 and K-913 (Make: Allis Chalmers; Model: 22-115-791-801; Installed: 1974) (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-911	E-911	Drag Chain K-911 to Elevators K-912 and K-913 (Make: Louise; Model: LF10892; Capacity: 175 TPH; Installed: 2001) (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-911-1	E-911-1	Drag Chain K-911 to Elevator K-912 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40 CFR 60 F, 40 CFR 63 LLL	NA	NA
K-912	E-912	Elevator K-912 to Drag Chain K-914 and Belt K-949 (U-19) (Make: Rexnord; Model: 4118-01; Capacity: 170 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-924	S-924
	E-912a			C-949-5 see U-19	S-949-5 see U-19
	E-912b			C-915-4	S-915-4
K-913	E-913	Elevator K-913 to Drag Chain K-914and Belt K-949 (U-19) (Make: Rexnord; Model: 4118-01; Capacity: 170 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-924	S-924
	E-913a			C-949-5 see U-19	S-949-5 see U-19
	E-913b			C-915-4	S-915-4
K-914	E-914	Drag Chain K-914 to Hot Tank K-915 (Make: Louise; Model: LF10891; Capacity: 320 TPH; Installed: 2001)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-915-4	S-915-4

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-915	E-915	Hot Tank K-915 to Truck (Capacity: 240 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-915-4	S-915-4

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U18 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-924	One bag collector for control of emissions from the clinker cooler (K-909) and associated equipment. Emissions are exhausted through the clinker cooler stack. (Make: Amerex; Model: RP-14-272D6; Capacity: 171,082 DSCFM)	VEs	S-924
C-915-4	One (1) 64-compartment bag collector to control emissions from the clinker hot tank (K-915) and associated equipment. (Make: IAC; Model: 144TB-BHT-100:S6; Capacity: 12,125 DSCFM)	VEs	S-915-4

U18 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-909-4, K-911, K-911-1, K-912, K-913, K-914, and K-915 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

ii. For Clinker Cooler (K-909) the owner or operator shall limit the PM emissions during normal operations to 0.07 lb/ton of clinker and during periods of startup and shutdown all air pollution control devices must be operating as required by the work practices of 40 CFR §63.1348(b)(9). (40 CFR §63.1343(b)(1))

iii. For Clinker Cooler (K-909) the owner or operator shall not exceed the PM kiln-specific operating limit, based on a 30-day rolling average of 4.0 LSU. (40 CFR §63.1343(b)(1)(i))[87]

b. **Opacity**

i. For K-909, K-909-4, K-912, K-913, and K-915 See Emission Unit Plantwide. [88]

ii. For K-911, K-911-1, and K-914 sources subject to 40 CFR 60 Subpart F see Appendix B.[89]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U18" based on actual operating hours in a calendar day.

Table 26 Hourly PM Standards U18

Equipment[90]	Standard (lb/hr)	Reg. Citation
K-909[91,92]	19.8	2.05 and 309-75-C

[87] Performance test on July 30 – August 1, 2018 was submitted on August 27, 2018. For PM the site-specific operating limits for the 30 day rolling average operating limit at equal to or less than 16.3 LSU was established. As a surrogate for HCl the kiln-specific 30 day rolling average operational parameter SO2 limit was established at equal to or less than 129 ppmv. For HCl the kiln-specific limit of 2.93 ppmvd was established. For THC the kiln-specific operating limit of 22 ppmvd was established. For D/F the kiln-specific operating temperature limits, for the main in-line kiln/raw mill exhaust at the inlet to the kiln PM control device, of 524ºF with the raw mill on and 530ºF with the raw mill off were established.

[88] Regulation 7.08 20% opacity standard applies to the Clinker Cooler (K-909) since 40 CFR 60 Subpart F does not have an opacity standard for this equipment.

[89] Since emission points K-911, K-911-1, and K-914 are subject to a more stringent opacity standard in 40 CFR 60 Subpart F, the 20% opacity standard in Regulaiton 7.08 does not apply in accordance with Regulation 7.02, section 5.

[90] Since the PM emission limit in the NSPS (40 CFR 60 Subpart F) is more stringent than the lb/hr PM emission limit in Regulation 7.08, the emission limit from Regulation does not apply to the Clinker Cooler (K-909), in accordance with Regulation 7.02, section 5.

Equipment[90]	Standard (lb/hr)	Reg. Citation
K-909-4[93]**Error! Bookmark not defined.**,[94]	59.79	6.09, section 3.2
K-911**Error! Bookmark not defined.**,[94]	39.55	7.08, section 3.1.2
K-911-1**Error! Bookmark not defined.**,[94]	39.55	7.08, section 3.1.2
K-912**Error! Bookmark not defined.**,[94]	57.07	6.09, section 3.2
K-913**Error! Bookmark not defined.**,[94]	57.07	6.09, section 3.2
K-914**Error! Bookmark not defined.**,[94]	43.56	7.08, section 3.1.2
K-915**Error! Bookmark not defined.**,[94]	60.50	6.09, section 3.2

ii. For Emission Points K-909 the owner or operator shall not allow the PM emissions to exceed 79.8 tons per 12 consecutive month period. (Regulation 2.05 and 309-75-C, Effective 4/1/1998)[91,92]

iii. The owner or operator shall not exceed 8064 hours of operation per 12 consecutive month period for the Clinker Cooler (K-909). (Regulation 2.05)[95]

iv. On and after the date on which the performance test required to be conducted by § 60.8 is completed, you may not discharge into the atmosphere from any clinker cooler any gases which: (40 CFR 60.62(b))

1) Contain PM in excess of: (40 CFR 60.62(b)(1))

2) 0.10 lb per ton of feed (dry basis) for clinker coolers constructed, reconstructed, or modified after August 17, 1971, but on or before June 16, 2008. (40 CFR 60.62(b)(iii))

d. **TAC**

i. See Emission Unit Plantwide.[96]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the

[91] The combined ton per 12 consecutive month and lb/hr limit can be exceeded uncontrolled; therefore, monitoring, recordkeeping, and reporting on operation of the controls are required.

[92] This limit is for PSD avoidance.

[93] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[94] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[95] This limit is for PSD avoidance.

[96] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

following table "Modeled TAC emissions U18". (Regulation 5.21, section 4.2 and section 4.3)

Table 27 Modeled TAC Emissions U18

Equipment ID	Stack or Area ID	As	Cr6	Co
		lb/12 consecutive month period		
K-914, K-912 (E-912b), K-913 (E-913a), and K-915 combined	S-915-4	7.43E-02	4.11E-02	6.04E-02
K-909 (E-909a&b), K-912 (E-912), and K-913 (E-913)	S-924	3.51E-01	1.94E-01	2.86E-01

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U18". (Regulation 5.21, section 4.2 and section 4.3)

Table 28 *De Minimis* TAC Standards U18

Equipment ID	As	Cr6	Cd	Cr3	Ni	Mn	Pb	Cu	Be	Al
K-909			*	*	*	*	*	*	*	*
K-915	*	*								

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-909 and K-915 the owner or operator shall operate and maintain the baghouse at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-912, K-913, K-914, and K-915 sources subject to 40 CFR 63 Subpart LLL see Appendix B. [97]

ii. Operation and maintenance plan requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1347)

[97] K-909-4, K-911, and K-911-1 have total enclosures and no monitoring, recordkeeping or reporting are required.

1) The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator[98] for review and approval as part of the application for a part 70 permit and shall include the following information: (40 CFR §63.1347(a))

(a) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emissions limits and operating limits, including fugitive dust control measures for open clinker piles of § § 63.1343, 63.1345, and 63.1346. Your operations and maintenance plan must address periods of startup and shutdown. (40 CFR §63.1347(a)(1))

(b) Corrective actions to be taken when required by 40 CFR §63.1350(f)(3); (40 CFR63.1347(a)(2))

2) Failure to comply with any provision of the operations and maintenance plan developed in accordance with this section is a violation of the standard. (40 63.1347(b))

iii. Compliance requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1348)

1) Initial Performance Test Requirements

For an affected source subject to this subpart, the owner or operator shall demonstrate compliance with the emissions standards and operating limits by using the test methods and procedures in 40 CFR §63.1349 and 63.7.

NOTE: The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or 12B) acceptance criteria. The performance test period is complete at the end of the 30th consecutive operating day. See 40 CFR §63.1341 for definition of operating day and 40 CFR §63.1348(b)(1) for the CEMS operating requirements. The source has the option of performing the compliance test earlier then the compliance date if desired. (40 CFR §63.1348(a))

(a) PM Compliance.

[98] Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part). 40 CFR 63.2

If the facility is subject to limitations on PM emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the PM emissions standards by using the test methods and procedures in 40 CFR §63.1349(b)(1). (40 CFR §63.1348(a)(1))

2) Continuous Monitoring Requirements

The owner or operator shall demonstrate compliance with the emissions standards and operating limits by using the performance test methods and procedures in 40 CFR §63.1350 and 63.8 for each affected source. (40 CFR §63.1348(b))

(a) General Requirements

(i) The owner or operator shall monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p). (40 CFR §63.1348(b)(1)(i))

(ii) Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR §63.1348(b)(1)(ii))

(iii) Data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities may not be used in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR §63.1348(b)(1)(iii))

(b) PM Compliance.

If the facility is subject to limitations on PM emissions under 40 CFR §63.1343(b), the owner or operator shall use

the monitoring methods and procedures in 40 CFR §63.1350(b) and (d). (40 CFR §63.1348(b)(2))

3) Changes in operations

(a) If a change in operations is planned to be undertaken that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under this subpart, the source must conduct a performance test as specified in 40 CFR §63.1349(b). (40 CFR §63.1348(c)(1)) (40 CFR §63.1348(c))

(b) In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the owner or operator may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in (c)(2)(i) through (c)(2)(iv) of this section of the federal regulation are met. The owner or operator shall submit temperature and other monitoring data that are recorded during the pretest operations. (40 CFR §63.1348(c)(2))

(i) The owner or operator shall provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (c)(1) of this section of the federal regulation, including when the planned operational change period would begin. (40 CFR §63.1348(c)(2)(i))

(ii) The performance test results must be documented in a test report according to 40 CFR §63.1349(a). (40 CFR §63.1348(c)(2)(ii))

(iii) A test plan must be made available to the Administrator prior to performance testing, if requested. (40 CFR §63.1348(c)(2)(iii))

(iv) The performance test must be completed within 360 hours after the planned operational change period begins. (40 CFR §63.1348(c)(2)(iv))

4) General duty to minimize emissions

At all times the owner or operator shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR §63.1348(d))

iv. Monitoring requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1350)

1) General monitoring requirements: (40 CFR §63.1350(a))

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of this section of the federal regulation. (40 CFR §63.1350(a)(1))

(b) For each existing unit that is equipped with a continuous monitoring system (CMS), maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. (40 CFR §63.1350(a)(3))

(c) Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section of the federal regulation is a violation. (40 CFR §63.1350(a)(4))

2) PM monitoring requirements: (40 CFR §63.1350(b))

(a) A PM continuous parameter monitoring system (CPMS) shall be used to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter shall be conducted. The PM CPMS to demonstrate continuous compliance with this operating limit shall be used. The owner or operator shall repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in 40 CFR §63.1349(b)(1) (i) through (vi) of this subpart. The owner or operator shall also repeat the test if the owner or operator changes the analytical range of the instrument, or if the owner or operator replaces the instrument itself or any principle analytical component of the instrument that

would alter the relationship of output signal to in-stack PM concentration. (40 CFR §63.1350(b)(1)(i))

(b) To determine continuous compliance, the owner or operator shall use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. (40 CFR §63.1350(b)(1)(ii))

(c) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the owner or operator shall: (40 CFR §63.1350(b)(1)(iii))

(i) Within 48 hours of the exceedance, visually inspect the APCD; (40 CFR §63.1350(b)(1)(iii)(A))

(ii) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and (40 CFR §63.1350(b)(1)(iii)(B))

(iii) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. Additional testing is not required to be conducted for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph. (40 CFR §63.1350(b)(1)(iii)(C))

(d) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart. (40 CFR §63.1350(b)(1)(iv))

3) Clinker production monitoring requirements:

In order to determine clinker production, the owner or operator shall: (40 CFR §63.1350(d))

(a) Determine hourly clinker production by one of two methods: (40 CFR §63.1350(d)(1))

(i) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 percent accuracy, or (40 CFR §63.1350(d)(1)(i))

(ii) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of them amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the owner or operator shall use the new ratio going forward, but the owner or operator do not have to retroactively change clinker production rates previously estimated. (40 CFR §63.1350(d)(1)(ii))

(b) Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) Until initial use (for new sources) or by the after compliance date of this rule (for existing sources). During each quarter of source operation, the owner or operator shall determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow). (40 CFR §63.1350(d)(2))

(c) If clinker production is measured directly, record the daily clinker production rates; if the kiln feed rates are measured and clinker production calculated, record the hourly kiln feed and clinker production rates. (40 CFR §63.1350(d)(3))

(d) Develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of this section of the federal regulation. (40 CFR §63.1350(d)(4))

4) Parameter Monitoring Requirements.

If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in

paragraphs (m)(1) through (4) of this section of the federal regulation by the compliance date specified in 40 CFR §63.1351. You must also meet the applicable specific parameter monitoring requirements in paragraphs 63.1350(m)(5) through (11) that are applicable to you. (40 CFR §63.1350(m))

(a) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data. (40 CFR §63.1350(m)(1))

(b) You must conduct all monitoring in continuous operation at all times that the unit is operating. (40 CFR §63.1350(m)(2)

(c) Determine the 1-hour block average of all recorded readings. (40 CFR §63.1350(m)(3))

(d) Record the results of each inspection, calibration, and validation check. (40 CFR §63.1350(m)(4))

(e) Liquid flow rate monitoring requirements.

If you have an operating limit that requires the use of a flow measurement device, you must meet the requirements in paragraphs (m)(5)(i) through (iv) of this section of the federal regulation. (40 CFR §63.1350(m)(5))

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow. (40 CFR §63.1350(m)(5)(i))

(ii) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate. (40 CFR §63.1350(m)(5)(ii))

(iii) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances. (40 CFR §63.1350(m)(5)(iii))

(iv) Conduct a flow sensor calibration check at least semiannually. (40 CFR §63.1350(m)(5)(iv))

(f) Specific pressure monitoring requirements.

If you have an operating limit that requires the use of a pressure measurement device, you must meet the requirements in paragraphs (m)(6)(i) through (vi) of this section of the federal regulation. (40 CFR §63.1350(m)(6))

(i) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure. (40 CFR §63.1350(m)(6)(i))

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion. (40 CFR §63.1350(m)(6)(ii))

(iii) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer with a minimum tolerance of 1 percent of the pressure range. (40 CFR §63.1350(m)(6)(iii))

(iv) Check pressure tap pluggage daily. (40 CFR §63.1350(m)(6)(iv))

(v) Using a manometer, check gauge calibration quarterly and transducer calibration monthly. (40 CFR §63.1350(m)(6)(v))

(vi) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor. (40 CFR §63.1350(m)(6)(vi))

(g) Bag leak detection monitoring requirements.

If you elect to use a fabric filter bag leak detection system (BLDS) to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a BLDS as specified in paragraphs (m)(10)(i) through (viii) of this section of the federal regulation. (40 CFR §63.1350(m)(10))

(i) You must install and operate a BLDS for each exhaust stack of the fabric filter. (40 CFR §63.1350(m)(10)(i))

(ii) Each BLDS must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA-454/R-98-015, September 1997. (40 CFR §63.1350(m)(10)(ii))

(iii) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 or fewer milligrams per actual cubic meter. (40 CFR §63.1350(m)(10)(iii))

(iv) The BLDS sensor must provide output of relative or absolute PM loadings. (40 CFR §63.1350(m)(10)(iv))

(v) The BLDS must be equipped with a device to continuously record the output signal from the sensor. (40 CFR §63.1350(m)(10)(v))

(vi) The BLDS must be equipped with an alarm system that will alert an operator automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located such that the alert is detected and recognized easily by an operator. (40 CFR §63.1350(m)(10)(vi))

(vii) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a BLDS must be installed in each baghouse compartment or cell. (40 CFR §63.1350(m)(10)(vii))

(viii) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors. (40 CFR §63.1350(m)(10)(viii))

(h) For each BLDS, the owner or operator must initiate procedures to determine the cause of every alarm within 8 hours of the alarm. The owner or operator must alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following: (40 CFR §63.1350(m)(11))

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions; (40 CFR §63.1350(m)(11)(i))

(ii) Sealing off defective bags or filter media; (40 CFR §63.1350(m)(11)(ii))

(iii) Replacing defective bags or filter media or otherwise repairing the control device; (40 CFR §63.1350(m)(11)(iii))

(iv) Sealing off a defective fabric filter compartment; (40 CFR §63.1350(m)(11)(iv))

(v) Cleaning the BLDS probe or otherwise repairing the BLDS; or (40 CFR §63.1350(m)(11)(v))

(vi) Shutting down the process producing the PM emissions. (40 CFR §63.1350(m)(11)(vi))

5) Continuous Flow Rate Monitoring System.

You must install, operate, calibrate, and maintain instruments, according to the requirements in paragraphs (n)(1) through (10) of this section of the federal regulation, for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources

subject to an emissions limitation that has a pounds per ton of clinker unit. (40 CFR §63.1350(n))

(a) You must install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the mercury or PM CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate. (40 CFR §63.1350(n)(1))

(b) The flow rate monitoring system must be designed to measure the exhaust flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust flow rate. (40 CFR §63.1350(n)(2))

(c) The flow rate monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (n)(1) of this section of the federal regulation. (40 CFR §63.1350(n)(4))

(d) The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system must be compatible with the output signal of the flow rate sensors used in the monitoring system. (40 CFR §63.1350(n)(5))

(e) The flow rate monitoring system must be designed to complete a minimum of one cycle of operation for each successive 15-minute period. (40 CFR §63.1350(n)(6))

(f) The flow rate sensor must have provisions to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in appendix B to Part 60 of this chapter for a discussion of CD). (40 CFR §63.1350(n)(7))

(i) Conduct the CD tests at two reference signal levels, zero (e.g., 0 to 20 percent of span) and upscale (e.g., 50 to 70 percent of span). (40 CFR §63.1350(n)(7)(i))

(ii) The absolute value of the difference between the flow monitor response and the reference signal must be equal to or less than 3 percent of the flow monitor span. (40 CFR §63.1350(n)(7)(ii))

(g) You must perform an initial relative accuracy test of the flow rate monitoring system according to Section 8.2 of Performance Specification 6 of appendix B to Part 60 of the chapter with the exceptions in paragraphs (n)(8)(i) and (n)(8)(ii) of this section of the federal regulation. (40 CFR §63.1350(n)(8))

(i) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system. (40 CFR §63.1350(n)(8)(i))

(ii) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data. (40 CFR §63.1350(n)(8)(ii))

(h) You must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in paragraph (n)(8). (40 CFR §63.1350(n)(9))

(i) You must operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). (40 CFR §63.1350(n)(10))

6) Development and Submittal (Upon Request) of Monitoring Plans. If you demonstrate compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, you must develop a site-specific monitoring plan according to the requirements in paragraphs (p)(1) through (4) of this section of the federal regulation. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under paragraph (o) of this section of the federal regulation and 40 CFR §63.8(f). If you use a BLDS, you must also meet the requirements specified in paragraph (p)(5) of this section of the federal regulation. (40 CFR §63.1350(p))

(a) For each CMS required in this section, you must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (p)(1)(i) through (iii) of this section of the federal regulation. You must submit this site-specific

monitoring plan, if requested, at least 30 days Until your initial performance evaluation of your CMS. (40 CFR §63.1350(p)(1))

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (40 CFR §63.1350(p)(1)(i))

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; (40 CFR §63.1350(p)(1)(ii)) and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). (40 CFR §63.1350(p)(1)(iii))

(b) In your site-specific monitoring plan, you must also address paragraphs (p)(2)(i) through (iii) of this section of the federal regulation. (40 CFR §63.1350(p)(2))

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR §63.8(c)(1), (c)(3), and (c)(4)(ii); (40 CFR §63.1350(p)(2)(i) 013)

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR §63.8(d); (40 CFR §63.1350(p)(2)(ii)) and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §63.10(c), (e)(1), and (e)(2)(i). (40 CFR §63.1350(p)(2)(iii))

(c) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (40 CFR §63.1350(p)(3))

(d) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. (40 CFR §63.1350(p)(4))

(e) BLDS Monitoring Plan.

Each monitoring plan must describe the items in paragraphs (p)(5)(i) through (v) of this section of the federal regulation. At a minimum, you must retain records related to the site-specific monitoring plan and information

discussed in paragraphs (m)(1) through (4), (m)(10) and (11) of this section of the federal regulation for a period of 5 years, with at least the first 2 years on-site; (40 CFR §63.1350(p)(5))

(i) Installation of the BLDS; (40 CFR §63.1350(p)(5)(i))

(ii) Initial and periodic adjustment of the BLDS, including how the alarm set-point will be established; (40 CFR §63.1350(p)(5)(ii))

(iii) Operation of the BLDS, including quality assurance procedures; (40 CFR §63.1350(p)(5)(iii))

(iv) How the BLDS will be maintained, including a routine maintenance schedule and spare parts inventory list; (40 CFR §63.1350(p)(5)(iv))

(v) How the BLDS output will be recorded and stored. (40 CFR §63.1350(p)(5)(v))

v. Recordkeeping Requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1355)

1) The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63 Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. (40 CFR §63.1355(a))

2) The owner or operator of an affected source shall maintain the following relevant records: (40 CFR §63.10(b)(2) as referenced by (40 CFR §63.1355(b))

(a) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment); (40 CFR §63.10(b)(2)(i) as referenced by 40 CFR §63.1355(b))

(b) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see 40 CFR §63.6(e)(3));

(40 CFR §63.10(b)(2)(iv) as referenced by 40 CFR §63.1355(b))

(c) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see 40 CFR §63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other after form of recordkeeping, in order to minimize the recordkeeping burden for conforming events); (40 CFR §63.10(b)(2)(v) as referenced by 40 CFR §63.1355(b))

(d) All results of performance tests, and opacity and visible emission observations; (40 CFR §63.10(b)(2)(viii) as referenced by 40 CFR §63.1355(b))

(i) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations; (40 CFR §63.10(b)(2)(ix) as referenced by 40 CFR §63.1355(b))

(e) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9; (40 CFR §63.1355(b)(1))

(f) All records of applicability determination, including supporting analyses; and (40 CFR §63.1355(b)(2))

(g) If the owner or operator has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. (40 CFR §63.1355(b)(3))

3) In addition to the recordkeeping requirements in paragraph (b) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR §63.10(c). (40 CFR §63.1355(c))

4) The owner or operator shall keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period. (40 CFR §63.1355(f))

5) The owner or operator shall keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. (40 CFR §63.1355(g)(1))

6) The owner or operator shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §63.1355(g)(2))

7) For each exceedance from an emissions standard or established operating parameter limit, the owner or operator shall keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1355(h))

b. **Opacity**

i. For K-909, K-912, K-913, K-914, and K-915 See Emission Unit Plantwide.

ii. For K-912, K-913, K-914, and K-915 sources subject to 40 CFR 60 Subpart F see Appendix B.[97]

iii. For C-924 and C-915-4 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. If there is any time that a control device for K-909 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) The combined 12 consecutive month PM total for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For K-909 the owner or operator shall daily record the hours of operation of the equipment.

iii. For K-909 the owner or operator shall calculate and maintain a record of the combined hours of operation each month for the 12 consecutive month rolling total to demonstrate compliance with the 8064 hour limit on operation.

iv. For C-924 and C-915-4 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

v. For compliance assurance monitoring (CAM) of K-909 see Appendix N.

vi. **PM Emissions Monitoring Requirements.** (40 CFR 60.63(c))

1) For each kiln or clinker cooler subject to a PM emissions limit in § § 60.62(a)1(ii) and 60.62(a)1(iii) or 60.62(b)(1)(i) and 60.62(b)(1)(ii), you must demonstrate

compliance through an initial performance test. You will conduct your performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM CPMS. (40 CFR 60.63(c)(1))

2) For your PM CPMS, you will establish a site-specific operating limit. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit equivalent to 75 percent of the standard. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test demonstrating compliance with the PM limit to establish your operating limit. You will use the PM CPMS to demonstrate continuous compliance with your operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR 60.63(c)(2))

(a) Your PM CPMS must provide a 4-20 milliamp or digital signal output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or the monitors digital equivalent. (40 CFR 60.63(c)(2)(i))

(b) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit. (40 CFR 60.63(c)(2)(ii))

(c) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs). (40 CFR 60.63(c)(2)(iii))

3) Determine your operating limit as specified in paragraphs (c)(4)(i) through (c)(5) of this section. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit, you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit, you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR 60.63(c)(3))

4) If the average of your three Method 5 or 5I compliance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or 5I compliance test with the procedures in (c)(4)(i)(A) through (D) of this section. (40 CFR 60.63(c)(4))

(a) Determine your PM CPMS instrument zero output with one of the following procedures. (40 CFR 60.63(c)(4)(i))

(i) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench. (40 CFR 60.63(c)(4)(i)(A))

(ii) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air. (40 CFR 60.63(c)(4)(i)(B))

(iii) The zero point can also can be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept. (40 CFR 60.63(c)(4)(i)(C))

(iv) If none of the steps in paragraphs (c)(4)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer. (40 CFR 60.63(c)(4)(i)(D))

(b) Determine your PM CPMS instrument average in milliamps or digital equivalent and the average of your corresponding three PM compliance test runs, using equation 1. (40 CFR 60.63(c)(4)(ii))

$$\overline{x} = \frac{1}{n}\sum_{i=1}^{n} X_1 \ , \overline{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 1)}$$

Where:

X_1 = The PM CPMS data points for the three runs constituting the performance test,

Y_1 = The PM concentration value for the three runs constituting the performance test, and

n = The number of data points.

(c) With your PM CPMS instrument zero expressed in milliamps or a digital value, your three run average PM CPMS milliamp or digital signal value, and your three run average PM concentration from your three PM performance test runs, determine a relationship of lb/ton-clinker per milliamp or digital signal with equation 2.
(40 CFR 60.63(c)(4)(iii))

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 2)}$$

Where:

R = The relative lb/ton clinker per milliamp or digital equivalent for your PM CPMS.

Y_1 = The three run average PM lb/ton clinker.

X_1 = The three run average milliamp or digital signal output from your PM CPMS.

z = The milliamp or digital equivalent of your instrument zero determined from (c)(4)(i) of this section.

(d) Determine your source specific 30-day rolling average operating limit using the lb/ton-clinker per milliamp or digital signal value from Equation 2 above in Equation 3, below. This sets your operating limit at the PM CPMS

output value corresponding to 75 percent of your emission limit. (40 CFR 60.63(c)(4)(iv))

$$O_l = z + (0.75(L)) / R \qquad \text{(Eq. 3)}$$

Where:

O_l = The operating limit for your PM CPMS on a 30-day rolling average, in milliamps or the digital equivalent.

L = Your source emission limit expressed in lb/ton clinker.

z = Your instrument zero in milliamps or a digital equivalent, determined from (1)(i).

R = The relative lb/ton-clinker per milliamp or digital equivalent, for your PM CPMS, from Equation 2.

5) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit, you must determine your operating limit by averaging the PM CPMS milliamp or digital equivalent output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 4.
(40 CFR 60.63(c)(5))

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i \qquad \text{(Eq. 4)}$$

Where:

X_1 = The PM CPMS data points for all runs i.

n = The number of data points.

O_h = Your site specific operating limit, in milliamps or digital equivalent.

6) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating, and use all the PM CPMS data for calculations when the source is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or the digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 5 to determine the 30 kiln operating day average. (40 CFR 60.63(c)(6))

$$30\text{kiln operating day average} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 5)}$$

Where:

Hpvi = The hourly parameter value for hour i.

n = The number of valid hourly parameter values collected over the previous 30 kiln operating days.

7) Use EPA Method 5 or Method 5I of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct at least three separate runs each while the mill is on and the mill is off under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs to determine compliance. You need not determine the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. (40 CFR 60.63(c)(7))

8) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run. (40 CFR 60.63(c)(8))

vii. For each CPMS or CEMS required under paragraphs (c) through (e) of this section: (40 CFR 60.63(g))

1) You must operate the monitoring system and collect data at all required intervals at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality

assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). (40 CFR 60.63(g)(1))

2) You may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. An owner or operator must use all the data collected during all other periods in reporting emissions or operating levels. (40 CFR 60.63(g)(2))

3) You must meet the requirements of § 60.13(h) when determining the 1-hour averages of emissions data. (40 CFR 60.63(g)(3))

viii. You must install, operate, calibrate, and maintain instruments for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere for each kiln subject to the PM emissions limits in § 60.62(a)(1)(ii) and (iii) and (b)(1)(i) and (ii), the NO_X emissions limit in § 60.62(a)(3), or the SO_2 emissions limit in § 60.62(a)(4) according to the requirements in paragraphs (h)(1) through (10), where appropriate, of this section. (40 CFR 60.63(h))

1) The owner or operator must install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the NO_X and/or SO_2 CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate. (40 CFR 60.63(h)(1))

2) The flow rate monitoring system must be designed to measure the exhaust gas flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust gas flow rate. (40 CFR 60.63(h)(2))

3) The flow rate monitoring system must have a minimum accuracy of 5 percent of the flow rate. (40 CFR 60.63(h)(3))

4) The flow rate monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (h)(2) of this section. (40 CFR 60.63(h)(4))

5) The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system must be compatible with the output signal of the flow rate sensors used in the monitoring system. (40 CFR 60.63(h)(5))

6) The flow rate monitoring system must be designed to measure a minimum of one cycle of operational flow for each successive 15-minute period. (40 CFR 60.63(h)(6))

7) The flow rate sensor must be able to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in appendix B to this part for a discussion of CD). (40 CFR 60.63(h)(7))

(a) Conduct the CD tests at two reference signal levels, zero (*e.g.*, 0 to 20 percent of span) and upscale (*e.g.*, 50 to 70 percent of span). (40 CFR 60.63(h)(7)(i))

(b) The absolute value of the difference between the flow monitor response and the reference signal must be equal to or less than 3 percent of the flow monitor span. (40 CFR 60.63(h)(7)(ii))

8) You must perform an initial relative accuracy test of the flow rate monitoring system according to section 8.2 of Performance Specification 6 of appendix B to this part, with the exceptions noted in paragraphs (h)(8)(i) and (ii) of this section. (40 CFR 60.63(h)(8))

(a) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system. (40 CFR 60.63(h)(8)(i))

(b) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data. (40 CFR 60.63(h)(8)(ii))

9) You must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in paragraph (h)(8) of this section. (40 CFR 60.63(h)(9))

10) You must operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and

malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments. (40 CFR 60.63(h)(10))

ix. **Development and Submittal (Upon Request) of Monitoring Plans.**
To demonstrate compliance with any applicable emissions limit through performance stack testing or other emissions monitoring (including PM CPMS), you must develop a site-specific monitoring plan according to the requirements in paragraphs (i)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 60.13(3)(i). If you use a bag leak detector system (BLDS), you must also meet the requirements specified in paragraph § 63.1350(m)(10) of this chapter.
(40 CFR 60.63(i))

1) For each continuous monitoring system (CMS) required in this section, you must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (i)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 30 days before the initial performance evaluation of your CMS.
(40 CFR 60.63(i)(1))

(a) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (40 CFR 60.63(i)(1)(i))

(b) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and (40 CFR 60.63(i)(1)(ii))

(c) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations). (40 CFR 60.63(i)(1)(iii))

2) In your site-specific monitoring plan, you must also address paragraphs (i)(2)(i) through (iii) of this section.
(40 CFR 60.63(i)(2))

(a) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (c)(3), and (c)(4)(ii); (40 CFR 60.63(i)(2)(i))

(b) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and (40 CFR 60.63(i)(2)(ii))

(c) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i). (40 CFR 60.63(i)(2)(iii))

3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (40 CFR 60.63(i)(3))

4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. (40 CFR 60.63(i)(4))

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U18". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-909 and K-915 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U18" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U18" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-909 and K-915.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-912, K-913, K-914, and K-915 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[99]

ii. Notification Requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1353)

1) The notification provisions of 40 CFR §part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section of the federal regulation for that notification. (40 CFR §63.1353(a))

2) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in 40 CFR §63.9 as follows: (40 CFR §63.1353(b))

(a) Initial notifications as required by 40 CFR §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR §part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by 40 CFR §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification. (40 CFR §63.1353(b)(1))

(b) Notification of performance tests, as required by 40 CFR §63.7 and 63.9(e). (40 CFR §63.1353(b)(2))

(c) Notification of opacity and visible emission observations required by 40 CFR §63.1349 in accordance with 40 CFR §63.6(h)(5) and 63.9(f). (40 CFR §63.1353(b)(3))

(d) Notification, as required by 40 CFR §63.9(g), of the date that the continuous emission monitor performance

evaluation required by 40 CFR §63.8(e) is scheduled to begin. (40 CFR §63.1353(b)(4))

(e) Notification of compliance status, as required by 40 CFR §63.9(h). (40 CFR §63.1353(b)(5))

(f) Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, notify the appropriate permitting agency of the planned performance tests. The notification requirements of 40 CFR §63.7(b) and 63.9(e) do not apply to retesting required for exceedances under this subpart. (40 CFR §63.1353(b)(6))

iii. Reporting requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1354)

1) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section of the federal regulation for that report. (40 CFR §63.1354(a))

2) The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this part 63, subpart A as follows: (40 CFR §63.1354(b))

(a) As required by 40 CFR §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status. (40 CFR §63.1354(b)(1))

(b) As required by 40 CFR §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by 40 CFR §63.1349. (40 CFR §63.1354(b)(2))

(c) As required by 40 CFR §63.10(d)(4), the owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 CFR §63.6(i) shall submit such reports by the dates specified in the written extension of compliance. (40 CFR §63.1354(b)(3))

(d) As required by 40 CFR §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 CFR §63.8(e). The owner or

operator shall submit the report simultaneously with the results of the performance test. (40 CFR §63.1354(b)(6))

(e) As required by 40 CFR §63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40 CFR §63.7 and described in 40 CFR §63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under 40 CFR §63.8(e). (40 CFR §63.1354(b)(7))

(f) As required by 40 CFR §63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit. (40 CFR §63.1354(b)(8))

(g) The owner or operator shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in § 63.10(e)(3)(vi). In addition, the summary report shall include: (40 CFR §63.1354(b)(9))

(i) All exceedances of maximum control device inlet gas temperature limits specified in 40 CFR §63.1346(a) and (b); (40 CFR §63.1354(b)(9)(i))

(ii) Notification of any failure to calibrate thermocouples and other temperature sensors as

required under 40 CFR §63.1350(g)(1)(iii) of this subpart; and (40 CFR §63.1354(b)(9)(ii))

(iii) Notification of any failure to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under 40 CFR § 63.1346(c)(2). (40 CFR §63.1354(b)(9)(iii))

(iv) Notification of any failure to conduct any combustion system component inspections conducted within the reporting period as required under 40 CFR §63.1347(a)(3). (40 CFR §63.1354(b)(9)(iv))

(v) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347(a). (40 CFR §63.1354(b)(9)(v))

(vi) For each PM CPMS, HCl, Hg, and THC CEMS, D/F temperature monitoring system, or Hg sorbent trap monitoring system, within 60 days after the reporting periods, you must report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems. (40 CFR §63.1354(b)(9)(vi))

(vii) In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1354(b)(9)(vii))

(viii) Within 60 days after the date of completing each CEMS performance evaluation test as defined in 40 CFR §63.2, you must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (b)(9) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, you must submit the results of the performance evaluation to the Administrator at the appropriate

address listed in 40 CFR §63.13. (40 CFR §63.1354(b)(9)(viii))

(ix) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (40 CFR §63.1354(b)(9)(ix))

(x) All reports required by this subpart not subject to the requirements in paragraphs (b)(9) introductory text and (b)(9)(viii) of this section must be sent to the Administrator at the appropriate address listed in 40 CFR §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (b)(9) introductory text and (b)(9)(viii) of this section in paper format. (40 CFR §63.1354(b)(9)(x))

3) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report. (40 CFR §63.1354(b)(10))

4) Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the owner or operator shall report the failure in the semi-annual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for

which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction. (40 CFR §63.1354(c))

b. **Opacity**

i. For K-909, K-912, K-913, K-914, and K-915 See Emission Unit Plantwide.[99]

ii. For K-912, K-913, K-914, and K-915 sources subject to 40 CFR 60 Subpart F see Appendix B.[99]

iii. For C-924 and C-915-4:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-909 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 month standard;

5) Description of any corrective action taken for each exceedance.

ii. For Clinker Cooler (K-909) the owner or operator shall report any exceedance of the 8064 hours of operation limit.

iii. For C-924 and C-915-4 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

iv. For Clinker Cooler (K-909) the owner or operator shall report any failure to perform Compliance Assurance Monitoring (CAM).

[99] K-911 has a total enclosure and no monitoring, recordkeeping or reporting is required.

v. **Recordkeeping and reporting requirements**. (40 CFR 60.65)

1) Each owner or operator required to install a CPMS or CEMS under sections § 60.63(c) through (e) shall submit reports of excess emissions. The content of these reports must comply with the requirements in § 60.7(c). Notwithstanding the provisions of § 60.7(c), such reports shall be submitted semiannually. (40 CFR 60.65(a))

2) Each owner or operator of facilities subject to the provisions of § 60.63(c) through (e) shall submit semiannual reports of the malfunction information required to be recorded by § 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere. (40 CFR 60.65(b))

3) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, 42 U.S.C. 7411, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State. (40 CFR 60.65(c))

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U18":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the following TAC standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-909 and K-915 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U18".

S4. **Testing** (Regulation 2.16, section 4.3.1)

a. **PM/ HAP/40 CFR §Part 63 Subpart LLL**

i. Performance testing requirements for the Clinker Cooler (K-909) and Baghouse C-924 are in Appendix C.

ii. Performance Test Frequency for the Clinker Cooler (K-909) and Baghouse C-924 tests for PM are repeated every 12 months. (40 CFR §63.1349(c))

iii. Performance Test Reporting Requirements for the Clinker Cooler (K-909) and Baghouse C-924 (40 CFR §63.1349(d))

1) You must submit the information specified in paragraphs (d)(1) and (2) of this section of the federal regulation no later than 60 days following the initial performance test. All reports must be signed by a responsible official. (40 CFR §63.1349(d)(1))

(a) The initial performance test data as recorded under paragraph (b) of this section of the federal regulation. (40 CFR §63.1349(d)(1)(i))

(b) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), and (7) of this section of the federal regulation, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test. (40 CFR §63.1349(d)(1)(ii))

2) As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR §63.2, conducted to demonstrate compliance with any standard covered by this subpart, you must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). (40 CFR §63.1349(d)(2))

iv. Conditions of performance tests for the Clinker Cooler (E-909) and

Baghouse C-924

Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. (40 CFR §63.1349(e))

v. Applicability and performance test dates. (40 CFR §63.7(a))

Except as provided in paragraph (a)(4) of this section, if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source. (40 CFR §63.7(a)(2))

vi. Notification of performance test. (40 CFR §63.7(b))

1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review an approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test. (40 CFR §63.7(b)(1))

2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act. (40 CFR §63.7(b)(2))

vii. Approval of site-specific test plan. (40 CFR §63.7(c)(3))

1) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary

information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with— (40 CFR §63.7(c)(3)(i))

(a) Notice of the information and findings on which the intended disapproval is based; and (40 CFR §63.7(c)(3)(i)(A))

(b) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan. (40 CFR §63.7(c)(3)(i)(B))

2) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply: (40 CFR §63.7(c)(3)(ii))

(a) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s); (40 CFR §63.7(c)(3)(ii)(A))

(b) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan)

if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative. (40 CFR §63.7(c)(3)(ii)(B))

3) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall— (40 CFR §63.7(c)(3)(iii))

(a) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or (40 CFR §63.7(c)(3)(iii)(A))

(b) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act. (40 CFR §63.7(c)(3)(iii)(B))

4) See Appendix E additional testing requirements.

b. **PM Test methods and procedures. (40 CFR 60.64)**

i. In conducting the performance tests and relative accuracy tests required in § 60.8, you must use reference methods and procedures and the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).
(40 CFR 60.64(a))

1) You must demonstrate compliance with the PM standards in § 60.62 using EPA method 5 or method 5I.
(40 CFR 60.64(b)(1))

2) Use Method 9 and the procedures in § 60.11 to determine opacity. (40 CFR 60.64(b)(2))

3) Within 60 days after the date of completing each performance test (see § 60.8) as required by this subpart you must submit the results of the performance tests conducted to demonstrate compliance under this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for

performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the CBI, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13.
(40 CFR 60.64(d)(1))

4) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.
(40 CFR 60.64(d)(3))

Emission Unit U19: Clinker Handling/Storage/Reclaim

Conveying of clinker to storage area and reclaimer.

U19 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U19 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-949	E-949a	Belt K-949 to Belt K-949-3 (Make: Rexnord; Model: 36”; Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-949A	S-949A
	E-949b	Belt K-949 to Belt K-964 (Make: Rexnord; Model: 36”; Capacity: 250 TPH; Installed: 1974)		C-958	S-958
K-949-3	E-949-3	Belt K-949-3 to Belt K-950 (Make: Rexnord; Model: 36”; Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-949B	S-949B
K-950	E-950	Belt K-950 to Indoor Clinker Storage Pile (Make: Rexnord; Model: 36”; Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-974	S-974
K-Crush Loader	E-A	Portable Clinker Loader to Crusher (Capacity: 90 TPH; Installed: 2004)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-A
K-Crush Crusher	E-B	Portable Clinker Crusher to Screen (Capacity: 90 TPH; Installed: 2004)	1.14, 7.02, 7.08, STAR*, 40CFR60-F	NA	F-B
K-Crush Screen	E-C	Portable Clinker Screen to Belt (Capacity: 90 TPH; Installed: 2004)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-C
K-Crush Belt	E-D	Portable Clinker Crusher Belt to 6 Feeders K-951-1-6 (Capacity: 90 TPH; Installed: 2004)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-D
K-951-1-6	E-951	Feeders K-951-1 through K-951-6 to Belt K-952 & Dust Collectors C-953/954 (Make: Jeffrey; Model: 40 DTH; Capacity: 175 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-953/954	S-954

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-952	E-952	Belt K-952 & DC C-953/954 to Elevator K-955 (Make: Rexnord; Model: 24”; Capacity: 250 TPH; Installed: 1974)	2.05, 5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-961	S-961
K-955	E-955	Elevator K-955 to Belt K-956 (Make: Rexnord; Model: 4124-01; Capacity: 250 TPH; Installed: 1974)	2.05, 5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-938	S-938
K-956	E-956A	Belt K-956 to Belt K-964 (Make: Rexnord; Model: 24”; Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-958	S-958
	E-956B	Belt K-956 to Clinker Bin K-1001 (Make: Rexnord; Model: 24”; Capacity: 250 TPH; Installed: 1974)		C-958	S-958
	E-956C	Belt K-956 to Clinker Bin K-1015 (Make: Rexnord; Model: 24”; Capacity: 250 TPH; Installed: 1974)		C-958	S-958
K-975	E-975	K-975 Belt to Emergency Shutdown Clinker Storage Building (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-Limestone Loader	E-Limestone Loader	Limestone Loader	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Limestone Loader
K-Clinker Loader	E-Clinker Loader	Clinker Loader	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Clinker Loader

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-Gyp Loader	E-Gyp Loader	Gypsum Loader (Capacity: 100 TPH)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Gyp Loader
K-1311	E-Gyp Hopper	Drag Feeder K-1311 to Elevator K-1312 (Make: Stamler; Model: BF-7Q-0-43S; (Capacity: 100; Installed: 2000)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Gyp Hopper
K-1312	E-1312a	Elevator K-1312 to Belt K-1314 and Gypsum Bin K-1137 (Make: Rexnord; Model: 1626-2008B; Capacity: 100 TPH; Installed: 2000)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1316	S-1316
	E-1312b			C-1316	S-1316
K-1314	E-1314a	Belt K-1314 to Gypsum Bins K-1000 and K-1016 (Capacity: 250 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1317	S-1317
	E-1314b			C-1317	S-1317
K-Syngyp Loader	E-Syngyp Loader 1	Loader to Hopper K-1318-1 & K-1318 (Capacity: 15 TPH)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-Syngyp Loader 1
	E-Syngyp Loader 2	Loader to Hopper K-1350-1 & K-1351 (Capacity: 15 TPH)		NA	F-Syngyp Loader 2
	E-Syngyp Loader 3	Loader to Hopper K-1350-2 & K-1353 (Capacity: 15 TPH)		NA	F-Syngyp Loader 3
K-1318/1318-1	E-1318	Hopper Feeder to Belt K-1352 (Make: JC Steele & Sons SSI or Spomin Metals: Model: 88E; Capacity: 50 TPH; Installed: 2010)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1318
K-1319	E-1319	Belt K-1319 to K-1141Mill Gypsum Belt (Make: Various; Model: Various; Capacity: 27 TPH; Installed: 2010)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1319

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1351/1350-1	E-1350-1	Hopper Feeder to Belt K-1354 (Make: Imperial Technologies hoppers each attached to separate JC Steele feeders, model 88E EVEN, each with a capacity of 10 tons/hour)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1350-1
K-1352	E-1352	Belt K-1352 to K-1002 Finish Mill #1 Drag (Make: Various; Model: Various; Capacity: 27 TPH; Installed: 2015)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1352
K-1353/1350-2	E-1350-2	Hopper Feeder to Belt K-1354 (Make: Imperial Technologies hoppers each attached to separate JC Steele feeders, model 88E EVEN, each with a capacity of 10 tons/hour)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1350-2
K-1354	E-1354	Belt K-1352 to K-1002 Finish Mill #1 Drag (Make: Various; Model: Various; Capacity: 27 TPH; Installed: 2015)	1.14, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-1354

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U19 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1316	A pulse jet dust collector controlling particulates from gypsum handling and the K-1137 gypsum bin. (Make: IAC; Model: 72TB; Capacity: 3,000 DSCFM)	VEs	S-1316
C-1317	A dust collector controlling particulates from gypsum bins (K-1000 and K-1016) (Make: IAC; Model: 72TB; Capacity: 27,500 DSCFM)	VEs	S-1317
C-949-5	A one compartment dust collector utilized to collect particulates from the discharge of the K-912 and K-913 bucket elevators onto the K-949 belt. (Make: ETA Engineering; Model: 66X98 BV; Capacity: 2,168 DSCFM)	VEs	S-949-5

ID	Description	Performance Indicator	Stack ID
C-958	A three compartment dust collector used to control particulates from clinker bins (K-1015 and K-1001) and transfers to belt K-964 and from belts K-949 and K-956) (Make: Wheelabrator; Model: 118-108; Capacity: 8,500 DSCFM)	VEs	S-958
C-974	A dust collector utilized to collect particulate emissions form the Clinker Storage Barn. (Make: IAC; Model: BHT-672:S6; Capacity: 77,600 DSCFM)	VEs	S-974
C-961	A dust collector utilized to collect particulates from the transfer belt K-952 to the K-955 bucket elevator. (Make: IAC; Model: 72B; Capacity: 2,000 DSCFM)	VEs	S-961
C-953/954	The C-954 dust collector vents the Clinker Storage Barn tunnel, controlling dust from the transfer of clinker from the K-951 feeders and the C-953 process dust collectors. (Make: Mikropulsaire; Model: 485-1 ½-30; Capacity: 6000 DSCFM) (Make: Wheelabrator; Model: 90-108; Capacity: 6,000 DSCFM)	VEs	S-954
C-938	A dust collector controlling particulates form the K-955 elevator and from the transfer from the K-955 elevator onto the K-956 belt. (Make: IAC; Model: 72 TB; Capacity: 6,000 DSCFM)	VEs	S-938
C-949A	A one compartment forced air dust collector controlling particulates from belts K-949 and K-949-3. (Make: ETA Engineering; Model: ETA 44x49 BV; Capacity: 1,500 DSCFM)	VEs	S-949A
C-949B	A one compartment forced air dust collector controlling particulates from belts K-949-3 and K-950. (Make: ETA Engineering; Model: ETA 44x49 BV; Capacity: 1,500 DSCFM)	VEs	S-949B

U19 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-975, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[100]

b. **Opacity**

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-975, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 60 Subpart F see Appendix B.

ii. For K-949, K-949-3, K-950, K-951-1-6, K-952, K-955, and K-956 see Emission Unit Plantwdie for Regulation 6.09 requirements.

iii. For K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 see Emission Unit Plantwide for Regulation 1.14 requirements.[101]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U19" based on actual operating hours in a calendar day.

Table 29 Hourly PM Standards U19

Equipment	Standard (lb/hr)	Reg. Citation
K-949[102,103]	41.87	31758-11-C(R1)

[100] K-Crush Crusher is not covered by 40 CFR 63 Subpart LLL per section 63.1340(c).

[101] Since these emission points are subject to a more stringent opacity standard in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[102] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[103] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-949-3[102,103]	41.87	31758-11-C(R1)
K-950[102,103]	41.17	195-04-C (R1)
K-Crush Loader[102,103]	35.5	53-04-C
K-Crush Crusher[102,103]	35.5	53-04-C
K-Crush Screen[102,103]	35.5	53-04-C
K-Crush Belt[102,103]	35.5	53-04-C
K-951-1-6[102,103]	36.16	6.09, section 3.2
K-952[102]	60.96	6.09, section 3.2
K-955[102]	60.96	6.09, section 3.2
K-952[102,104]	2.7 combined	2.05 and 78-98-C
K-955[102,104]		
K-956[102,103]	60.95	6.09, section 3.2
K-975[102,103]	41.87	7.08, section 3.1.2
K-Limestone Loader[102,103]	36.16	7.08, section 3.1.2
K-Clinker Loader[102,103]	36.16	7.08, section 3.1.2
K-Gyp Loader[102,103]	36.16	7.08, section 3.1.2
K-1311[102,103]	36.16	7.08, section 3.1.2
K-1312[102,103]	36.16	7.08, section 3.1.2
K-1314[102]	41.88	7.08, section 3.1.2
K-1314[102,104]	1.2	2.05 and 77-98-C
K-Syngyp Loader[102,103]	19.24	7.08, section 3.1.2
K-1318/1318-1[102,103]	19.24	7-09-C(R1)
K-1319[102,103]	27.70	7.08, section 3.1.2
K-1351/1350-1[102,103]	32.36	7.08, section 3.1.2
K-1352[102,103]	27.70	7.08, section 3.1.2
K-1353/1350-2[102,103]	32.36	7.08, section 3.1.2
K-1354[102,103]	27.70	7.08, section 3.1.2

[104] This limit is for PSD avoidance.

ii. For K-952 and K-955 combined the owner or operator shall not allow the PM emissions to exceed 11.1 tons per 12 consecutive month period. (Regulation 2.05 and 78-98-C, Effective 4/1/1998)[104,105]

iii. For K-1314 the owner or operator shall not allow the PM emissions to exceed 4.8 tons per 12 consecutive month period. (Regulation 7.08, section 3.1.2) (Regulation 2.05 and 77-98-C, Effective 4/1/1998)[104,105]

d. **TAC**

i. See Emission Unit Plantwide.[106]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U19". (Regulation 5.21, section 4.2 and section 4.3)

Table 30 Modeled TAC Emissions U19

Equipment ID	Stack or Area ID	As	Cd	Cr6	Ni	Co
		lb/12 consecutive month period				
K-949 (E-949a)	S-949A	9.20E-03	5.26E-03	5.08E-03	3.09E-02	7.47E-03
K-949 (E-949b)	S-949B	9.20E-03	5.26E-03	5.08E-03	3.09E-02	7.47E-03
K-955	S-938	7.99E-02	4.56E-02	4.42E-02	2.69E-01	6.50E-02
K-912 (E-912b), K-913 (E-913b) combined	S-949-5	1.45E-02	8.25E-03	7.98E-03	4.85E-02	1.17E-02
K-951-1-6 and K-953-0-5 combined	S-954	7.99E-02	4.56E-02	4.42E-02	2.69E-01	6.50E-02
K-949 (E-949b)and K-956 combined	S-958	5.66E-02	3.23E-02	3.13E-02	1.90E-01	4.60E-02
K-952	S-961	1.33E-02	7.61E-03	7.36E-03	4.48E-02	1.09E-02
K-950	S-974	5.17E-01	2.95E-01	2.86E-01	1.73E+00	4.20E-01
K-1312b combined	S-1316	3.68E-02	2.10E-02	2.03E-02	1.24E-01	2.99E-02
K-1314b combined	S-1317	2.45E-02	1.40E-02	1.36E-02	8.25E-02	2.00E-02
K-1311	F-Gyplo	1.21E-01	6.92E-02	6.69E-02	4.07E-01	9.81E-02
K-Crush Loader	F-A	1.95E-04	1.11E-04	1.08E-04	6.56E-04	1.59E-04
K-Crush Crusher	F-B	1.63E-03	9.29E-04	9.02E-04	5.47E-03	1.32E-03
K-Crush Screen	F-C	3.51E-04	2.01E-04	1.94E-04	1.18E-03	2.86E-04
K-Crush Belt	F-D	6.50E-04	3.71E-04	3.59E-04	2.19E-03	5.29E-04

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U19". (Regulation 5.21, section 4.2 and section 4.3)

[105] These emission points cannot exceed the tons per consecutive 12 month PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[106] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Table 31 De Minimis TAC Standards U19

Equipment ID	Cr6	Be
K-951	*	

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-951 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[107]

b. **Opacity**

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 See Emission Unit Plantwide.[107]

ii. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 60 Subpart F Appendix B.[107]

iii. For C-1316, C-1317, C-949-5, C-958, C-974, C-961, C-953, C-954, C-938, C-949A, and C-949B if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

[107] K-975 has a total enclosure and no monitoring, recordkeeping or reporting is required.

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-1316, C-1317, C-949-5, C-958, C-974, C-961, C-953, C-954, C-938, C-949A, and C-949B the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U19". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-951 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U19" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U19" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-951.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[107]

b. **Opacity**

i. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Crusher, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 See Emission Unit Plantwide.[107]

ii. For K-949, K-949-3, K-950, K-Crush Loader, K-Crush Screen, K-Crush Belt, K-951-1-6, K-952, K-955, K-956, K-Limestone Loader, K-Clinker Loader, K-Gyp Loader, K-1311, K-1312, K-1314, K-Syngyp Loader, K-1318/1318-1, K-1319, K-1351/1350-1, K-1352, K-1353/1350-2, and K-1354 sources subject to 40 CFR 60 Subpart F see Appendix B.[107]

iii. For C-1316, C-1317, C-949-5, C-958, C-974, C-961, C-953, C-954, C-938, C-949A, and C-949B:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1316, C-1317, C-949-5, C-958, C-974, C-961, C-953, C-954, C-938, C-949A, and C-949B any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the

dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U19":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-951 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U19".

Emission Unit U20: Finish Mill #1

Clinker, gypsum, and additives are ground in a grinding mill. The mill is served by a separator for fines control, general baghouse dust collectors, and cement cooler.

U20 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1, 2, 3.3, 4, 5, 6, 7, 8

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U20 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1000	E-1000a	Gypsum Bin K-1000 (U-19-2) to Weigh Feeder K-1000-1 (Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1000-1	E-1000-1	Weigh Feeder K-1000-1 to Drag Conv. K-1002 (Make: Ramsey; Model: 40-17 (24”); Capacity: 10 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1001	E-1001	Clinker Bin K-1001 to Weigh Feeder K-1001-1 (Make: N/A; Model: N/A; Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1001-1	E-1001-1	Weigh Feeder K-1001-1 to Drag Conv. K-1002 (Make: Ramsey; Model: 40-17 (24”); Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1002	E-1002	Drag Conv. K-1002 to Finish Mill 1 K-1003 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02 STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1003	E-1003	Finish Mill 1 K-1003 to Airslide K-1005 (Make: Allis Chalmers; Model: Ball; Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1012	S-1012
K-1005	E-1005	Airslide K-1005 to Elevator K-1006 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1012	S-1012
K-1006	E-1006	Elevator K-1006 to Airslide K-1007 (Make: Rexnord; Model: 4118-01; Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1012	S-1012
K-1007	E-1007	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1008	E-1008	Separator K-1008 to Airslide K1009 (to cement silos) (Make: FLSmith; Model: O-Sepa; Capacity: 65 TPH; Installed: 2015)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1009	E-1009	Airslide K-1009 to Airlslide K-1038	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1009-1	E-1009-1	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1038	E-1038	Airslide K-1038 to Surge Bin K-1035 (U-21)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1036b	E-1036b	Screw K-1036 to Pump K-1011	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1070	E-1070	Airslide K-1070 to Pump K-1011 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-1011	E-1011	Pump K-1011 to Cement Silos (Make: Fuller: Model: 8” H-2; Capacity: 100 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1014	S-1014
K-2kgrind	E-2kgrind	Storage Tank - 2,000 gal (grinding aid) installed 1974	7.12	NA	S-2kgrind
K-12kgrind	E-12kgrind	Storage Tank -12,000 gal (grinding aid) installed 1974	7.12	NA	S-12kgrind
K-12kair	E-12kair	Storage Tank - 12,000 gal (air entraining agent) installed 1974	7.12	NA	S-12kair

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U20 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1012	Reverse air baghouse controlling particulates from Finish Mill #1 (K-1003), Elevator (K-1006), and Airslide (K-1005) (Make: Norblo; Model: 648 AMT; Capacity: 17,500 DSCFM)	VEs	S-1012

ID	Description	Performance Indicator	Stack ID
C-1014	Jet pulse baghouse controlling particulates from multiple emission points within Finish Mill #1 process, including finish mill Separator (K-1008). (Make: FLSmidth; Model: UC/PJ/704; Capacity: 36,021 ACFM)	VEs	S-1014

U20 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1007, K-1008, K-1009, K-1009-1, K-1038, K-1036b, K-1070, and K-1011 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1070, and K-1011 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-1007, K-1008, K-1009, K-1009-1, K-1038, and K-1036b sources subject to 40 CFR 60 Subpart F see Appendix B.[108]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U20" based on actual operating hours in a calendar day.

Table 32 Hourly PM Standards U20

Equipment	Standard (lb/hr)	Reg. Citation
K-1000[109,110]	60.95	6.09, section 3.2
K-1000-1[109,110]	19.17	6.09, section 3.2
K-1001[109,110]	60.95	6.09, section 3.2
K-1001-1[109,110]	47.05	6.09, section 3.2
K-1002[109,110]	47.05	6.09, section 3.2
K-1003[109,110]	47.05	6.09, section 3.2
K-1005[109,110]	47.05	6.09, section 3.2
K-1006[109,110]	65.08	6.09, section 3.2
K-1007[109,110]	33.75	7.08, section 3.1.2
K-1008[109,110]	33.76	7.08, section 3.1.2

[108] Since these emission points are subject to a more stringent opacity standard in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[109] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[110] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-1009[109,110]	44.39	7.08, section 3.1.2
K-1009-1[109,110]	33.75	7.08, section 3.1.2
K-1038[109,110]	44.39	7.08, section 3.1.2
K-1036b[109,110]	33.75	7.08, section 3.1.2
K-1070[109,110]	47.05	6.09, section 3.2
K-1011[109,110]	51.27	6.09, section 3.2

ii. The owner or operator shall not exceed 65 tons per hour of throughput of material processed in Separator K-1008. (Regulation 2.05 and District Permit C-0060-1052-14-V)[111]

d. **TAC**

i. See Emission Unit Plantwide. [112]

ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards as listed in the following table "Modeled TAC emissions U20". (Regulation 5.21, section 4.2 and section 4.3)

Table 33 Modeled TAC Emissions U20

Emission Point	Stack or Area ID	As	Cr6	Co
		lb/12 consecutive month period		
K-1003, K-1005, and K-1006 combined	S-1012	4.41E-01	6.81E-01	2.65E-01
K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1008, K-1009, K-1038, K-1036b, K-1070, and K-1011 combined	S-1014	1.82E-01	2.81E-01	2.65E-01

e. **VOC**

i. For emission points K-2kgrind, K-12kgrind, and K-12kair: The owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia in the storage vessel(s), unless the storage

[111] The 65 tons per hour throughput limit was calculated by the Company to be the limit of the feed systems to each Finish Mill #1 and #2 based on historical throughput data with standard deviation and a resulting 3-sigma confidence level. The calculated limit is incorporated into permit conditions to ensure PSD significant thresholds are not exceeded.

[112] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

tank is equipped with a permanent submerged fill pipe. (Regulation 7.12, section 3.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1008, K-1038, K-1036b, K-1070, and K-1011 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[113]

b. **Opacity**

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1008, K-1038, K-1036b, K-1070, and K-1011 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[113]

ii. For C-1012 and C-1014 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-1012 and C-1014 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

ii. The owner or operator shall daily monitor and record the throughput of material processed in separator K-1008.

[113] K-1007 and K-1009-1 have total enclosures and no monitoring, recordkeeping or reporting is required.

iii. The owner or operator shall daily monitor and record the hours of operation of separator K-1008.

iv. The owner or operator shall monthly calculate the average hourly throughput of separator K-1008.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U20". (See Appendix F for Calculation Methodology)

e. **VOC**

For emission points K-2kgrind, K-12kgrind, and K-12kair:

i. The owner or operator of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the new vapor pressure, and the date of the change in order to demonstrate compliance.

ii. The owner or operator shall keep a record that shows if the storage vessel is equipped with a submerged fill pipe. Submerged fill pipe means any fill pipe the discharge of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean every fill pipe the discharge opening of which is entirely submerged when the liquid level is 2 times the fill pipe diameter above the bottom of the tank.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1008, K-1038, K-1036b, K-1070, and K-1011 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[113]

b. **Opacity**

i. For K-1000, K-1000-1, K-1001, K-1001-1, K-1002, K-1003, K-1005, K-1006, K-1008, K-1038, K-1036b, K-1070, and K-1011 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[113]

ii. For C-1012 and C-1014:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1012 and C-1014 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

ii. The owner or operator shall report all periods of exceeding the 65 tons per hour throughput standard for K-1008.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table “Modeled TAC Emissions U20”:

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the following standards; and

3) Description of any corrective action taken for each exceedance..

e. **VOC**

i. For emission points K-2kgrind, K-12kgrind, and K-12kair: There are no routine compliance reporting requirements for this equipment.

Emission Unit U21: Finish Mill #2

Clinker, gypsum, and additives are ground in a grinding mill. The mill is served by a separator for fines control, general baghouse dust collectors, and cement cooler.

U21 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U21 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Stack ID
K-1015	E-1015	Clinker bin K-1015 (U-19-1) to Weigh Feeder K-1015-1 (Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1015-1	E-1015-1	Weigh Feeder K-1015-1 to Drag Conveyor K-1017 (Make: Ramsey; Model: 40-17 (24”); Capacity: 10 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1016	E-1016	Gypsum Bin K-1016 (U-19) to Weigh Feeder K-1016-1 (Capacity: 250 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1016-1	E-1016-1	Weigh Feeder K-1016-1 to Drag Conveyor K-1017 (Make: Ramsey; Model: 40-17 (24”); Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1017	E-1017	Drag Conveyor K-1017 to Finish Mill #2 K-1018 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1018	E-1018	Finish Mill #2 K-1018 to Airslide K-1020 (Make: Allis Chalmers; Model: Ball; Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1027	S-1027
K-1020	E-1020	Airslide K-1020 to Elevator K-1021 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1027	S-1027
K-1021	E-1021	Elevator K-1021 to Airslide K-1022 (Make: Rexnord; Model: 4118-01; Capacity: 360 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1027	S-1027
K-1021-1	E-1021-1	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1022	E-1022	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Stack ID
K-1023	E-1023	Separator K-1023 to Airslide K-1024 (to Cement Silo) (Make: FLSmith; Model: O-Sepa; Capacity: 65 TPH; Installed: 2015)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1024	E-1024	Airslide K-1024 to Airslide K-1032	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1024-1	E-1024-1	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1025	E-1025	Cement Cooler (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1030-23	E-1030-23	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1038	E-1038	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1032	E-1032	Airslide K-1032 to Surge Bin K-1035	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1035	E-1035	Surge Bin K-1035 to Screw K-1036	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1036	E-1036a	Screw K-1036 to Pump K-1026	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030
K-1071	E-1071	Airslide K-1071 to Pump K-1026 (Capacity: 65 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Stack ID
K-1026	E-1026	Pump K-1026 to Cement Silos (Make: Fuller: Model: 8” H-2; Capacity: 100 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1030	S-1030

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U21 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1027	Reverse air baghouse controlling particulates from Finish Mill #2 (K-1018), Elevator (K-1021), and Airslide (K-1020) (Make: Norblo; Model: 648 AMT; Capacity: 17,500 DSCFM)	VEs	S-1027
C-1030	Jet pulse baghouse controlling particulates from multiple emission points within Finish Mill #2 process, including finish mill Separator (K-1023). (Make: FLSmidth; Model: UC/PJ/704; Capacity: 36,021 ACFM)	VEs	S-1030

U21 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1021-1, K-1022, K-1023, K-1024, K-1024-1, K-1025, K-1030-23, K-1038, K-1032, K-1035, K-1036, K-1071, and K-1026 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1071, and K-1026 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-1021-1, K-1022, K-1023, K-1024, K-1024-1, K-1025, K-1030-23 K-1038, K-1032, K-1035, and K-1036 sources subject to 40 CFR 60 Subpart F see Appendix B.[114]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U21" based on actual operating hours in a calendar day.

Table 34 Hourly PM Standards U21

Equipment	Standard (lb/hr)	Reg. Citation
K-1015[115,116]	60.95	6.09, section 3.2
K-1015-1[115,116]	19.17	6.09, section 3.2
K-1016[115,116]	60.95	6.09, section 3.2
K-1016-1[115,116]	47.05	6.09, section 3.2
K-1017[115,116]	47.05	6.09, section 3.2
K-1018[115,116]	47.05	6.09, section 3.2
K-1020[115,116]	47.05	6.09, section 3.2
K-1021[115,116]	65.08	6.09, section 3.2
K-1021-1[115,116]	33.75	7.08, section 3.1.2

[114] Since these emission points are subject to a more stringent opacity standard in 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[115] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[116] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-1022[115,116]	33.75	7.08, section 3.1.2
K-1023[115,116]	33.76	7.08, section 3.1.2
K-1024[115,116]	44.39	7.08, section 3.1.2
K-1024-1[115,116]	33.75	7.08, section 3.1.2
K-1025[115,116]	33.75	7.08, section 3.1.2
K-1030-23[115,116]	36.16	7.08, section 3.1.2
K-1038[115,116]	44.39	7.08, section 3.1.2
K-1032[115,116]	44.39	7.08, section 3.1.2
K-1035[115,116]	44.39	7.08, section 3.1.2
K-1036[115,116]	33.75	7.08, section 3.1.2
K-1071[115,116]	47.05	6.09, section 3.2
K-1026[115,116]	51.27	6.09, section 3.2

ii. The owner or operator shall not exceed 65 tons per hour of throughput of material processed in Separator K-1023. (District Permit C-0060-1052-14-V Regulation 2.05)[117]

d. **TAC**

i. See Emission Unit Plantwide.[118]

ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards as listed in the following table "Modeled TAC emissions U21". (Regulation 5.21, section 4.2 and section 4.3)

Table 35 Modeled TAC Emissions U21

Emission Point	Stack or Area ID	As	Cr6	Co
		lb/12 consecutive month period		
K-1018, K-1020, and K-1021 combined	S-1027	4.41E-01	6.81E-01	2.65E-01

[117] The 65 tons per hour throughput limit was calculated by the Company to be the limit of the feed systems to each Finish Mill #1 and #2 based on historical throughput data with standard deviation and a resulting 3-sigma confidence level. The calculated limit is incorporated into permit conditions to ensure PSD significant thresholds are not exceeded.

[118] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Emission Point	Stack or Area ID	As	Cr6	Co
		lb/12 consecutive month period		
K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1023, K-1024, K-1032, K-1035, K-1036, K-1071, and K-1026 combined	S-1030	1.82E-01	2.81E-01	2.65E-01

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1023, K-1024, K-1032, K-1035, K-1036, K-1071, and K-1026 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[119]

b. **Opacity**

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1023, K-1024, K-1032, K-1035, K-1036, K-1071, and K-1026 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[119]

ii. For C-1027 and C-1030 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

[119] K-1021-1, K-1022, K-1024-1, K-1025, K-1030-23 and K-1038 have total enclosures and no monitoring, recordkeeping or reporting is required.

c. **PM**

i. For C-1027 and C-1030 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

ii. The owner or operator shall daily monitor and record the throughput of material processed of separator K-1023.

iii. The owner or operator shall daily monitor and record the hours of operation of separator K-1023.

iv. The owner or operator shall monthly calculate the average hourly throughput of separator K-1023.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U21". (See Appendix F for Calculation Methodology)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1023, K-1024, K-1032, K-1035, K-1036, K-1071, and K-1026 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[119]

b. **Opacity**

i. For K-1015, K-1015-1, K-1016, K-1016-1, K-1017, K-1018, K-1020, K-1021, K-1023, K-1024, K-1032, K-1035, K-1036, K-1071, and K-1026 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[119]

ii. For C-1027 and C-1030:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1027 and C-1030 any and all periods of failure to perform the

monthly visual inspection of the structural and mechanical integrity of the dust collectors.

ii. The owner or operator shall report all periods of exceeding the 65 tons per hour throughput standard for K-1023.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U21":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

Emission Unit U22: Mortar Mixing Mill

Portland cement, clinker, and hydrated lime are pumped to separate bins and are weighed before being combined and sent to the mortal mill. The mortar product is then sent to a pump hopper and conveyed to silos in processes U-24 and U-26.

U22 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U22 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1105	E-1011	Mortar Cement Feed Bin K-1105 (Capacity: 140 Ton; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1103	S-1103
K-1124	E-1105	Weigh Feeder K-1124	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1116	E-585	CKD Bin K-1116 (Capacity: 140 Ton; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1115	S-1115
K-1126	E-1116	Weigh Feeder K-1126	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1127	E-1122 E-1124	Feed Screw K-1127 (Make: Rexnord; Model: 14” x 40’; Capacity: 20 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1129	E-1127	Mortar Mill K-1129 (Make: Allis Chambers; Model: 5.5’ x 21’; Capacity: 20 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1130	E-1129	Feed Screw K-1130	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1133	E-1130	Pump Hopper K-1133	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128
K-1114	E-LIME TRUCK	Lime Bin K-1114 (Capacity: 200 Ton; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1113	S-1113
K-1122	E-1114	Weigh Feeder K-1122	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1128	S-1128

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U22 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1128	This is a two (2) compartment unit that captures material from the Kosmortar Cement Feed Bin (K-1105), CKD Bin (K-1116), Weigh Feeder (K-1126), Feed Screw (K-1127), Mortar Mill (K-1129), Feed Screw (K-1130), and the Lime Bin (K-1114). (Make: Buell/Norblo; Model: 216 AMT; Capacity: 4,000 DSCFM)	VEs	S-1128
C-1103	This is a single (1) compartment unit that collects particulates from Kosmortar Cement Feed Bin (K-1105) (Make: Wheelabrator; Model: 36-108; Capacity: 2,500 DSCFM)	VEs	S-1103
C-1113	This is a single (1) compartment unit that vents the Lime Bin (K-1114) (Make: Wheelabrator; Model: 18-108; Capacity: 1,500 DSCFM)	VEs	S-1113
C-1115	This is a single (1) compartment unit used to vent the CKD Bin (K-1116). (Make: Wheelabrator; Model: 18-108; Capacity: 1,500 DSCFM)	VEs	S-1115

U22 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U22" based on actual operating hours in a calendar day.

Table 36 Hourly PM Standards U22

Equipment	Standard (lb/hr)	Reg. Citation
K-1105[120,121]	51.27	6.09, section 3.2
K-1124[120,121]	54.71	6.09, section 3.2
K-1116[120,121]	54.71	6.09, section 3.2
K-1126[120,121]	54.71	6.09, section 3.2
K-1127[120,121]	54.71	6.09, section 3.2
K-1129[120,121]	30.51	6.09, section 3.2
K-1130[120,121]	30.51	6.09, section 3.2
K-1133[120,121]	30.51	6.09, section 3.2
K-1114[120,121]	58.50	6.09, section 3.2
K-1122[120,121]	58.50	6.09, section 3.2

d. **TAC**

[120] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[121] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

i. See Emission Unit Plantwide.[122]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U22". (Regulation 5.21, section 4.2 and section 4.3)

Table 37 Modeled TAC Emissions U22

Emission Point	Stack or Area ID	As	Cr6
		lb/12 consecutive month period	
K-1105	S-1103	3.14E-02	4.86E-02
K-1114	S-1113	1.88E-02	2.92E-02
K-1116	S-1115	1.88E-02	2.92E-02
K-1124, K-1126, K-1127, K-1129, K-1130, K-1133, and K-1122	S-1128	5.03E-02	7.78E-02

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U22". (Regulation 5.21, section 4.2 and section 4.3)

Table 38 *De Minimis* TAC Standards U22

Equipment ID	Co
K-1124	*
K-1126	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-1124 and K-1126 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

[122] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For C-1128, C-1103, C-1113, and C-1115 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-1128, C-1103, C-1113, and C-1115 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table “Modeled TAC Emissions U22”. (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-1124 or K-1126 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the

following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U22" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U22"for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-1124 and K-1126.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1105, K-1124, K-1116, K-1126, K-1127, K-1129, K-1130, K-1133, K-1114, and K-1122 sources subject to 40 CFR 60 Subpart F Emission Unit Plantwide and Appendix B.

ii. For C-1128, C-1103, C-1113, and C-1115:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1128, C-1103, C-1113, and C-1115 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U22":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-1124 or K-1126 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U22".

Emission Unit U24: Rail and Barge Loading

Portland or Masonry cement is conveyed through various silos, bins and/or hoppers for truck, barge or rail loading. Portland cement that is loaded into barges is stored in the cement dome (or in the South Bank of silos/"six pack" is the bypass is used) prior to shipment.

In the event that cement cannot be transferred from the silos to the dome prior to loading a hopper barge, the dome bypass line will allow a direct transfer from the silos to a barge. The bypass system is controlled by the 1635 dust collector, prior to the cement's transfer into the 1611-2 "mini-dome" and on to the hopper barge load spout.

U24 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
2.05	Prevention of Significant Deterioration of Air Quality	1,2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U24 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1320	E-1175b	Silo Alleviator K-1320 (Make: Fuller; Model: 8" H-2; Capacity: 100 TPH; Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1321	S-1321
K-1322	E-1320	Airslides/Distribution Box K-1322 (Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1321	S-1321
K-Silo 6 and 9	E-1322a	Cement Silos 6&9 from Airslides/Distribution Box K-1322 (Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1450	S-1450
K-Silo 5 and 8	E-1322b	Cement Silos 5&8 Airslides/Distribution Box K-1322 (Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1452	S-1452
K-Silo 4 and 7	E-1322c	Cement Silos 4&7 Airslides/Distribution Box K-1322 (Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1454	S-1454
K-1468	E-1468	Airslide K-1468 to Rail Loading Spout K-1485 (Make Vortex, Model TBD, Capacity 9,251 ft3/hr, 278 tons/hr)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1487	S-1487
K-1485	E-1485	Rail Loading Spout K-1485 (Make: Vortex; Capacity: 720 TPH; Installed: 2016)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1487	S-1487
K-1478	E-1478	Airslide K-1478 to Diversion Bin K-1490 (Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1491	S-1491
K-1490	E-1490a	Diversion Bin K-1490 to Pump K-	5.02, 6.09, 7.02,	C-1491	S-1491

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
	E-1490b	1493 and Pump K-144 (Installed: 1961)	STAR*, 40CFR60-F, 40CFR63-LLL	C-1491	S-1491
K-1443	E-1443	Pump K-1443 to Barge Surge Bin K-1433 (Make: Fuller Kenyon; Capacity: 350 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1431	S-1431
K-1493	E-1493	Pump K-1493 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1433	E-1433	Barge Surge Bin K-1433 to Pump K-1438 (Installed: 2000)	5.02, 7.02,7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1431	S-1431
K-1438	E-1438	Pump K-1438 to Pneumatic Barge Loading (Make: Fuller Kenyon; Model: 12” Type M; Capacity: 350 TPH; Installed: 1961)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1430	S-1430
K-1600	E-1600	Target box K-1600 to Cement Dome K-1602 (Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1601	S-1601
K-1602	E-1602	Cement dome K-1602 to De-dusting chamber K-1611-2 (Capacity: 100,000 tons; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1603	S-1603
K-1604	E-1604	Airslide (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1611	E-1611	Airslide K-1611 to Mini Dome K-1611-2 (Installed: 2003)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1629	S-1629
K-1611-2	E-1611-2	Mini Dome K-1611-2 to Belt K-1627 (Installed: 2003)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1629	S-1629

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1627	E-1627	Belt K-1627 to Hopper Barge Load Spout K-1631 (Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1628	S-1628
K-1631	E-1631	Hopper Barge Load Spout K-1631 to Hopper Barges (Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1628	S-1628
K-Dome Bypass	E-Dome Bypass	Dome Bypass Alleviator to Mini Dome K-1611-2 (Make: 16" Claudius Peters airslides; Capacity: 400 TPH; Installed: 2003)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1635	S-1635
K-Silo 10	E-Silo 10	Masonry Silo 10 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	S-MSilo 10
K-Silo 11	E-Silo 11	Masonry Silo 11 (total enclosure no emissions)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	NA	S-MSilo 11

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U24 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1450	Dust collector capturing emissions from the distribution box / airslides (K-1322) and cement silos 6 & 9. (Make: Norblo; Model: 260 AMT; Capacity: 3,000 DSCFM)	VEs	S-1450
C-1321	Dust collector capturing emissions from pump (K-1011, K-1026, K-1175) and silo alleviator (K-1320). (Capacity: 12,200 DSCFM)	VEs	S-1321
C-1452	Dust collector capturing emissions from the distribution box / airslides (K-1322) and cement silos 5, 8, & 4. (Make: Norblo; Model: 260 AMT; Capacity: 3,000 DSCFM)	VEs	S-1452
C-1454	Dust collector capturing emissions from the distribution box / airslides (K-1322) and cement silos 4 & 7. (Make: Norblo; Model: 260 AMT; Capacity: 3,000 DSCFM)	VEs	S-1454

ID	Description	Performance Indicator	Stack ID
C-1487	Dust collector capturing emissions from the airslide (K-1468) and Load Spout (K-1485) (Vortex, model VFS-70-A-A-E77546)	VEs	S-1487
C-1491	Dust collector capturing emissions from the diversion bin (K-1490) and pumps (K-1443 and 1493) (Make: Norblo; Model: 260 AMT; Capacity: 3,000 DSCFM)	VEs	S-1491
C-1431	Dust collector capturing emission from the barge surge bin (K-1433) and pump (K-1438). (Make: Fuller; Model: 304 C12; Capacity: 20,000 DSCFM)	VEs	S-1431
C-1430	Dust collector capturing emission from barge loading operations. (Make: Fuller; Model: 304 C12; Capacity: 20,000 DSCFM)	VEs	S-1430
C-1601	Dust collector capturing emissions from the cement dome (K-1601). (Make: IAC; Model: 120 TB; Capacity: 15,000 DSCFM)	VEs	S-1601
C-1603	Dust collector capturing emissions from airslide (K-1602) and the de-dusting chamber. (Make: IAC; Mode:l 120 TB; Capacity: 4,250 DSCFM)	VEs	S-1603
C-1635	Dust collector capturing emissions from the dome bypass alleviator. (Capacity: 13,200 DSCFM)	VEs	S-1635
C-1629	Dust collector capturing emissions from the cement mini-dome and airslide (K-1611). (Make: IAC; Model: 120 TB; Capacity: 3,000 DSCFM)	VEs	S-1629
C-1628	Dust collector capturing emissions from belt (K-1627) and the hopper barge load spout (K-1631). (Make: IAC; Model: 120 TB; Capacity: 3,000 DSCFM)	VEs	S-1628

U24 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1468, K-1485, K-1478, K-1490, K-1443, K-1493, K-1433, K-1438, K-1600, K-1602, K-1604, K-1611, K-1611-2, K-1627, K-1631, K-Dome Bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1478, K-1490, K-1443, and K-1438, sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. Kor K-1468, K-1485, K-1493, K-1433, K-1600, K-1602, K-1604, K-1611, K-1611-2, K-1627, K-1631, K-Dome bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 60 Subpart F see Appendix B.[123]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U24" based on actual operating hours in a calendar day.

Table 39 Hourly PM Standards U24

Equipment	Standard (lb/hr)	Reg. Citation
K-1320[124,125]	51.27	6.09, section 3.2
K-1322[124,125]	51.27	6.09, section 3.2
K-Silo 6 and 9[124,125]	51.27	6.09, section 3.2
K-Silo 5 and 8[124,125]	51.27	6.09, section 3.2
K-Silo 4 and 7[124,125]	51.27	6.09, section 3.2
K-1468[124,125]	42.59	7.08, section 3.1.2
K-1485[124,125]	42.59	7.08, section 3.1.2

[123] Since these emission points are subject to a more stringent opacity standard in Regulation 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[124] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[125] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

Equipment	Standard (lb/hr)	Reg. Citation
K-1478[124,125]	64.76	6.09, section 3.2
K-1490[124,125]	64.76	6.09, section 3.2
K-1443[124,125]	65.08	6.09, section 3.2
K-1493[124,125]	44.19	7.08, section 3.1.2
K-1433[124,125]	44.19	7.08, section 3.1.2
K-1438[124,125]	64.76	6.09, section 3.2
K-1600	44.19	7.08, section 3.1.2
K-1602	44.19	7.08, section 3.1.2
K-1611	44.19	7.08, section 3.1.2
K-1611-2	45.15	7.08, section 3.1.2
K-1627	44.19	7.08, section 3.1.2
K-1631	44.19	7.08, section 3.1.2
K-1600[126,127]	3.5 combined	2.05 and 85-98-C
K-1602[125,127]		
K-1611[125,127]		
K-1611-2[125,127]		
K-1627[125,127]		
K-1631[125,127]		
K-1604[124,125]	44.19	7.08, section 3.1.2
K-Dome Bypass[126]	45.15	7.08, section 3.1.2
K- Silo 10[124,125]	23.00	7.08, section 3.1.2
K- Silo 11[124,125]	23.00	7.08, section 3.1.2

ii. For Emission Points K-1600, K-1602, K-1611, K-1611-2, K-1627, and K-1631 combined the owner or operator shall not allow the PM emissions to exceed 14 tons per 12 consecutive months. (Regulation 2.05 and 85-98-C, Effective 4/1/1998)[126,127]

[126] This limit is for PSD avoidance.

[127] The pound per hour and 12 consecutive month limits can be exceeded without controls; therefore, both limits require monitoring and record keeping to demonstrate compliance.

iii. For K-Dome Bypass the owner or operator shall not cause or allow the project PM emissions to equal or exceed 25 tons, during any 12 consecutive month period. (Regulation 2.05 and 260-03-C)[126,128]

iv. For K-Dome Bypass the owner or operator shall not cause or allow the project PM_{10} emissions to equal or exceed 15 tons, during any 12 consecutive month periods. (Regulation 2.05 and 260-03-C)[126,128]

d. **TAC**

i. See Emission Unit Plantwide.[129]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U24". (Regulation 5.21, section 4.2 and section 4.3)

Table 40 Modeled TAC Emissions U24

Emission Point	Stack or Area ID	As	Cr6	Ni	Co	Mn
		lb/12 consecutive month period				
K-1322 and K-1320 combined	S-1321	1.53E-01	2.37E-01	4.40E-01	9.29E-02	3.32E+00
K-1438	S-1430	2.51E-01	3.89E-01	7.20E-01	1.52E-01	5.44E+00
K-1443 and K-1433 combined	S-1431	2.51E-01	3.89E-01	7.20E-01	1.52E-01	5.44E+00
K-Silo 6and9	S-1450	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-Silo 5 and 8	S-1452	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-Silo 4 and 7	S-1454	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-1468 and K-1485 combined	S-1487	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-1478 and E-1490 combined	S-1491	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01

[128] The PSD avoidance limit of 25 tons for PM and PM_{10} limit of 15 tons cannot be exceeded uncontrolled, therefore no monitoring or recordkeeping is required.

[129] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Emission Point	Stack or Area ID	As	Cr6	Ni	Co	Mn
		lb/12 consecutive month period				
K-1600	S-1601	1.66E-01	2.56E-01	4.73E-01	9.99E-02	4.08E+00
K-1602	S-1603	5.34E-02	8.27E+00	1.53E-01	3.22E-02	1.16E+00
K-1627 and K-1631 combined	S-1628	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-1611 and K-1611-2 combined	S-1629	3.78E-02	5.83E-02	1.08E-01	2.28E-02	8.16E-01
K-Dome Bypass	S-1635	2.06E-02	3.19E-02	5.90E-02	1.24E-02	3.59E+00

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1468, K-1485, K-1478, K-1490, K-1443, K-1433, K-1438, K-1600, K-1602, K-1611, K-1611-2, K-1627, K-1631, K-Dome Bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[130]

b. **Opacity**

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1468, K-1485, K-1478, K-1490, K-1443, K-1433, K-1438, K-1600, K-1602, K-1611, K-1611-2, K-1627, K-1631, K-Dome Bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[130]

ii. For C-1450, C-1321, C-1452, C-1454, C-1487, C-1491, C-1431, C-1430, C-1601, C-1603, C-1635, C-1629, and C-1628 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

[130] K-1604 and K-1493 have total enclosures and no monitoring, recordkeeping or reporting is required.

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. If there is any time that a control device for K-1600, K-1602, K-1611, K-1611-2, K-1627, and K-1631 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) The combined 12 consecutive month PM total for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For K-1600, K-1602, K-1611, K-1611-2, K-1627, and K-1631 the owner or operator shall daily record the hours of operation of the process.

iii. For C-1450, C-1321, C-1452, C-1454, C-1487, C-1491, C-1431, C-1430, C-1601, C-1603, C-1635, C-1629, and C-1628 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U24". (See Appendix F for Calculation Methodology)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1468, K-1485, K-1478, K-1490, K-1443, K-1433, K-1438, K-1600, K-1602, K-1611, K-1611-2, K-1627, K-1631, K-Dome Bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[130]

b. **Opacity**

i. For K-1320, K-1322 K-Silo 6 and 9, K-Silo 5 and 8, K-Silo 4 and 7, K-1468, K-1485, K-1478, K-1490, K-1443, K-1433, K-1438, K-1600, K-1602, K-1611, K-1611-2, K-1627, K-1631, K-Dome Bypass, K-Silo 10, and K-Silo 11 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[130]

ii. For C-1450, C-1321, C-1452, C-1454, C-1487, C-1491, C-1431, C-1430, C-1601, C-1603, C-1635, C-1629, and C-1628:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-1600, K-1602, K-1611, K-1611-2, K-1627, and K-1631 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 month standard;

5) Description of any corrective action taken for each exceedance.

ii. For C-1450, C-1321, C-1452, C-1454, C-1487, C-1491, C-1431, C-1430, C-1601, C-1603, C-1635, C-1629, and C-1628 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U24":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

Emission Unit U25: Truck Loading

Cement product is transferred to silos and then conveyed to truck load out.

U25 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U25 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1499	E-SILO 13b, 14b, 16b	Pump Hopper K-1499 (Capacity: 100 TPH; Installed: 1998)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1499-2	S-1499-2
K-Silo 12	E-1499b	Cement Silo 12	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1420	S-1420
K-1424/1427	E-CS-1,2,3	Pump Hopper K-1424 & FK Pump K-1427	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1425	S-1425
	E-Silo12			C-1425	S1425
K-Silo 1-3	E-OFM	Cement Silos 1, 2, and 3	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1400	S-1400
	E-1499			C-1400	S-1400
K-1410	E-1410	East Loadout to Trucks K-1410 (Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-ELS	S-ELS
K-1403	E-CSilo 3	Cement Silo 3 load out (Capacity: 12,765 tons; Installed: 1974	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1408	S-1408
K-1403-1	E-CSilo 1	Cement Silo 1 load out (Capacity: 12,765 tons; Installed: 1974	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1408	S-1408
K-1404	E-CSilo 2	Cement Silo 2 load out (Capacity: 12,765 tons; Installed: 1974	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1412	S-1412
	E-1404			C-1412	S-1412
K-1403-2	E-1403	Airslide K-1403-2 to North Loadout Spout K-1406	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1408	S-1408
	E-1403-2				

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1406	E-1406	North Loadout Spout K-1406 to Trucks (Installed: 1974)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1408	S-1408

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U25 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1408	Dust collector capturing emissions from the cement silos 1 and 3, the north loadout spout (K-1406), airslides (K-1403-1, K-1403-2, K-1403). (Make: Norblo; Model: 112 ME; Capacity: 3,800 DSCFM)	VEs	S-1408
C-1400	Dust collector capturing emissions from Cement Silos 1, 2 and 3 (Make: Fuller; Model: Type 3; Capacity: 3,800 DSCFM)	VEs	S-1400
C-1412	Dust collector capturing emissions from cement silo 2. (Make: Norblo; Model: 112 ME; Capacity: 4,000 DSCFM)	VEs	S-1412
C-1420	Dust collector capturing emissions from cement silo 12. (Make: Fuller; Capacity: 3,000 DSCFM)	VEs	S-1420
C-1425	Dust collector capturing emissions from cement silos 1, 2, and 3. (Make: Norblo; Model: 120 AMS; Capacity: 3,000 DSCFM)	VEs	S-1425
C-1499-2	Dust collector capturing emissions form cement silos 14 and 16. (Capacity: 1,000 DSCFM)	VEs	S-1499-2
C-ELS	Dust collector capturing emissions form east load spout. (Capacity: 1,500 DSCFM)	VEs	S-ELS

U25 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1499, K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For K-1499 sources subject to 40 CFR 60 Subpart F see Appendix B. [131]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U25" based on actual operating hours in a calendar day.

Table 41 Hourly PM Standards U25

Equipment	Standard (lb/hr)	Reg. Citation
K-1499[132,133]	36.16	7.08, section 3.1.2
K-Silo 12[132,133]	51.27	6.09, section 3.2
K-1424/1427[132,133]	51.27	6.09, section 3.2
K-Silo 1-3[132,133]	51.27	6.09, section 3.2
K-1410[132,133]	51.27	6.09, section 3.2
K-1403[132,133]	51.27	6.09, section 3.2
K-1403-1[132,133]	51.27	6.09, section 3.2
K-1404[132,133]	51.27	6.09, section 3.2
K-1403-2[132,133]	51.27	6.09, section 3.2
K-1406[132,133]	51.27	6.09, section 3.2

[131] Since K-1499 is subject to a more stringent opacity standard in Regulation 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[132] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[133] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

d. **TAC**

i. See Emission Unit Plantwide.[134]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U25". (Regulation 5.21, section 4.2 and section 4.3)

Table 42 Modeled TAC Emissions U25

Emission Point	Stack or Area ID	As	Cr6
		lb/12 consecutive month period	
K-1410	S-ELS	1.88E-02	2.92E-02
K-1499	S-1499-2	3.12E-03	4.83E-03
K-Silo 12	S-1420	2.34E-03	3.62E-03
K-1424/1427	S-1425	2.34E-03	3.62E-03
K-Silo 1-3	S-1400	4.78E-02	7.39E-02
K-1403, K-1403-1, K-1403-2, and K-1406 combined	S-1408	2.39E-02	3.70E-02
K-1404	S-1412	2.51E-02	3.89E-02

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U25". (Regulation 5.21, section 4.2 and section 4.3)

Table 43 De Minimis TAC Standards U25

Equipment ID	Ni	Co	Mn
K-1406		*	
K-1410		*	
K-Silo 12	*	*	*
K-Silo 1-3	*	*	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-1406, K-1410, K-Silo 12 and K-Silo 1-3 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

[134] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1499, K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1499, K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For C-1408, C-1400, C-1412, C-1420, C-1425, C-1499-2, and C-ELS if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-1408, C-1400, C-1412, C-1420, C-1425, C-1499-2, and C-ELS the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table “Modeled TAC Emissions U25”. (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-1406, K-1410, K-Silo 12 and K-Silo 1-3 is bypassed or not in operation when the process

equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U25" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U25" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-1406, K-1410, K-Silo 12 and K-Silo 1-3.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-1499, K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-1499, K-Silo 12, K-1424/1427, K-Silo 1-3, K-1410, K-1403, K-1403-1, K-1404, K-1403-2, and K-1406 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

ii. For C-1408, C-1400, C-1412, C-1420, C-1425, C-1499-2, and C-ELS:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1408, C-1400, C-1412, C-1420, C-1425, C-1499-2, and C-ELS any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U25":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding TAC Bypass Activity for K-1406, K-1410, K-Silo 12 and K-Silo 1-3 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and the 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U25".

Emission Unit U26: Storage Silos and Packaging

Portland or Masonry cement is conveyed through various silos, bins and/or hoppers for bagging/packaging.

U26 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U26 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K- SILO 13	E-SILO 13a	Pump Hoppers K-1011 & K-1026 to Cement Silo 13	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1243	S-1243
K- SILO 16	E-SILO 16	Pump Hoppers K-1011 & K-1026 to Cement Silo 16	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1243	S-1243
K- SILO 17	E-SILO 17	Pump Hopper K-1133 to Masonry Silo 17	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1243	S-1243
K- SILO 15	E-SILO 15a	Pump Hopper K-1133 to Masonry Silo 15	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1244	S-1244
K- SILO 14	E-SILO 14a	Pump Hoppers K-1011 & K-1026 to Cement Silo 14	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1244	S-1244
K-1229	E-SILO 13b	Elevator K-1229 from Cement Silo 13	5.02, 1.14, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	F-SILO 13b
K-1230	E-1229	Elevator K-1229 to Bin "A"	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1245	S-1245
K-1206	E-SILO 15b	Belt K-1204 to Elevator K-1206 from Masonry Silo 15&17	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1246	S-1246
K-1207	E-1206	Elevator K-1206 to Belt K-1207 from Masonry Silo 17	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1246	S-1246
K-1212	E-1210	Bin "B" from Masonry Silo 17	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1246	S-1246

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1211	E-1209	Bin "C" K-1211 from Masonry Silo 15	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1247	S-1247
K-1205	E-1205	Surge Bin “C” (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1218	E-1218	East Packer "C" K-1218 to Belt K-1219 from Masonry Silo 15 (Make: St. Regis; Model: 150FC)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1247	S-1247
K-1204	E-1204	Conveyance (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1217	E-1217	mid packer “B”	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1246	S-1246
K-1220	E-1220	Belt K-1220	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1245	S-1245
K-1232	E-1231	Bin “A” K-1232	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	C-1245	S-1245
K-1237-1	NA	Flattner (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1209	E-1209	Airslide K-1209 (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1210	E-1210	Screw K-1210 (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1219	E-1219	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1233-1	E-1233-1	Surge Bin “A” (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1231	E-1231	Screw K-1231 (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1235	E-1235	West Packer "A" K-1235 to Flattner K-1237-1 from Cement Silo 13 (Make: St. Regis; Model: 150FC) (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1237	E-1237	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1237-2	E-1237-2	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1238	E-1238	Palletizer (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1238-1	E-1238-1	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1241	E-1241	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA
K-1226	E-1226	Belt (total enclosure no emissions)	5.02, 6.09, 7.02, STAR*, 40CFR60-F, 40CFR63-LLL	NA	NA

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U26 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1243	Dust collector capturing emissions from Cement Silos 13 and 16 and Masonry Silo 17. (Make: Wheelabrator; Model: 112-108; Capacity: 9,500 DSCFM)	VEs	S-1243
C-1244	Dust collector capturing emissions from Cement Silo 14 and Masonry Silo 15. (Make: Wheelabrator; Model: 112-108; Capacity: 9,500 DSCFM)	VEs	S-1244
C-1245	Dust collector capturing emissions from Cement screw (K-1231), elevator (K-1229) and the West Packer "A" (K-1235). (Make: Wheelabrator; Model: 112-108; Capacity: 2,000 DSCFM)	VEs	S-1245
C-1246	Dust collector capturing emissions from belt (K-1204), elevator (K-1206), and screw (K-1210). (Make: Wheelabrator; Model: 112-108; Capacity: 2,000 DSCFM)	VEs	S-1246
C-1247	Dust collector capturing emissions from airslide (K-1209) and East packer "C". (Make: Wheelabrator; Model: 112-108; Capacity: 2,000 DSCFM)	VEs	S-1247

U26 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1205, K-1218, K-1204, K-1217, K-1220, K-1232, K-1237-1, K-1209, K-1210, K-1219, K-1233-1, K-1231, K-1235, K-1237, K-1237-2, K-1238, K-1238-1, K-1241, and K-1226 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1205, K-1218, K-1204, K-1217, K-1220, K-1232, K-1237-1, K-1209, K-1210, K-1219, K-1233-1, K-1231, K-1235, K-1237, K-1237-2, K-1238, K-1238-1, K-1241, and K-1226 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U26" based on actual operating hours in a calendar day.

Table 44 Hourly PM Standards U26

Equipment	Standard (lb/hr)	Reg. Citation
K- SILO 13[135,136]	51.27	6.09, section 3.1
K- SILO 16[135,136]	51.27	6.09, section 3.1
K- SILO 17[135,136]	51.27	6.09, section 3.1
K- SILO 15[135,136]	51.27	6.09, section 3.1
K-1229[135,136]	51.27	6.09, section 3.1
K-1230[135,136]	51.27	6.09, section 3.1
K-1206[135,136]	51.27	6.09, section 3.1
K-1207[135,136]	51.27	6.09, section 3.1
K-1212[135,136]	51.27	6.09, section 3.1
K-1211[135,136]	51.27	6.09, section 3.1

[135] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[136] These emission points were installed prior to the applicable NSR/PSD date.

Equipment	Standard (lb/hr)	Reg. Citation
K-1205[135,136]	51.27	6.09, section 3.1
K-1218[135,136]	51.27	6.09, section 3.1
K-1204[135,136]	51.27	6.09, section 3.1
K-1217[135,136]	51.27	6.09, section 3.1
K-1220[135,136]	51.27	6.09, section 3.1
K-1232[135,136]	51.27	6.09, section 3.1
K-1237-1[135,136]	51.27	6.09, section 3.1
K-1209[135,136]	51.27	6.09, section 3.1
K-1210[135,136]	51.27	6.09, section 3.1
K-1219[135,136]	51.27	6.09, section 3.1
K-1233-1[135,136]	51.27	6.09, section 3.1
K-1231[135,136]	51.27	6.09, section 3.1
K-1235[135,136]	51.27	6.09, section 3.1
K-1237[135,136]	51.27	6.09, section 3.1
K-1237-2[135,136]	51.27	6.09, section 3.1
K-1238[135,136]	51.27	6.09, section 3.1
K-1238-1[135,136]	51.27	6.09, section 3.1
K-1241[135,136]	51.27	6.09, section 3.1
K-1226[135,136]	51.27	6.09, section 3.1

d. **TAC**

i. See Emission Unit Plantwide.[137]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U26". (Regulation 5.21, section 4.2 and section 4.3)

Table 45 Modeled TAC Emissions U26

Emission	Stack or Area	As	Cr6	Co

[137] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

Point	ID	lb/12 consecutive month period		
K-SILO 13, K-SILO 16, and K-SILO 17	S-1243	1.19E-01	1.85E-01	7.20E-02
K-SILO 14 and K-SILO 15	S-1244	1.19E-01	1.85E-01	7.20E-02
K-1220, K-1230, and K-1232	S-1245	2.50E-02	3.86E-02	1.51E-02
K-1206, K-1207, K-1212, and K-1217	S-1246	2.50E-02	1.77E-02	1.51E-02
K-1211 and K-1218	S-1247	2.50E-02	3.86E-02	1.51E-02

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U26". (Regulation 5.21, section 4.2 and section 4.3)

Table 46 De Minimis TAC Standards U26

Equipment ID	Ni	Co	Mn
K-SILO 13	*	*	*
K-SILO 14	*	*	*
K-SILO 15	*	*	*
K-SILO 16	*	*	*
K-SILO 17	*	*	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-SILO 13, K-SILO 14, K-SILO 15, K-SILO 16, and K-SILO 17 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1218, K-1217, K-1220, K-1232, and K-1237-1 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[138]

b. **Opacity**

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-

1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1218, K-1217, K-1220, K-1232, and K-1237-1 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[138]

ii. For C-1243, C-1244, C-1245, C-1246, and C-1247 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-1243, C-1244, C-1245, C-1246, and C-1247 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table “Modeled TAC Emissions U26”. (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-SILO13, K-SILO14, K-SILO15, K-SILO16, or K-SILO17 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

[138] K-1204, K-1205, K-1209, K-1210, K-1219, K-1233-1, K-1231, K-1235, K-1237, K-1237-1, K-1237-2, K-1238, K-1238-1, K-1241, and K-1226 have total enclosures and no monitoring, recordkeeping or reporting is required.

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U26" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U26" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-SILO13, K-SILO14, K-SILO15, K-SILO16, and K-SILO17.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1218, K-1217, K-1220, K-1232, and K-1237-1 sources subject to 40 CFR 63 Subpart LLL see Appendix B.[138]

b. **Opacity**

i. For K- SILO 13, K- SILO 16, K- SILO 17, K- SILO 15, K- SILO 14, K-1229, K-1230, K-1206, K-1207, K-1212, K-1211, K-1218, K-1217, K-1220, K-1232, and K-1237-1 sources subject to 40 CFR 60 Subpart F see Emission Unit Plantwide and Appendix B.[138]

ii. For C-1243, C-1244, C-1245, C-1246, and C-1247:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-1243, C-1244, C-1245, C-1246, and C-1247 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U26":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding TAC Bypass Activity for K-SILO13, K-SILO14, K-SILO15, K-SILO16, and K-SILO17 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U26".

Emission Unit U27: Paved and Unpaved Roads

Paved and unpaved roads throughout the plant with trucks and operational, heavy equipment carrying raw materials and final products.

U27 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U27 Equipment:

Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
E-A	Paved segment of road with limestone, coal/coke, gypsum, flyash, millscale (delivery), and clinker (alternate) fugitives.	1.14, STAR*	C-ST	F-A
E-B	Paved segment of road with clinker (alternate) fugitives.	1.14, STAR*	C-ST	F-B
E-C	Paved segment of road with limestone, coal/coke, gypsum, flyash, millscale (delivery), and clinker (alternate) fugitives	1.14, STAR*	C-ST	F-C
E-D	Paved segment of road with limestone, coal/coke, gypsum, flyash, millscale (delivery), and clinker (alternate) fugitives	1.14, STAR*	C-ST	F-D
E-E	Unpaved segment of rad with limestone, flyash, millscale (process) fugitives.	1.14, STAR*	C-WS	F-E

Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
E-F	Paved segment of road with flyash and millscale (process) fugitives.	1.14, STAR*	C-ST	F-F
E-G	Unpaved segment of road with coal/coke, gypsum, clinker (alternate), and sand fugitives.	1.14, STAR*	C-WS	F-G
E-H1	Paved segment of road with cement (bagged, bulk) and masonry (bagged, bulk) fugitives.	1.14, STAR*	C-ST	F-H1
E-H2	Paved segment of road with cement (bagged, bulk) and masonry (bagged, bulk) fugitives.	1.14, STAR*	C-ST	F-H2
E-I	Paved segment of road with bagged cement and masonry fugitives	1.14, STAR*	C-ST	F-I
E-J	Paved segment of road with bulk cement and masonry fugitives.	1.14, STAR*	C-ST	F-J
E-K	Unpaved segment of road with clinker, coal/coke, gypsum, clinker (alternate), and clinker (outside) fugitives.	1.14, STAR*	C-WS	F-K
E-L	Heavy equipment moving limestone around the plant.	1.14, STAR*	C-ST/C-WS	F-L
E-LA	Heavy equipment moving overs limestone around the plant.	1.14, STAR*	C-ST/C-WS	F-LA
E-M	Heavy equipment moving coal/coke around the plant.	1.14, STAR*	C-ST/C-WS	F-M
E-N	Heavy equipment moving gypsum (delivery) around the plant.	1.14, STAR*	C-WS	F-N
E-NA	Heavy equipment moving gypsum (1141 Mill System) around the plant.	1.14, STAR*	C-ST/C-WS	F-NA
E-O	Heavy equipment moving clay around the plant.	1.14, STAR*	C-ST/C-WS	F-O
E-P	Unpaved segment of road with gypsum fugitives.	1.14, STAR*	C-WS	F-P
E-Q	Paved segment of road with clinker hot tank.	1.14, STAR*	C-ST	F-Q
E-R	Paved segment of road with clinker (alternate) and clinker (outside) fugitives.	1.14, STAR*	C-WS	F-R
E-S	Unpaved segment with gypsum fugitives.	1.14, STAR*	C-WS	F-S
E-T	Road not typically utilized at plant.	1.14, STAR*	NA	F-T

Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
E-U	Heavy equipment moving sand around the plant.	1.14, STAR*	C-ST/C-WS	F-U
E-V	Unpaved segment of road with coal/coke, clinker (outside), sand and gypsum fugitives.	1.14, STAR*	C-WS	F-V
E-VA	Heavy equipment moving clinker (outside), sand and gypsum fugitives.	1.14, STAR*	C-ST/C-WS	F-VA
E-W	Unpaved segment of road with gypsum.	1.14, STAR*	C-ST/C-WS	F-W
E-WA	Heavy equipment moving coal/coke around the plant.	1.14, STAR*	C-ST/C-WS	F-WA
E-X	Unpaved segment of road with gypsum, coal/coke and sand.	1.14, STAR*	C-WS	F-X
E-Y	Unpaved segment of road with gypsum and sand.	1.14, STAR*	C-WS	F-Y
E-Z	Unpaved segment of road with sand fugitives.	1.14, STAR*	C-WS	F-Z

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U27 Control Devices:

ID	Description	Performance Indicator	Efficiency
C-ST	Sweeper Truck	VE	75%
C-WS	Water Suppression	VE	75%
C-ST/WS	Sweeper Truck and Water suppression	VE	75%

U27 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **Opacity**

i. For E-A, E-B, E-C, E-D, E-E, E-F, E-G, E-H1, E-H2, E-I, E-J, E-K, E-L, E-LA, E-M, E-N, E-NA, E-O, E-P, E-Q, E-R, E-S, E-T, E-U, E-V, E-VA, E-W, E-WA, E-X, E-Y, and E-Z See Emission Unit Plantwide.

b. **PM**

i. The owner or operator shall not allow a road to be used without taking reasonable precautions to prevent particulate matter from becoming airborne beyond the work site. Such precautions shall include, where applicable, but shall not be limited to the following: (Regulation 1.14, section 2.1)

1) Applying and maintaining asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts, (Regulation 1.14, section 2.1.2)

2) Covering at all times, except when loading and unloading, open bodied trucks transporting materials likely to become airborne, (Regulation 1.14, section 2.1.4)

3) Maintaining paved roadways in a clean condition, (Regulation 1.14, section 2.1.6)

4) Removing earth or other material from paved streets which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. (Regulation 1.14, section 2.1.7)

5) Comply with the dust control plan in Appendix J. (Regulation 1.14, section 3.1)

c. **TAC**

i. See Emission Unit Plantwide.[139]

[139] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U27". (Regulation 5.21, section 4.2 and section 4.3)

Table 47 Modeled TAC Emissions U27

Road Segment	As	Cr6	Co
	lb/12 consecutive month period		
A	7.47E-06	6.73E-06	3.70E-05
B	2.35E-02	1.53E-02	2.37E-03
C	9.90E-02	5.47E-02	1.01E-02
D	1.27E-02	7.01E-03	1.30E-03
G	3.51E-02	1.36E-02	3.18E-02
H1	3.07E-03	4.21E-03	1.55E-03
H2	3.07E-03	4.21E-03	1.55E-03
I	1.03E-03	7.38E-04	1.27E-04
J	5.04E-02	7.76E-02	3.03E-02
K	1.03E-02	5.71E-03	8.41E-03
L	1.07E-02	9.64E-03	5.29E-02
LA	2.01E-03	1.80E-03	9.90E-03
Q	1.89E-02	1.04E-02	1.54E-02
R	3.44E-03	1.90E-03	2.80E-03
U	2.11E-02	6.95E-03	1.97E-02
V	1.46E-02	5.07E-03	1.35E-02
VA	3.23E-03	1.79E-03	2.63E-03
X	2.06E-02	6.76E-03	1.92E-02
Y	3.16E-02	1.04E-02	2.95E-02
Z	1.42E-01	4.68E-02	1.33E-01

iii. The owner or operator shall not allow TAC emissions to exceed values for the equipment as indicated in the following table "*De Minimis* TAC Standards U27". (Regulation 5.21, section 4.2 and section 4.3)

Table 48 De Minimis TAC Standards U27

Road Segment	Ni	Mn
G	*	*
V	*	*
X	*	*
Y	*	*
Z	*	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For E-G, E-V, E-X, E-Y, and E-Z the owner or operator shall operate and maintain associated controls at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. For E-A, E-B, E-C, E-D, E-E, E-F, E-G, E-H1, E-H2, E-I, E-J, E-K, E-L, E-LA, E-M, E-N, E-NA, E-O, E-P, E-Q, E-R, E-S, E-T, E-U, E-V, E-VA, E-W, E-WA, E-X, E-Y, and E-Z, the owner or operator shall comply with monitoring and record keeping requirements contained in the dust control plan in Appendix J.

ii. For C-ST, C-WS, and C-ST/WS if there is any time that Appendix J is not followed when the associated process is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

b. **PM**

i. The owner or operator shall comply with monitoring and record keeping requirements contained in the dust control plan in Appendix J.

c. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table “Modeled TAC Emissions U27”. (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for E-G, E-V, E-X, E-Y, or E-Z is

bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U27" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U27" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for E-G, E-V, E-X, E-Y, and E-Z.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **Opacity**

i. The owner or operator shall report any deviations from the requirements contained in the dust control plan in Appendix J.

ii. For C-ST, C-WS, and C-ST/WS:

1) Number of times and duration that Appendix J was not followed;

2) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

3) Description of any corrective action taken for each exceedance.

b. **PM**

i. The owner or operator shall report any deviations from the requirements contained in the dust control plan in Appendix J.

c. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U27":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding TAC Bypass Activity for E-G, E-V, E-X, E-Y, and E-Z in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table "De Minimis Value Standards U27".

Emission Unit U28: Storage Piles

Raw material storage piles stored on-site at the plant.

U28 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
1.14	Control of Fugitive Emissions	1, 2, 2.3 and 2.4
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U28 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
P-1	P-1	7 Acres Limestone	1.14, STAR*	NA	F-1
P-2	P-2	1 Acres Limestone overs	1.14, STAR*	NA	F-2
P-3	P-3a	3 Acres Coal/Coke Main drop point	1.14, 7.08, STAR*	NA	F-3a
	P-3b	3 Acres Coal/Coke Main wind erosion		NA	F-3b
P-4	P-4	5.48 Acres Sand	1.14, STAR*	NA	F-4
P-5	P-5	2.5 Acres Clay	1.14, STAR*	NA	F-5
P-6	P-6	3.0 Acres Clinker Outside	1.14, 5.02, 7.02, STAR*, 40 CFR60-F, 40CFR63-LLL	NA	F-6
P-7	P-7	1 Acre Rock Gypsum	1.14, STAR*	NA	F-7
P-8	P-8	0.29 Acres Covered Gypsum	1.14, STAR*	NA	F-8
P-9	P-9	0.54 Clinker inside	1.14, STAR*	NA	F-9
P-10	P-10	1 Acre Limestone crushed	1.14, STAR*	NA	F-10
P-11	P-11a	3 Acres Coal/Coke Temporary Unloading drop point	1.14, 7.08, STAR*	NA	F-11a
	P-11b	3 Acres Coal/Coke Temporary Unloading wind erosion		NA	F-11b
P-12	P-12a	2.4 Acres Cole/Coke Secondary drop point	1.14, 7.08, STAR*	NA	F-12a
	P-12b	2.4 Acres Cole/Coke Secondary wind erosion		NA	F-12b
P-13	P-13a	0.4 Acres Millscale	1.14, 7.08, STAR*	NA	F-13a
	P-13b	0.4 Acres Millscale		NA	F-13b
P-14	P-14a	0.7 Clinker MIAG building drop point	1.14, 7.08, STAR*	NA	F-14a
	P-14b	0.7 Clinker MIAG building wind erosion		NA	F-14b

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
P-15	P-15a	0.17 Acres Shreds/Tire Components drop point	1.14, 7.08, STAR*	NA	F-15a
	P-15b	0.17 Acres Shreds/Tire Components wind erosion		NA	F-15b
P-16	P-16a	0.1 Synthetic Gypsum drop point	1.14, 7.08, STAR*	NA	F-16a
	P-16b	0.1 Synthetic Gypsum wind erosion		NA	F-16b
P-17	P-17a	0.1 Large AF drop point	1.14, 7.08, STAR*	NA	F-17a
	P-17b	0.1 Acres Large AF wind erosion		NA	F-17b
P-18	P-18a	0.11 RDF drop point	1.14, 7.08, STAR*	NA	F-18a
	P-18b	0.11 RDF wind erosion		NA	F-4b

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U28 Control Devices:

ID	Description	Performance Indicator	Efficiency
C-Tarp	Tarp used to cover outdoor clinker pile	VE	70%

U28 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For P-6 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-8, P-9, P-10, P-11, P-12, P-13, P-14, P-15, P-16, P-17, and P-18 see Emission Unit Plantwide.

ii. For P-6 sources subject to 40 CFR 60 Subpart F see Appendix B.

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U28" based on actual operating hours in a calendar day.

Table 49 Hourly PM Standards U28

Equipment	Standard (lb/hr)	Reg. Citation
P-3a[140]	26.83	7.08, section 3.1.2
P-3b[140]	26.83	7.08, section 3.1.2
P-11a[140]	26.83	7.08, section 3.1.2
P-11b[140]	26.83	7.08, section 3.1.2
P-12a[140]	26.83	7.08, section 3.1.2
P-12b[140]	26.83	7.08, section 3.1.2
P-13a[140]	4.00	7.08, section 3.1.2
P-13b[140]	4.00	7.08, section 3.1.2
P-14a[140]	4.57	7.08, section 3.1.2
P-14b[140]	4.57	7.08, section 3.1.2
P-15a[140]	2.34	7.08, section 3.1.2
P-15b[140]	2.34	7.08, section 3.1.2
P-16a[140]	15.41	7.08, section 3.1.2
P-16b[140]	15.41	7.08, section 3.1.2

[140] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

Equipment	Standard (lb/hr)	Reg. Citation
P-17a[140]	2.34	7.08, section 3.1.2
P-17b[140]	2.34	7.08, section 3.1.2
P-18a[140]	9.21	7.08, section 3.1.2
P-18b[140]	9.21	7.08, section 3.1.2

d. **TAC**

i. See Emission Unit Plantwide.[141]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U28". (Regulation 5.21, section 4.2 and section 4.3)

Table 50 Modeled TAC Emissions U28

Emission Point	Description	As	Cr6
		lb/12 consecutive month period	
P-1	Limestone	3.87E-03	3.49E-03
P-2	Limestone (overs)	5.55E-04	5.01E-04
P-4	Sand	1.44E-02	4.73E-03
P-6	Clinker (outside)	7.75E-02	4.28E-02
P-9	Clinker inside	9.64E-02	5.35E-02
P-10	Crushed Limestone	3.92E-03	3.54E-03

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For P-6 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-8, P-9, P-10, P-11, P-12, P-13, P-14, P-15, P-16, P-17, and P-18 see Emission Unit Plantwide.

[141] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

ii. For C-Tarp if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. For C-Tarp the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the control device for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U28". (See Appendix F for Calculation Methodology)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For P-6 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-8, P-9, P-10, P-11, P-12, P-13, P-14, P-15, P-16, P-17, and P-18 see Emission Unit Plantwide.

ii. For C-Tarp:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. For C-Tarp any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the control device.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table "Modeled TAC Emissions U28":

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

Emission Unit U29: Gasoline Dispensing Facility

Storage and dispensing of gasoline for company vehicles and equipment

U29 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.15	Standards of Performance for Gasoline Transfer To New Service Station Storage Tanks (Stage 1 Vapor Recovery)	1,2, 3.1, 3.3, 3.8, 4, 5, 6

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U29 Equipment:

Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
E-GDS	4,000 Gallon Gasoline Underground Storage Tank & Dispensing Facility	7.15, STAR*	Stage I	F-GDS

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U29 Control Devices:

ID	Description	Performance Indicator	Range	Efficiency	Stack ID
NA	Stage I	NA	NA	NA	NA

U29 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **TAC**

i. See Emission Unit Plantwide.[142]

b. **VOC**

i. For emission point E-GDS (gasoline storage tank and refueling pump):

1) The owner or operator shall maintain and operate the following devices on the storage tank: (Regulation 7.15, section 3.1)

(a) Submerged fill pipe; (Regulation 7.15, section 3.1.1)

(b) If the gasoline storage tank is equipped with a separate gauge well, a gauge well drop tube shall be installed which extends to within six inches of the bottom of the tank; (Regulation 7.15, section 3.1.2)

(c) Vent line restrictions on the affected facility; and (Regulation 7.15, section 3.1.3)

(d) Vapor balance system and vapor tight connections on the liquid fill and vapor return hoses. The cross-sectional area of the vapor return hose and any other vapor return passages in the circuit connecting the vapor space in the service station tank to that of the truck tank must be at least 50% of the liquid fill hose cross-sectional area for tank and free of flow restrictions to achieve acceptable recovery. The vapor balance equipment must be maintained according to the manufacturer's specifications. The type, size, and design of the vapor balance system are subject to the approval of the District. (Regulation 7.15, section 3.1.4)

2) The owner or operator may elect to use an alternate control system provided it can be demonstrated to the District's satisfaction to achieve an equivalent control efficiency. (Regulation 7.15, section 3.2)

3) The owner or operator shall not allow delivery of fuel to the storage tank until the vapor balance system is properly connected to the transport vehicle and the affected facility. (Regulation 7.15, section 3.3)

4) No person shall deliver gasoline to a service station without connecting the vapor return hose between the tank of the delivery truck and the storage tank receiving the product. The vapor balance system must be operating in accordance

[142] The equipment is *de minimis* by definition according to Regulation 5.21, section 2.

with the manufacturer's specifications. (Regulation 7.15, section 3.4)

5) Opening of a truck tank hatch for the purpose of visual inspection is permitted for a period not to exceed one minute and only after pumping from that compartment has stopped for at least three minutes prior to the opening. All truck tank hatches must be closed during pumping. (Regulation 7.15, section 3.5)

6) All lines must be gravity drained in such a manner that upon disconnect no liquid spillage would be expected. (Regulation 7.15, section 3.6)

7) Equipment subject to this section shall be operated and maintained with no defects and: (Regulation 7.15, section 3.8)

(a) All fill tubes shall be equipped with vapor-tight covers including gaskets, (Regulation 7.15, section 3.8.1)

(b) All dry breaks shall have vapor-tight seals and shall be equipped with vapor-tight covers or dust covers, (Regulation 7.15, section 3.8.2)

(c) All vapor return passages shall be operated so there can be no obstruction of vapor passage from the storage tank back to the delivery vehicle, (Regulation 7.15, section 3.8.3)

(d) All storage tank vapor return pipes and fill pipes without dry breaks shall be equipped with vapor-tight covers including gaskets, and (Regulation 7.15, section 3.8.4)

(e) All hoses, fitting, and couplings shall be in a vapor-tight condition. (Regulation 7.15, section 3.8.5)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

i. For emission point E-GDS (gasoline storage tank and refueling pump):

1) Compliance with Regulation 7.15 will be verified by inspections performed by District Personnel. (Regulation 7.15, section 6)

2) The owner or operator shall, monthly, record the gasoline throughput in gallons for that month.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

i. For emission point E9 (gasoline storage tank and refueling pump): The owner or operator shall report the gasoline throughput in gallons for each month in the reporting period.

Emission Unit U30: Cold Solvent Metal Cleaners

Parts washer for various equipment parts.

U30 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4.1, 4.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U30 Equipment:

Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
E-Parts Washer (See IA list)	One Non-halogenated cold solvent metal cleaning tank, rated capacity of 30 gallons, installed in 1994 without secondary reservoir	6.18, STAR*	NA	F-Parts Washer

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U30 Control Devices:

There are no control devices associated with this unit.

U30 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **TAC**

i. See Emission Unit Plantwide.[143]

b. **VOC**

i. The owner or operator shall install, maintain, and operate the control equipment as follows: (Regulation 6.18, section 4)

1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. (Regulation 6.18, section 4.1.1)

2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. (Regulation 6.18, section 4.1.2)

3) A permanent, conspicuous label summarizing the operating requirements as specified in section 4 shall be installed on or near the cold cleaner. (Regulation 6.18, section 4.1.3)

4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner. (Regulation 6.18, section 4.1.4)

5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. (Regulation 6.18, section 4.1.6)

6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. (Regulation 6.18, section 4.1.8)

ii. The owner or operator shall observe at all times the following operating

[143] The parts washer is *de minimis* pursuant to Regulation 5.21, section 2.1.

requirements: (Regulation 6.18, section 4.2)

1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. (Regulation 6.18, section 4.2.1)

2) The solvent level in the cold cleaner shall not exceed the fill line. (Regulation 6.18, section 4.2.2)

3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. (Regulation 6.18, section 4.2.3)

4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. (Regulation 6.18, section 4.2.4)

5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. (Regulation 6.18, section 4.2.5)

6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. (Regulation 6.18, section 4.2.6)

7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. (Regulation 6.18, section 4.2.7)

iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). (Regulation 6.18, section 4.3.2)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

The owner or operator shall maintain records that include the following for each purchase:
(Regulation 6.18, section 4.4.2)

i. The name and address of the solvent supplier;

ii. The date of the purchase;

iii. The type of the solvent; and

iv. The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

There are no compliance reporting requirements for this equipment.

Emission Unit U31: Finish Mill #4

Clinker, gypsum and additives are ground in a ball mill. The mill is served by a feed system (bins, conveyor belts and bucket elevator), an air separator for fine control, and several baghouses.

U31 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60 Subpart F	Standards of Performance for Portland Cement Plants	60.60, 60.61, 60.62, 60.63, 60.64, 60.65 & 60.66
40 CFR 63 Subpart LLL	National Emission Standards For Hazardous Air Pollutants From Portland Cement Manufacturing Industry	63.1340, 63.1341, 63.1342, 63.1348, 63.1349, 63.1350, 63.1351, 63.1353, 63.1354, and 63.1355
2.05	Prevention of Significant Deterioration of Air Quality	1,2
7.08	Standards of Performance for New Process Operations	1 through 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Federal New Source Performance Standards Incorporated by Reference	1.72, 2, 3, 4, 5

U31 Equipment:

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-964	E-964	Belt K-964 (U-19) to Clinker Bin K-1136 (Capacity: 250 TPH; Installed: 2000)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1136-2	S-1136-2
K-1136	E-1136	Clinker Bin K-1136 to Weigh Feeder K-1139 (Capacity: 250 Tons; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1137	E-1137	Gypsum Bin K-1137 to Weigh Feeder K-1138 (Capacity: 120 Tons; Installed: 2000)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1138	E-1138	Weigh Feeder K-1138 to Belt K-1140 (Capacity: 250 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1139	E-1139	Weigh Feeder K-1139 to Belt K-1140 (Capacity: 250 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1140	E-1140	Belt K-1140 to Finish Mill #3 K-1141 (Capacity: 250 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1141	E-1141	Finish Mill #3 K-1141 to Airslide K-1148 (Make: Fuller Traylor; Model: 4.6 M x 13.5 M; Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1152	S-1152
K-1148	E-1148	Airslide K-1148 to Elevator K-1150 (Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1152	S-1152
K-1150	E-1150	Elevator K-1150 to Airslide K-1155 (Make: Sepax 450; Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1152	S-1152
K-1155	E-1155	Airslide K-1155 to Separator K-1181 (Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1152	S-1152

Equipment ID	Emission Point ID	Description	Applicable Regulation	Control ID	Release ID
K-1181	E-1181a	Separator K-1181 to Pump Hopper K-1175 (Make: Sepax 450; Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1160/1162	S-1160/1162
	E-1181b	Separator K-1181 to Airslide K-1185 (Make: Sepax 450; Capacity: 150 TPH; Installed: 2000)		C-1135	S-1135
K-1185	E-1185	Airslide K-1185 to Finish Mill #3 K-1141 (Capacity: 250 TPH; Installed: 2000)	5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1135	S-1135
K-1175	E-1175	Pump Hopper K-1175 to Screw Pump K-1175 (Capacity: 150 TPH; Installed: 2000)	2.05, 5.02, 7.02, 7.08, STAR*, 40CFR60-F, 40CFR63-LLL	C-1152	S-1152

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

U31 Control Devices:

ID	Description	Performance Indicator	Stack ID
C-1152	Pulse Jet baghouse controlling particulates form Finish Mill #3 (K-1141), Airslide (K-1148), Elevator (K-1150), Airslide (K-115), and Pump Hopper (K-1175). (Make: Amerex; Model: RP-12525D6; Capacity: 31,000 DSCFM)	VEs	S-1152
C-1136-2	Pulse Jet baghouse controlling particulates from Belt (K-964) to Clinker Bin (K-1136). (Make: IAC; Model: 72 TB; Capacity: 1,500 DSCFM)	VEs	S-1136-2
C-1135	Pulse Jet baghouse controlling particulates from Clinker Bin (K-1136), Gypsum Bin (K-1137), Weigh Feeder (K-1139), Weigh Feeder (K-1138), Belt (K-1140), Air Slide (K-1185), Separator (K-1181) (Make: IAC; Model: 72 TB; Capacity: 5,000 DSCFM)	VEs	S-1135
C-1160/1162	Pulse Jet baghouse controlling particulates from Separator (K-1181). (Make: Amerex; Model: RP-12-1040D6; Capacity: 65,500 DSCFM)	VEs	S-1160/1162

U31 Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 sources subject to 40 CFR 60 Subpart F see Appendix B. [144]

c. **PM**

i. The owner or operator shall not allow PM emissions to exceed the lb/hr standards in the table "Hourly PM Standards U31" based on actual operating hours in a calendar day.

Table 51 Hourly PM Standards U31

Equipment	Standard (lb/hr)	Reg. Citation
K-964[145,146]	41.88	7.08, section 3.1.2
K-1136[145]	41.88	7.08, section 3.1.2
K-1136[147,148]	0.8	2.05 and 68-98-C
K-1137[145,146]	37.23	7.08, section 3.1.2
K-1138[145]	41.88	7.08, section 3.1.2
K-1139[145]	41.88	7.08, section 3.1.2
K-1140[145]	41.88	7.08, section 3.1.2
K-1138[147,148]	1.2 combined	2.05 and 77-98-C
K-1139[147148]		

[144] Since these emission points are subject to a more stringent opacity standard in Regulation 40 CFR 60 Subpart F, the 20% opacity standard in Regulation 7.08 does not apply in accordance with Regulation 7.02, section 5.

[145] These emission points cannot exceed the lb/hr PM limit uncontrolled; therefore, there is no monitoring or recordkeeping for this standard.

[146] These emission points cannot exceed the NSR/PSD significant threshold uncontrolled or were installed prior to the compliance date of April 21, 1984 for District Regulation 2.04 and prior to the compliance date of June 19, 1978 for District Regulation 2.05.

[147] The lb/hr limit cannot be exceeded controlled; therefore, bypass monitoring and reporting is required to demonstrate compliance.

[148] This limit is for PSD avoidance.

Equipment	Standard (lb/hr)	Reg. Citation
K-1140[147148]		
K-1141[145]	38.59	7.08, section 3.1.2
K-1148[145]	38.59	7.08, section 3.1.2
K-1150[145]	38.59	7.08, section 3.1.2
K-1155[145]	38.59	7.08, section 3.1.2
K-1175[145]	38.59	7.08, section 3.1.2
K-1141[147,148]	5.3 combined	2.05 and 64-98-C
K-1148[147,148]		
K-1150[147,148]		
K-1155[147,148]		
K-1175[147,148]		
K-1181[145]	38.59	7.08, section 3.1.2
K-1181[145,148]	22.5	2.05 and 65-98-C
K-1185[145,146]	41.88	7.08, section 3.1.2

ii. For K-1141, K-1148, K-1150, K-1155, and K-1175 the owner or operator shall not allow PM emissions to exceed 21.4 tons per 12 consecutive months. (Regulation 2.05 and 64-98-C, Effective 4/1/1998)[148, 149]

iii. For K-1181 the owner or operator shall not allow PM emissions to exceed 90.5 tons per 12 consecutive months. (Regulation 2.05 and 65-98-C, Effective 4/1/1998)[148, 150]

iv. For K-1136 the owner or operator shall not allow PM emissions to exceed 3.1 tons per 12 consecutive months. (Regulation 2.05 and 68-98-C, Effective 4/1/1998)[148, 149]

v. For K-1138, K-1139, and K-1140 the owner or operator shall not allow combined PM emissions to exceed 4.8 tons per 12 consecutive months. (Regulation 2.05 and 77-98-C, Effective 4/1/1998)[148, 149]

d. **TAC**

[149] These 12 consecutive month limits can be exceeded uncontrolled and will require monitoring, record keeping and reporting to demonstrate compliance.

[150] These 12 consecutive month limits cannot be exceeded uncontrolled; therefore, no monitoring and reporting will be required.

i. See Emission Unit Plantwide.[151]

ii. The owner or operator shall not allow TAC emissions to exceed the modeled emission rates from the EA Demonstration as listed in the following table "Modeled TAC emissions U31". (Regulation 5.21, section 4.2 and section 4.3)

Table 52 Modeled TAC Emissions U31

Equipment ID	Stack or Area ID	As	Cd	Cr6	Ni	Co	Mn
		lb/12 consecutive month period					
K-1136, K-1137, K-1138, K-1139, K-1140, K-1181 (E-1181b), and K-1185 combined	S-1135	6.29E-02	8.56E-03	9.72E-02	1.80E-01	3.79E-02	1.36E+00
K-964	S-1136-2	1.88E-02	2.57E-03	2.92E-02	5.40E-02	1.14E-02	4.08E-01
K-1141, K-1148, K-1150, K-1155, and K-1175 combined	S-1152	3.90E-01	5.31E-02	6.04E-01	1.11E+00	2.35E-01	8.44E+00
K-1181 (E-1181a)	S-1160/1162	1.65E+00	2.24E-01	2.55E+00	4.72E+00	9.90E-01	3.57E+01

iii. The owner or operator shall not allow TAC emissions to exceed *de minimis* values for the equipment as indicated in the following table. (Regulation 5.21, section 4.2 and section 4.3)

Table 53 De Minimis TAC Standards U31

Equipment ID	Al
K-1139	*

**The company has accepted de minimis as a STAR limit for these TACs from this equipment.* (See Appendix H)

iv. For K-1139 the owner or operator shall operate and maintain the baghouses at all times including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

[151] Other than limits specified in this unit, the equipment in this unit cannot exceed the current *de minimis* value for TAC emissions uncontrolled.

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 limits for affected sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 sources subject to 40 CFR 60 Subpart F see Appendix B.

ii. For C-1152, C-1136-2, C-1135, C-1160, and C-1162 if there is any time that a control device is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) The owner or operator shall conduct a visible emissions survey during bypass event;

5) If visible emissions are observed, the owner or operator shall perform or cause to be performed a Method 9;

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

c. **PM**

i. If there is any time that a control device for K-1141, K-1148, K-1150, K-1155, and K-1175 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) The combined 12 consecutive month PM total for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

ii. For K-1141, K-1148, K-1150, K-1155, and K-1175 the owner or operator shall daily record the hours of operation of the equipment.

iii. If there is any time that a control device for K-1136 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each PM for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. For K-1136 the owner or operator shall daily record the hours of operation of the equipment.

v. If there is any time that a control device for K-1138, K-1139, and K-1140 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions of PM during the bypass in lb/hr combined for the emission points; (See Appendix F for Calculation Methodology)

5) The combined 12 consecutive month PM total for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

vi. For K-1138, K-1139, and K-1140 the owner or operator shall daily record the hours of operation of the equipment.

vii. For C-1152, C-1136-2, C-1135, C-1160, and C-1162 the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall monthly calculate the monthly and 12 consecutive month period emissions of TACs listed in the table "Modeled TAC Emissions U31". (See Appendix F for Calculation Methodology)

iii. If there is any time that a control device for K-1139 is bypassed or not in operation when the process equipment associated with the control is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) Emissions for each TAC marked in the table "*De Minimis* TAC Standards U31" during the bypass in lb/hr and lb/averaging period; (See Appendix F for Calculation Methodology)

5) The 12 consecutive month total emissions of each TAC marked in the table "*De Minimis* TAC Standards U31" for each set of consecutive 12 month periods which includes the bypass event; (See Appendix F for Calculation Methodology)

6) Summary of the cause or reason for each bypass event;

7) Corrective action taken to minimize the extent or duration of the bypass event; and

8) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall daily record the hours of operation for K-1139.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 sources subject to 40 CFR 63 Subpart LLL see Appendix B.

b. **Opacity**

i. For K-964, K-1136, K-1137, K-1138, K-1139, K-1140, K-1141, K-1148, K-1150, K-1155, K-1181, K-1185, and K-1175 sources subject to 40 CFR 60 Subpart F see Appendix B.

ii. For C-1152, C-1136-2, C-1135, C-1160, and C-1162:

1) Number of times of the bypass activities;

2) Duration of each bypass to the atmosphere;

3) The date, time, and result of each Method 9 conducted (or a negative declaration if none)

4) Description of any corrective action taken for each exceedance.

c. **PM**

i. The owner or operator shall report the following information regarding bypass activity for K-1136 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 month standard;

5) Description of any corrective action taken for each exceedance.

ii. The owner or operator shall report the following information regarding bypass activity for K-1138, K-1139, or K-1140 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 consecutive month standard;

5) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-1141, K-1148, K-1150, K-1155, and K-1175 in the semi-annual compliance reports:

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated combined PM emissions in lb/hr for each bypass and identification of any exceedance of the PM standards;

4) Identification of any exceedance of the any 12 consecutive month standard;

5) Description of any corrective action taken for each exceedance.

iv. For C-1152, C-1136-2, C-1135, C-1160, and C-1162 any and all periods of failure to perform the monthly visual inspection of the structural and mechanical integrity of the dust collectors.

d. **TAC**

i. See Emission Unit Plantwide.

ii. The owner or operator shall report the following information regarding the 12 consecutive month standards in table “Modeled TAC Emissions U31”:

1) Emission unit ID number and emission point ID number;

2) Calculated 12 month total TAC emissions for each month in the reporting period and identification of any exceedance of the standards; and

3) Description of any corrective action taken for each exceedance.

iii. The owner or operator shall report the following information regarding bypass activity for K-1139 in the semi-annual compliance reports.

1) Emission unit ID number and emission point ID number;

2) Duration of each bypass to the atmosphere;

3) Calculated TAC emissions in lb/hr and 12 consecutive month total for each bypass and identification of any exceedance of the standards; and

4) Description of any corrective action taken for each exceedance of De Minimis limits listed in table “De Minimis Value Standards U31”.

Emission Unit: Engines

Engines Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	63.6603, 6604, 6605, 6625, 6640, 6645, 6655

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.02	Adoption of National Emission Standards for Hazardous Air Pollutants	1, 3.95 and 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

Engines Equipment:

Emission Point ID**	Description	Applicable Regulation
E-Rice 1	Sand Screener Engine Diesel, 75 hp, installed 2000	STAR*
E-Rice 2 (See IA list)	Caterpillar Model D343 Emergency Generator Diesel, 350 hp, installed 1973	STAR*, 40CFR63-ZZZZ
E-Rice 3 (See IA list)	Azco with Detroit Engine Model 4/71 Emergency Generator Diesel, 127 hp, Installed 1999	STAR*, 40CFR63-ZZZZ
E-Rice 4 (See IA list)	Caterpillar Emergency Generator Diesel, 587 hp, installed 1999	STAR*, 40CFR63-ZZZZ
E-Rice 5	Barge Auto Standby Barge Generator: 2013, 140 Hp	STAR*
E-Rice 6	Portable Crusher: Kolberg-Pioneer M- 4250 Cummings Inc. Engine, 2007, 400Hp, Tier 3	STAR*

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

** All engines in this emission unit are Compression Ignition (CI) not subject to the NSPS IIII due to the installation dates and are not Spark Ignition (SI) therefore not subject to the NSPS JJJJ.

Engines Control Devices:
There are no control devices associated with this unit.

Engines Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP**

i. For E-RICE 2 and 3 the owner or operator shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. (40 CFR §63.6595(a)(1))

ii. For E-RICE 4 you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. (40 CFR §63.6595(a)(1))

iii. E-RICE 4 an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions does not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart. (40 CFR §63.6600(c))

iv. For E -RICE 2 and 3 the owner or operator of an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions shall comply with the following requirements in Table 2c to this subpart, as the following: (40 CFR §63.6602))

1) For E-RICE 2 and 3 each emergency stationary CI RICE and black start stationary CI RICE the owner or operator shall change the oil and filter every 500 hours of operation or annually, whichever comes first. The owner or operator has the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart. (40 CFR §63, Subpart ZZZZ, Table 2c (1)(a))

2) For E-RICE 2 and 3 the owner or operator shall inspect the air cleaners every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR §63, Subpart ZZZZ, Table 2c (1)(b) and (2)(b))

3) For E-RICE 2, and 3 the owner or operator shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR §63, Subpart ZZZZ, Table 2c (1)(c) and (2)(c))

v. General requirements for complying with 40 CFR §63, Subpart ZZZZ:

1) For E-RICE 2, 3, and 4 the owner or operator shall be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to the RICE at all times. (40 CFR §63.6605(a))

2) For E-RICE 2, 3, and 4 at all times the owner or operator shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR §63.6605(b))

vi. For E-RICE 2, and 3 the owner or operator shall demonstrate continuous compliance with each emission limitation, operating limitation, and other applicable requirements in Tables 2c to this subpart. (40 CFR §63.6640(a))

vii. For E-RICE 2, and 3 the owner or operator shall report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in 40 CFR §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. (40 CFR §63.6640(b))

viii. For E-RICE 2, and 3 report each instance in which you did not meet the requirements in the General Provisions (40 CFR §part 63 except per 63.6645(a)(5), the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h). (40 CFR §63.6640(e))

ix. For E-RICE 2, 3, and 4 the owner or operator shall operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If the owner or operator does not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (40 CFR §63.6640(f))

1) There is no time limit on the use of the emergency stationary RICE in emergency situations. (40 CFR §63.6640(f)(1))

2) The owner or operator may operate the emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). (40 CFR §63.6640(f)(2))

(a) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. (40 CFR §63.6640(f)(2)(i))

(b) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. (40 CFR §63.6640(f)(2)(iii))

3) For E-RICE 2, 3, and 4: Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (40 CFR §63.6640(f)(3))

b. **TAC**

i. See Emission Unit Plantwide.

c. **Unit Operation**

i. For E-Rice 1, 5, and 6: The owner or operator shall not allow the diesel engines to be located in one place onsite for more than 12 consecutive months.[152] (Regulation 2.16, section 4.1.1)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP**

i. Monitoring, installation, collection, operation, and maintenance requirements: (40 CFR §63.6625)

1) For E-RICE 2 and 3 the owner or operator shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (40 CFR §63.6625(e))

2) For E-RICE 2, 3, and 4 the owner or operator shall install a non-resettable hour meter if one is not already installed. (40 CFR §63.6625(f))

3) For E-RICE 2 and 3 the owner or operator shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup. (40 CFR §63.6625(h))

4) For E-RICE 2 and 3 the owner or operator has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these

[152] If the engines are located on site at one location for 12 consecutive months at any one time then they are considered stationary and not mobile.

condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. (40 CFR §63.6625(i))

ii. Recordkeeping requirements: (40 CFR §63.6655)

1) For E-RICE 2, 3, and 4 the owner or operator shall keep the following records that apply to your RICE: (40 CFR §63.6655(a))

(a) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (40 CFR §63.6655(a)(2))

(b) Records of all required maintenance performed on the air pollution control and monitoring equipment. (40 CFR §63.6655(a)(4))

(c) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §63.6655(a)(5))

2) For E-RICE 2, 3, and 4 the owner or operator shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in 40 CFR §63.6640(f)(2)(ii) or (iii) or 40 CFR §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. (40 CFR §63.6655(f))

b. **TAC**

i. See Emission Unit Plantwide.

c. **Unit Operation**

i. For E-Rice 1, 5, and 6: The owner or operator shall, monthly, maintain records of any change in location of the diesel engines or a declaration that no change in location occurred.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **HAP**

i. For E-RICE 2, 3, and 4 if the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. (40 CFR §63, Subpart ZZZZ, Footnote 1 of Table 2c)

b. **TAC**

i. See Emission Unit Plantwide.

c. **Unit Operation**

i. For E-Rice 1, 5, and 6: The owner or operator shall report any change in location of the diesel engines or a declaration that no change in location occurred.

Emission Unit: Tanks

Tanks Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 5, 7 and 8

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

Tanks Equipment:

Emission Point ID**	Description	Applicable Regulation
K-AG500EG	Above-Ground Fuel Oil Storage Tank 500 gal Diesel for E.G	7.12, STAR*
K-AG500MIAG	Above-Ground Fuel Oil Storage Tank 500 Diesel fuel	7.12, STAR*
K-550	Above-Ground Fuel Oil Storage Tank 550 Kerosene fuel	7.12, STAR*
KAG3000	Above-Ground Fuel Oil Storage Tank 3,000 Diesel fuel	7.12, STAR*
K-AG10000a	Above-Ground Fuel Oil Storage Tank 10,000 Diesel fuel	7.12, STAR*
K-AG10000b	Above-Ground Fuel Oil Storage Tank 10,000 Diesel fuel	7.12, STAR*
K-AG10000c	Above-Ground Fuel Oil Storage Tank 10,000 oily water	7.12, STAR*
K-UST20000	UST 20,000 gals Diesel fuel	7.12, STAR*
K-Port275	Portable Diesel/Gasoline Storage Tanks 275 gal diesel	7.12, STAR*
K-Port50a	Portable Diesel/Gasoline Storage Tanks 50 gal oil	STAR*
K-Port50b	Portable Diesel/Gasoline Storage Tanks 50 gal oil	STAR*
K-Port50c	Portable Diesel/Gasoline Storage Tanks 50 gal oil	STAR*
K-Port90	Portable Diesel/Gasoline Storage Tanks 90 gal used oil	STAR*

* Strategic Toxic Air Reduction (Includes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22, & 5.23)

** These VOC Storage Tanks are not subject to Federal Regulation 40 CFR 60 Subpart Kb because they have a capacity less than 75 cubic meters (19,813 gallons) or are greater than 75 cubic meters (19,813 gallons) but store liquid with a maximum true vapor pressure less than 15.0 kPa,(2.18 psia).

Tanks Control Devices:
There are no control devices associated with this unit.

Tanks Specific Conditions

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

i. For all emission points in this emission unit, the owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia, unless the tanks are equipped with a permanent submerged fill pipe. (Regulation 7.12, section 3.3)[153]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

i. The owner or operator of the storage vessels shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessels are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance.

ii. The owner or operator shall keep a record that shows if the storage vessel is equipped with a submerged fill pipe. Submerged fill pipe means any fill pipe the discharge of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean every fill pipe the discharge opening of which is entirely submerged when the liquid level is 2 times the fill pipe diameter above the bottom of the tank.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall report the following information, as required by General Condition 14:

a. **TAC**

i. See Emission Unit Plantwide.

b. **VOC**

i. There are no compliance reporting requirements for this equipment.

[153] For storage vessels, Regulation 7.12 applies due to the size of the tanks, but since the vapor pressure as stored is less than 1.5 psia there are no applicable standards in the regulation.

Permit Shield

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance, pursuant to Regulation 2.16, section 4.6.1.

Off-Permit Documents

Operations and Maintenance Plan

Alternative Operating Scenario

See Appendix C – Kiln Operating Scenarios

Insignificant Activities

Equipment	Quantity	Pollutant Potential To Emit (tn/yr)	Basis for Exemption
Internal Combustion Engines (Azco Generator: Detroit Engine M-4/71, Pre-2000, 127 Hp; Caterpillar Generator M-D343, 1973, 350 Hp; Caterpillar, 1999, 587 Hp) (See Emission Unit: Engines)	3	NOx - 4.55 (587 HP Caterpillar)	Regulation 1.02, Appendix A
Above-Ground Fuel Oil Storage Tanks (1-500 gal Diesel for E.G.; 1-500 gal Diesel for Miag; 1-550 gal Kerosene; 1-3000 gal Diesel 2-10,000 Diesel fuel; 1-10,000 oily water; 1-UST 20,000 gals Diesel fuel) (See Emission Unit: Tanks)	8	VOC - 0.1	Regulation 1.02, Appendix A
Portable Diesel/Gasoline Storage Tanks (1-275 gal diesel; 3-50 gal oil; 1-90 gal used oil) (See Emission Unit: Tanks)	5	VOC - 0.005	Regulation 1.02, Appendix A
Sand Mining (Fugitive Source not subject to Reg 6.09)	3	PM - 1.12	Regulation 1.02

1) Insignificant Activities identified in District Regulation 1.02 Appendix A may be subject to size or production rate disclosure requirements.

2) Insignificant Activities identified in District Regulation 1.02 Appendix A shall comply with generally applicable requirements.

3) Activities identified in Regulation 1.02, Appendix A, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the permit.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the pollutant Potential To Emit (PTE) quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment.

6) The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.

7) The owner or operator shall annually submit an updated list of insignificant activities, including an identification of the additions and removals of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

Appendix A – 40 CFR 63 Subpart LLL for Existing or New Raw Material Dryers

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. For Existing or new raw material dryers the owner or operator shall limit the THC emissions to less than 24 ppmvd or alternatively 12 ppmvd for total organic HAP. (40 CFR §63.1343(b)(1))[154,155]

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. If you are subject to limitations on THC emissions under 40 CFR §63.1343(b), you must demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(i) and (j). (40 CFR §63.1348(b)(6)(i))

ii. THC must be measured either upstream of the coal mill or in the coal mill stack. (40 CFR §63.1348(b)(6)(ii))

iii. If you plan to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under this subpart, the source must conduct a performance test as specified in 40 CFR63.1349(b). (40 CFR §63.1348(c)(1))

iv. In preparation for and while conducting a performance test required in 40 CFR63.1349(b), you may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in (c)(2)(i) through (c)(2)(iv) of this section[156] are met. You must submit temperature and other monitoring data that are recorded during the pretest operations. (40 CFR §63.1348(c)(2))

1) You must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be

[154] If an affected facility subject to 40 CFR 63 Subpart LLL has a different emissions limit or requirement for the same pollutant under another regulation in title 40 of this chapter the owner or operator of the affected facility must comply with the most stringent emissions limit or requirement and is exempt from the less stringent requirement.

[155] According to 40 CFR 63.1351(c), the compliance date for existing sources for all the requirements that were amended and established on February 12, 2013 will be September 9, 2015.

[156] This section is in reference to the Federal Regulation 40 CFR 63 Subpart LLL.

affected by the change, and a schedule for completion of the performance test required under paragraph (c)(1) of this section, including when the planned operational change period would begin. (40 CFR §63.1348(c)(2)(i))

2) The performance test results must be documented in a test report according to 40 CFR63.1349(a). (40 CFR §63.1348(c)(2)(ii))

3) A test plan must be made available to the Administrator prior to performance testing, if requested. (40 CFR §63.1348(c)(2)(iii))

4) The performance test must be completed within 360 hours after the planned operational change period begins. (40 CFR §63.1348(c)(2)(iv))

v. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR §63.1348(d) General duty to minimize emissions)

vi. Monitoring requirements: (40 CFR §63.1350)

1) General monitoring requirements: (40 CFR §63.1350(a))

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of this section of the federal regulation. (40 CFR §63.1350(a)(1))

(b) All continuous monitoring data for periods of startup and shutdown must be compiled and averaged separately from data gathered during other operating periods. (40 CFR §63.1350(a)(2))

(c) For each existing unit that is equipped with a continuous monitoring system (CMS), maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. (40 CFR §63.1350(a)(3))

(d) Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section of the federal regulation is a violation. (40 CFR §63.1350(a)(4))

2) THC monitoring requirements. (40 CFR §63.1350(i))

If the facility is subject to an emissions limitation on THC emissions, the owner or operator shall comply with the monitoring requirements of paragraphs (i)(1) and (i)(2) and (m)(1) through (m)(4) of this section of the federal regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of this section of the federal regulation.

(a) The owner or operator shall install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8 or Performance Specification 8A of Appendix C to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part. The owner or operator must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. For THC continuous emission monitoring systems certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in appendix A to 40 CFR §part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2. (40 CFR §63.1350(i)(1))

(b) Performance tests on alkali bypass and coal mill stacks must be conducted using Method 25A in appendix A to 40 CFR §part 60 and repeated every 30 months. (40 CFR §63.1350(i)(2))

3) Total organic HAP monitoring requirements. (40 CFR §63.1350(j))

If the owner or operator is complying with the total organic HAP emissions limits, the owner or operator shall continuously monitor THC according to paragraph (i)(1) and (2) of this section or in accordance with Performance Specification 8 or Performance Specification 8A of Appendix C to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part. The owner or operator shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. In addition, the must follow the monitoring requirements in paragraphs (m)(1) through (4) of this section of the federal regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (4) of this section of the federal regulation.

vii. The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. (40 CFR §63.1355(a))

viii. The owner or operator shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this part of the Federal Regulation; (40 CFR §63.1355(b)) and

1) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9; (40 CFR §63.1355(b)(1))

2) All records of applicability determination, including supporting analyses; (40 CFR §63.1355(b)(2)) and

3) If the owner or operator has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. (40 CFR §63.1355(b)(3))

ix. In addition to the recordkeeping requirements in paragraph (b) of this section of the Federal Regulation, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR §63.10(c). (40 CFR §63.1355(c))

x. The owner or operator must keep annual records of the amount of CKD which is removed from the kiln system and either disposed of as solid waste or otherwise recycled for a beneficial use outside of the kiln system. (40 CFR §63.1355(d))

xi. The owner or operator shall keep records of the daily clinker production rates and kiln feed rates. Before September 9, 2015 the owner or operator must keep records of the amount of CKD recycled on an hourly basis. (40 CFR §63.1355(e))

xii. The owner or operator shall keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period. (40 CFR §63.1355(f))

xiii. The owner or operator shall keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date,

time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. (40 CFR §63.1355(g)(1))

xiv. The owner or operator shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §63.1355(g)(2))

xv. For each exceedance from an emissions standard or established operating parameter limit, the owner or operator shall keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1355(h))

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports as required by General Condition 14.

i. Notification requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1353)

1) The notification provisions of 40 CFR §part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section of the federal regulation for that notification. (40 CFR §63.1353(a))

2) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in 40 CFR §63.9 as follows: (40 CFR §63.1353(b))

(a) Initial notifications as required by 40 CFR §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR §part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by 40 CFR §63.9(b), and the State to which the permit application has been submitted has an

approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification. (40 CFR §63.1353(b)(1))

(b) Notification of performance tests, as required by 40 CFR §63.7 and 63.9(e). (40 CFR §63.1353(b)(2))

(c) Notification of opacity and visible emission observations required by 40 CFR §63.1349 in accordance with 40 CFR §63.6(h)(5) and 63.9(f). (40 CFR §63.1353(b)(3))

(d) Notification of compliance status, as required by 40 CFR §63.9(h). (40 CFR §63.1353(b)(5))

ii. Reporting requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1354)

1) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section of the federal regulation for that report. (40 CFR §63.1354(a))

2) The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this part 63, subpart A as follows: (40 CFR §63.1354(b))

(a) As required by 40 CFR §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status. (40 CFR §63.1354(b)(1))

(b) As required by 40 CFR §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by 40 CFR §63.1349. (40 CFR §63.1354(b)(2))

(c) The owner or operator shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can

be accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in § 63.10(e)(3)(vi). In addition, the summary report shall include: (40 CFR §63.1354(b)(9))

(i) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347(a). (40 CFR §63.1354(b)(9)(v))

(ii) In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1354(b)(9)(vii))

(d) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report. (40 CFR §63.1354(b)(10))

iii. Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the owner or operator shall report the failure in the semi-annual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated

pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction. (40 CFR §63.1354(c))

S4. **Testing** (Regulation 2.16, section 4.3.1)

i. Performance testing requirements. (40 CFR §63.1349)

1) Opacity tests. (40 CFR §63.1349(b)(2))

If you are subject to limitations on opacity under this subpart, you must conduct opacity tests in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (b)(2)(i) through (b)(2)(ii) of this section of the federal regulation apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating. (40 CFR §63.1349(b)(2))

(a) There are no individual readings greater than 10 percent opacity; (40 CFR §63.1349(b)(2)(i))

(b) There are no more than three readings of 10 percent for the first 1-hour period. (40 CFR §63.1349(b)(2)(ii))

ii. Performance Test Reporting Requirements. (40 CFR §63.1349(d))

1) You must submit the information specified in paragraphs (d)(1) and (2) of this section of the federal regulation no later than 60 days following the initial performance test. All reports must be signed by a responsible official. (40 CFR §63.1349(d)(1))

(a) The initial performance test data as recorded under paragraph (b) of this section of the federal regulation. (40 CFR §63.1349(d)(1)(i))

(b) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3),

(6), and (7) of this section of the federal regulation, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test. (40 CFR §63.1349(d)(1)(ii))

iii. Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. (40 CFR §63.1349(e))

iv. See Appendix E for additional testing requirements.

Appendix B – 40 CFR 63 Subpart LLL Requirements for Affected Facilities other than kilns; clinker coolers; new and reconstructed raw material dryers & 40 CFR 60 Subpart F other than kilns; clinker coolers

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. The owner or operator of an open clinker storage pile must prepare, and operate in accordance with, the fugitive dust emissions control measures, described in their operation and maintenance plan (see § 63.1347 of this subpart), that is appropriate for the site conditions as specified in paragraphs (c)(1) through (3) of this section. The operation and maintenance plan must also describe the measures that will be used to minimize fugitive dust emissions from piles of clinker, such as accidental spillage, that are not part of open clinker storage piles. (40 CFR §63.1343(c))

1) The operation and maintenance plan must identify and describe the location of each current or future open clinker storage pile and the fugitive dust emissions control measures the owner or operator will use to minimize fugitive dust emissions from each open clinker storage pile. (40 CFR §63.1343(c)(1))

2) For open clinker storage piles, the operations and maintenance plan must specify that one or more of the following control measures will be used to minimize to the greatest extent practicable fugitive dust from open clinker storage piles: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents, use of a wind barrier, compaction, use of tarpaulin or other equally effective cover or use of a vegetative cover. You must select, for inclusion in the operations and maintenance plan, the fugitive dust control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source. (40 CFR §63.1343(c)(2))

3) Temporary piles of clinker that result from accidental spillage or clinker storage cleaning operations must be cleaned up within 3 days. (40 CFR §63.1343(c)(3))

ii. The owner or operator shall not allow or cause the opacity from each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; raw and finish mills; and each existing raw material

dryer to exceed 10%. (40 CFR §63.1345)

iii. The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of 40 CFR §63, Subpart LLL, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information: (40 CFR §63.1347(a))

1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR §63.1343 through 63.1348; and (40 CFR §63.1347(a)(1))

2) Corrective actions to be taken when required by 40 CFR §63.1350(f)(3). (40 CFR §63.1347(a)(2))

b. **Opacity**

i. The owner or operator shall not allow or cause the opacity from each raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems to exceed 10%. (40 CFR §60.62(c))

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP** (40 CFR 63 Subpart LLL (MACT))

i. If you are subject to the limitations on opacity under 40 CFR §63.1345, you must demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. You must initiate corrective actions within one hour of detecting visible emissions above the applicable limit. (40 CFR §63.1348(b)(3) Opacity Compliance.)

1) If you install a COMS in lieu of conducting the daily visible emissions testing, you must demonstrate compliance using a COMS such that it is installed, operated, and maintained in accordance with the requirements of 40 CFR § 63.1350(f)(4)(i). (40 CFR §63.1348(b)(3)(i))[157]

2) Bag leak determination system (BLDS). If you install a BLDS on a raw mill or finish mill in lieu of conducting the daily visible emissions testing, you must demonstrate compliance using a BLDS that is installed, operated, and maintained in accordance with the requirements of 40 CFR §63.1350(f)(4)(ii). (40 CFR §63.1348(b)(3)(ii))

[157] The clinker cooler and kiln are equipped with COMs but are not subject to these conditions in Appendix B.

ii. The owner or operator shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review or operation and maintenance records, and inspection of the source. (40 CFR §63.1348(d))

iii. If you are subject to a limitation on opacity under 40 CFR §63.1345, the owner or operator shall conduct required opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) of this section of the cited federal regulation and in accordance with your monitoring plan developed under 40 CFR §63.1350(p). (40 CFR §63.1350(f))

1) The owner or operator shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to 40 CFR §60. The test shall be conducted while the affected source is in operation. (40 CFR §63.1350(f)(1)(i))

2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. (40 CFR §63.1350(f)(1)(ii))

3) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. (40 CFR §63.1350(f)(1)(iii))

4) If visible emissions are observed during any Method 22 test, the owner or operator must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The Method 9 performance test, of appendix A-4 to part 60 of this chapter, must begin within 1 hour of any observation of visible emissions. (40 CFR §63.1350(f)(1)(iv))

5) Any totally enclosed conveying system transfer point, regardless of the location of the transfer point is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan. (40 CFR §63.1350 (f)(1)(v))

6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of 40 CFR §63.1352(f)(1)(i) through (f)(1)(iv) of this section of the cited federal regulation for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii) of this section of the cited federal regulation. (40 CFR §63.1350(f)(1)(vi))

7) If visible emissions from a building are monitored, the requirements of paragraphs 40 CFR §63.1350(f)(1)(i) through (f)(1)(iv) apply to the monitoring of the building, and the owner or operator shall also test visible emissions from each side, roof, and vent of the building for at least 10 minutes. (40 CFR §63.1350(f)(1)(vii))

8) For a raw mill or finish mill, you must monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of this chapter. The duration of the Method 22 performance test must be 6 minutes. (40 CFR §63.1350(f)(2)(i))

9) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the owner or operator must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test. (40 CFR §63.1350(f)(2)(ii))

10) If visible emissions are observed during the follow-up Method 22 performance test required by paragraph (f)(2)(ii) of this section of the federal regulation from any stack from which visible emissions were observed during the previous Method 22 performance test required by paragraph (f)(2)(i) of the section, you must then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with

Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 test must be 30 minutes. (40 CFR §63.1350(f)(2)(iii))

11) If visible emissions are observed during any Method 22 visible emissions test conducted under paragraphs (f)(1) or (2) of this section of the federal regulation, you must initiate, within one-hour, the corrective actions specified in your operation and maintenance plan as required in 40 CFR § 63.1347. (40 CFR §63.1350(f)(3))

12) The requirements under paragraph (f)(2) of this section of the federal regulation to conduct daily Method 22 testing do not apply to any specific raw mill or finish mill equipped with a COMS or BLDS. (40 CFR §63.1350(f)(4))

13) If the owner or operator chooses to install a COMS in lieu of conducting the daily visible emissions testing required under paragraph (f)(2) of this section of the federal regulation, then the COMS must be installed at the outlet of the PM control device of the raw mill or finish mill and the COMS must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of this part and according to PS-1 of Appendix C to part 60 of this chapter. (40 CFR §63.1350(f)(4)(i))

14) If you choose to install a BLDS in lieu of conducting the daily visible emissions testing required under paragraph (f)(2) of this section of the federal regulation, the requirements in paragraphs (m)(1) through (m)(4), (m)(10) and (m)(11) of this section of the federal regulation apply. (40 CFR §63.1350(f)(4)(ii))

iv. The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. (40 CFR §63.1355(a))

v. The owner or operator shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this part of the Federal Regulation; (40 CFR §63.1355(b)) and

1) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9; (40 CFR §63.1355(b)(1))

2) All records of applicability determination, including supporting analyses; (40 CFR §63.1355(b)(2)) and

3) If the owner or operator has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. (40 CFR §63.1355(b)(3))

vi. In addition to the recordkeeping requirements in paragraph (b) of this section of the Federal Regulation, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR §63.10(c). (40 CFR §63.1355(c))

vii. The owner or operator must keep annual records of the amount of CKD which is removed from the kiln system and either disposed of as solid waste or otherwise recycled for a beneficial use outside of the kiln system. (40 CFR §63.1355(d))

viii. The owner or operator shall keep records of the daily clinker production rates and kiln feed rates. Before September 9, 2015 the owner or operator must keep records of the amount of CKD recycled on an hourly basis. (40 CFR §63.1355(e))

ix. The owner or operator shall keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period. (40 CFR §63.1355(f))

x. The owner or operator shall keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. (40 CFR §63.1355(g)(1))

xi. The owner or operator shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §63.1355(g)(2))

xii. For each exceedance from an emissions standard or established operating parameter limit, the owner or operator shall keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1355(h))

b. **Opacity**

i. See HAP monitoring and record keeping requirements. 40 CFR 63 Subpart LLL.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports as required by General Condition 14.

i. Notification requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1353)

1) The notification provisions of 40 CFR §part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 (See Comment section below) of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section of the federal regulation for that notification. (40 CFR §63.1353(a))

2) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in 40 CFR §63.9 as follows: (40 CFR §63.1353(b))

(a) Initial notifications as required by 40 CFR §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR §part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by 40 CFR §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification. (40 CFR §63.1353(b)(1))

(b) Notification of performance tests, as required by 40 CFR §63.7 and 63.9(e). (40 CFR §63.1353(b)(2))

(c) Notification of opacity and visible emission observations required by 40 CFR §63.1349 in accordance with 40 CFR §63.6(h)(5) and 63.9(f). (40 CFR §63.1353(b)(3))

(d) Notification of compliance status, as required by 40 CFR §63.9(h). (40 CFR §63.1353(b)(5))

ii. Reporting requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1354)

1) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1

of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section of the federal regulation for that report. (40 CFR §63.1354(a))

2) The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this part 63, subpart A as follows: (40 CFR §63.1354(b))

(a) As required by 40 CFR §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status. (40 CFR §63.1354(b)(1))

(b) As required by 40 CFR §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by 40 CFR §63.1349. (40 CFR §63.1354(b)(2))

(c) The owner or operator shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in § 63.10(e)(3)(vi). In addition, the summary report shall include: (40 CFR §63.1354(b)(9))

(i) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347(a). (40 CFR §63.1354(b)(9)(v))

(ii) In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1354(b)(9)(vii))

3) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report. (40 CFR §63.1354(b)(10))

iii. Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the owner or operator shall report the failure in the semi-annual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction. (40 CFR §63.1354(c))

b. **Opacity**

i. See General Condition 14.

S4. **Testing** (Regulation 2.16, section 4.3.1)

i. Performance testing requirements. (40 CFR §63.1349)

1) Opacity tests. (40 CFR §63.1349(b)(2))

If you are subject to limitations on opacity under this subpart, you must conduct opacity tests in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (b)(2)(i) through (b)(2)(ii) of this section of the federal regulation apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating. (40 CFR §63.1349(b)(2))

(a) There are no individual readings greater than 10 percent opacity; (40 CFR §63.1349(b)(2)(i))

(b) There are no more than three readings of 10 percent for the first 1-hour period. (40 CFR §63.1349(b)(2)(ii))

ii. Performance Test Reporting Requirements. (40 CFR §63.1349(d))

1) You must submit the information specified in paragraphs (d)(1) and (2) of this section of the federal regulation no later than 60 days following the initial performance test. All reports must be signed by a responsible official. (40 CFR §63.1349(d)(1))

(a) The initial performance test data as recorded under paragraph (b) of this section of the federal regulation. (40 CFR §63.1349(d)(1)(i))

(b) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), and (7) of this section of the federal regulation, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test. (40 CFR §63.1349(d)(1)(ii))

iii. Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. (40 CFR §63.1349(e))

iv. See Appendix E for additional testing requirements.

Comment:

Table 1 to Subpart LLL of Part 63 —Applicability of General Provisions

Citation	Requirement	Applies to subpart LLL	Explanation
63.1(a)(1)-(4)	Applicability	Yes	
63.1(a)(5)		No	[Reserved].
63.1(a)(6)-(8)	Applicability	Yes	
63.1(a)(9)		No	[Reserved].
63.1(a)(10)-(14)	Applicability	Yes	
63.1(b)(1)	Initial Applicability Determination	No	§ 63.1340 specifies applicability.
63.1(b)(2)-(3)	Initial Applicability Determination	Yes	
63.1(c)(1)	Applicability After Standard Established	Yes	
63.1(c)(2)	Permit Requirements	Yes	Area sources must obtain Title V permits.
63.1(c)(3)		No	[Reserved].
63.1(c)(4)-(5)	Extensions, Notifications	Yes	
63.1(d)		No	[Reserved].
63.1(e)	Applicability of Permit Program	Yes	
63.2	Definitions	Yes	Additional definitions in § 63.1341.
63.3(a)-(c)	Units and Abbreviations	Yes	
63.4(a)(1)-(3)	Prohibited Activities	Yes	
63.4(a)(4)		No	[Reserved].
63.4(a)(5)	Compliance date	Yes	
63.4(b)-(c)	Circumvention, Severability	Yes	
63.5(a)(1)-(2)	Construction/Reconstruction	Yes	
63.5(b)(1)	Compliance Dates	Yes	
63.5(b)(2)		No	[Reserved].
63.5(b)(3)-(6)	Construction Approval, Applicability	Yes	
63.5(c)		No	[Reserved].
63.5(d)(1)-(4)	Approval of Construction/Reconstruction	Yes	
63.5(e)	Approval of Construction/Reconstruction	Yes	
63.5(f)(1)-(2)	Approval of Construction/Reconstruction	Yes	
63.6(a)	Compliance for Standards and Maintenance	Yes	
63.6(b)(1)-(5)	Compliance Dates	Yes	
63.6(b)(6)		No	[Reserved].
63.6(b)(7)	Compliance Dates	Yes	
63.6(c)(1)-(2)	Compliance Dates	Yes	
63.6(c)(3)-(4)		No	[Reserved].
63.6(c)(5)	Compliance Dates	Yes	
63.6(d)		No	[Reserved].

Citation	Requirement	Applies to subpart LLL	Explanation
63.6(e)(1)-(2)	Operation & Maintenance	No	See § 63.1348(d) for general duty requirement. Any reference to § 63.6(e)(1)(i) in other General Provisions or in this subpart is to be treated as a cross-reference to § 63.1348(d).
63.6(e)(3)	Startup, Shutdown Malfunction Plan	No	Your operations and maintenance plan must address periods of startup and shutdown. See § 63.1347(a)(1).
63.6(f)(1)	Compliance with Emission Standards	No	Compliance obligations specified in subpart LLL.
63.6(f)(2)-(3)	Compliance with Emission Standards	Yes	
63.6(g)(1)-(3)	Alternative Standard	Yes	
63.6(h)(1)	Opacity/VE Standards	No	Compliance obligations specified in subpart LLL.
63.6(h)(2)	Opacity/VE Standards	Yes	
63.6(h)(3)		No	[Reserved].
63.6(h)(4)-(h)(5)(i)	Opacity/VE Standards	Yes	
63.6(h)(5)(ii)-(iv)	Opacity/VE Standards	No	Test duration specified in subpart LLL.
63.6(h)(6)	Opacity/VE Standards	Yes	
63.6(h)(7)	Opacity/VE Standards	Yes	
63.6(i)(1)-(14)	Extension of Compliance	Yes	
63.6(i)(15)		No	[Reserved].
63.6(i)(16)	Extension of Compliance	Yes	
63.6(j)	Exemption from Compliance	Yes	
63.7(a)(1)-(3)	Performance Testing Requirements	Yes	§ 63.1349 has specific requirements.
63.7(b)	Notification period	Yes	Except for repeat performance test caused by an exceedance. See § 63.1353(b)(6).
63.7(c)	Quality Assurance/Test Plan	Yes	
63.7(d)	Testing Facilities	Yes	
63.7(e)(1)	Conduct of Tests	No	See § 63.1349(e). Any reference to 63.7(e)(1) in other General Provisions or in this subpart is to be treated as a cross-reference to § 63.1349(e).
63.7(e)(2)-(4)	Conduct of tests	Yes	
63.7(f)	Alternative Test Method	Yes	
63.7(g)	Data Analysis	Yes	
63.7(h)	Waiver of Tests	Yes	
63.8(a)(1)	Monitoring Requirements	Yes	
63.8(a)(2)	Monitoring	No	§ 63.1350 includes CEMS requirements.
63.8(a)(3)		No	[Reserved].
63.8(a)(4)	Monitoring	No	Flares not applicable.
63.8(b)(1)-(3)	Conduct of Monitoring	Yes	
63.8(c)(1)-(8)	CMS Operation/Maintenance	Yes	Temperature and activated carbon injection monitoring data reduction requirements given in subpart LLL.
63.8(d)	Quality Control	Yes, except for the	

Citation	Requirement	Applies to subpart LLL	Explanation
		reference to the SSM Plan in the last sentence	
63.8(e)	Performance Evaluation for CMS	Yes	
63.8(f)(1)-(5)	Alternative Monitoring Method	Yes	Additional requirements in § 63.1350(l).
63.8(f)(6)	Alternative to RATA Test	Yes	
63.8(g)	Data Reduction	Yes	
63.9(a)	Notification Requirements	Yes	
63.9(b)(1)-(5)	Initial Notifications	Yes	
63.9(c)	Request for Compliance Extension	Yes	
63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
63.9(e)	Notification of performance test	Yes	Except for repeat performance test caused by an exceedance. See § 63.1353(b)(6).
63.9(f)	Notification of VE/Opacity Test	Yes	Notification not required for VE/opacity test under § 63.1350(e) and (j).
63.9(g)	Additional CMS Notifications	Yes	
63.9(h)(1)-(3)	Notification of Compliance Status	Yes	
63.9(h)(4)		No	[Reserved].
63.9(h)(5)-(6)	Notification of Compliance Status	Yes	
63.9(i)	Adjustment of Deadlines	Yes	
63.9(j)	Change in Previous Information	Yes	
63.10(a)	Recordkeeping/Reporting	Yes	
63.10(b)(1)	General Recordkeeping Requirements	Yes	
63.10(b)(2)(i)-(ii)	General Recordkeeping Requirements	No	See § 63.1355(g) and (h).
63.10(b)(2)(iii)	General Recordkeeping Requirements	Yes	
63.10(b)(2)(iv)-(v)	General Recordkeeping Requirements	No	
63.10(b)(2)(vi)-(ix)	General Recordkeeping Requirements	Yes	
63.10(c)(1)	Additional CMS Recordkeeping	Yes	PS-8A supersedes requirements for THC CEMS.
63.10(c)(1)	Additional CMS Recordkeeping	Yes	PS-8A supersedes requirements for THC CEMS.
63.10(c)(2)-(4)		No	[Reserved].
63.10(c)(5)-(8)	Additional CMS Recordkeeping	Yes	PS-8A supersedes requirements for THC CEMS.
63.10(c)(9)		No	[Reserved].
63.10(c)(10)-(15)	Additional CMS Recordkeeping	Yes	PS-8A supersedes requirements for THC CEMS.
63.10(d)(1)	General Reporting Requirements	Yes	
63.10(d)(2)	Performance Test Results	Yes	
63.10(d)(3)	Opacity or VE Observations	Yes	
63.10(d)(4)	Progress Reports	Yes	
63.10(d)(5)	Startup, Shutdown, Malfunction	No	See § 63.1354(c) for reporting requirements. Any

Citation	Requirement	Applies to subpart LLL	Explanation
	Reports		reference to § 63.10(d)(5) in other General Provisions or in this subpart is to be treated as a cross-reference to § 63.1354(c).
63.10(e)(1)-(2)	Additional CMS Reports	Yes	
63.10(e)(3)	Excess Emissions and CMS Performance Reports	Yes	Exceedances are defined in subpart LLL.
63.10(e)(3)(vii) and (viii)	Excess Emissions and CMS Performance Reports	No	Superseded by 63.1354(b)(10).
63.10(f)	Waiver for Recordkeeping/Reporting	Yes	
63.11(a)-(b)	Control Device Requirements	No	Flares not applicable.
63.12(a)-(c)	State Authority and Delegations	Yes	
63.13(a)-(c)	State/Regional Addresses	Yes	
63.14(a)-(b)	Incorporation by Reference	Yes	
63.15(a)-(b)	Availability of Information	Yes	

Appendix C – Kiln Operating Scenarios

The kiln at Kosmos may operate under one of two operating scenarios as defined by PCMACT regulations or CISWI regulations, depending upon whether or not solid waste, as defined under Non-Hazardous Secondary Materials provisions (40 CFR Part 241), is being used as a fuel, according to the following provisions.

PCMACT kiln refers to the kiln operating in accordance with regulations found in 40 CFR 63 Subpart LLL.[158]

CISWI kiln refers to the kiln operating in accordance with regulations found in 40 CFR 60 Subpart DDDD or a state equivalent rule. The Company has requested to comply with the "model" rule for the CISWI Kiln as described in 40 CFR 60 Subpart DDDD.

The Kosmos kiln operates under one of the two operating scenarios at any one time that are defined by which regulations and emission standards are applicable. When solid waste is being utilized as fuel, the kiln must comply with the CISWI emission standards contained in this permit. When solid waste fuel is not being utilized as fuel, the kiln may stay in CISWI compliance or must comply with the emission standards of the PCMACT rule. In addition, the fuel switching requirements in the CISWI rule must be met to transition between the two operating scenarios.

Operating Scenario 1: PCMACT Kiln. The applicable emission standards for the Kosmos kiln are the PCMACT requirements until the effective date of the CISWI regulations if solid waste is utilized as fuel six months prior. If solid waste is not utilized at or in the previous six months before the effective date, the PCMACT requirements continue to be applicable until the first day solid waste is utilized as a fuel in the kiln.

The PCMACT requirements also become applicable following a fuel-to-waste switch to traditional fuels in accordance with the procedures for fuel switching in 40 CFR §60.2710 and 63.1348(a) as described under Utilization of Alternative Fuel below..

The PCMACT revised requirements per the February 12, 2013 rule citation become applicable after September 9, 2015 if the kiln has not been declared a CISWI kiln.

Operating Scenario 2: CISWI Kiln. The applicable emission standards for the Kosmos kiln are the CISWI requirements upon the effective date if solid waste is being utilized at that time or in the previous 6 months. The effective date is 3 years after approval of a state implementation plan or February 7, 2018 in the absence of a state plan.

The CISWI requirements also become applicable immediately following a fuel switch from traditional fuels to solid waste if its utilization begins after the rule's effective date.

Utilization of Alternative Fuel

The owner or operator is permitted to utilize non-hazardous alternative fuel (such as off-spec used oil, Tire Derived Fuel (TDF) and Refuse Derived Fuel (RDF)) in the Kiln with preheat tower (K-900/901). The owner or operator must determine whether the alternative fuel is regulated as "solid waste" pursuant to 40 CFR Part 241 – Solid Wastes used as fuels or Ingredients in Combustion Units. Whether or not the owner or operator is utilizing an alternative fuel that is deemed a solid waste for regulatory purposes dictates which of the regulations listed below will be applicable to air

[158] Initial Notification of Compliance by Kosmos for the MACT 40 CFR 63 Subpart LLL was submitted to the District on October 7, 1999, and Notification of Compliance was submitted on April 9, 2001.

emissions from the Kiln with preheat tower (K-900/901) at any particular time. Consistent with the Clean Air Act, the Kiln can be subject to only one of these rules at any one time, depending on the fuel types being utilized during a kiln operating scenario. The owner or operator is allowed to switch between solid- and non-solid waste fuels – hence between compliance with the two regulations, but only consistent with the regulatory provision's switching criteria as follows:

- 40 CFR Part 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry and 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants apply when traditional fuels or NHSM that **is documented to be a non-waste is being used**, or
- 40 CFR Part 60 Subpart DDDD – Standards of Performance for Commercial and Industrial Solid Waste Incineration Units applies when NHSM that **is a solid waste is being used** (Subpart DDDD or State equivalent).

Upon the effective date of Subpart DDDD, the Company has requested to comply with the conditions contained within this permit. The owner or operator utilizes alternative fuels that meet the definition of "solid waste" under the 40 C.F.R. Part 241 (NHSM Rule). If the Kiln does not utilize (and has not for at least 6 months) any fuel that meets the definition of "solid waste," it can be instead subject to Part 63 Subpart LLL and Part 60 Subpart F. The owner or operator can "fuel switch" as follows:

Fuel Switching Provisions

The owner or operator may choose to begin or cease the utilization of solid waste as fuel in the Kiln with preheat tower (K-900/901) at any time during the permit term; therefore, Subpart DDDD contains provisions that specify the required steps for switching applicability between Operating Scenarios as per 60.2710(a)(4)(ii) which states that, "The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste."

Specific Conditions

OPERATING SCENARIO 1. PCMACT Kiln

The following sections describe the emission standards, monitoring, recordkeeping, reporting and operational requirements for affected sources / affected facilities located at Portland cement plants when the regulations 40 CFR 63 Subpart LLL and 40 CFR 60 Subpart F are applicable.

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **HAP**[159,160]

Emission Limits for Kilns

i. For the Kiln with preheat tower (K-900/901) and the operating mode is Normal Operation the owner or operator shall limit the PM emissions to less than 0.07 lb/ton clinker. (40 CFR §63.1343(b)(1) Table 1. Note 1 to Table 1 of 40 CFR §63.1343(b)(1))

ii. For the Kiln with preheat tower (K-900/901) and the operating mode is Normal Operation no owner or operator shall cause to be discharged into the atmosphere from the kiln, any gases which contain Dioxins and Furans (D/F) in excess of 0.20 ng/dscm (TEQ)[161] corrected to seven percent oxygen; or 0.40 ng/dscm ($1.7H10^{-10}$ gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204°C (400°F) or less. (40 CFR §63.1343(b)(1) Table 1, Note 2 to Table 1 of §63.1343(b)(1))

iii. For the Kiln with preheat tower (K-900/901) and the operating mode is Normal Operation the owner or operator shall limit the mercury emissions to 55 lb/MM tons clinker (40 CFR §63.1343(b)(1) Table 1)

iv. For the Kiln with preheat tower (K-900/901) and the operating mode is Normal Operation the owner or operator shall limit the THC emissions to 24 ppmvd measured as propane, or 12 ppmvd for total organic HAP. (40 CFR §63.1343(b)(1) Table 1, Notes 3 and 4 to Table 1 of §63.1343(b)(1))

v. For the Kiln with preheat tower (K-900/901) and the operating mode is Normal Operation the owner or operator shall limit the HCl emissions: to 3 ppmvd. (40 CFR §63.1343(b)(1) Table 1)

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[159] If you have an affected source subject to 40 CFR 60 Subpart F with a different emissions limit or requirement for the same pollutant under another regulation in title 40 of this chapter, (i.e. 40 CFR 63 Subpart LLL), once you are in compliance with the most stringent emissions limit or requirement, you are not subject to the less stringent requirement. Until you are in compliance with the more stringent limit, the less stringent limit continues to apply.

[160] According to 40 CFR 63.1351(c), the compliance date for existing sources for all the requirements that were amended and established on February 12, 2013 will be September 9, 2015.

[161] *TEQ* means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Clorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989. (40 CFR §63.1341 *Definitions*.)

vi. When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the combined PM emissions from the kiln and the alkali bypass stack and/or the inline coal mill stack are subject to the PM emissions limit. (40 CFR §63.1343(b)(2))

Operating Limits for Kilns

vii. The owner or operator of a kiln subject to a D/F emission limitation under 40 CFR §63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in 40 CFR §63.1346(b). The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under 40 CFR §63.1343 must operate the in-line kiln/raw mill, such that: (40 CFR §63.1346(a))

1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR §63.1346(b) and established during the performance test when the raw mill was operating is not exceeded. During periods of startup/shutdown the temperature limit may be exceeded by no more than 10 percent. (40 CFR §63.1346(a)(1))

2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR §63.1346(b) and established during the performance test when the raw mill was not operating, is not exceeded. During periods of startup/shutdown, the temperature limit may be exceeded by no more than 10 percent.(40 CFR §63.1346(a)(2))

viii. No kiln may use as a raw material or fuel any fly ash where the mercury content of the fly ash has been increased through the use of activated carbon, or any other sorbent, unless the facility can demonstrate that the use of that fly ash will not result in an increase in mercury emissions over baseline emissions (i.e., emissions not using the fly ash). The facility has the burden of proving there has been no emissions increase over baseline. Once the kiln is in compliance with a mercury emission limit specified in 40 CFR §63.1343 this paragraph no longer applies. (40 CFR §63.1346(f))

ix. During periods of startup and shutdown the owner or operator shall meet the requirements listed in 40 CFR §63.1346 (g)(1) through 40 CFR §63.1346 (4) of this section of the federal regulation. (40 CFR §63.1346(g))

1) During startup the owner or operator shall use any one or combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1200° Fahrenheit.(40 CFR §63.1346(g)(1))

2) Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200° Fahrenheit (40 CFR §63.1346(g)(2))

3) All dry sorbent and activated carbon systems that control hazardous air pollutants devices must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown. (40 CFR §63.1346(g)(3))

4) The owner or operator shall keep records as specified in 40 CFR §63.1355 during periods of startup and shutdown. (40 CFR §63.1346(g)(4))

Operations and Maintenance Plan Requirements

x. The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator[162] for review and approval as part of the application for a part 70 permit and shall include the following information: (40 CFR §63.1347(a))

1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits, including fugitive dust control measures for open clinker piles of 40 CFR §63.1343, 40 CFR §63.1345, and 63.1346. Your operations and maintenance plan must address periods of startup and shutdown. (40 CFR §63.1347(a)(1))

2) Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) as listed in the Operations and Maintenance Plan and S2.i); (40 CFR63.1347(a)(2))

3) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year. (40 CFR §63.1347(a)(3))

xi. Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR §63.1347 is a violation of the standard. (40 CFR §63.1347(b))

[162] The Administrator here means the District pursuant to District Regulation 5.02, Section 1.

Compliance with standards.

xii. The emission standards and operating requirements set forth in this subpart apply at all times. (40 CFR §60.2710(a)(1))

xiii. If you cease combusting solid waste you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time). (40 CFR §60.2710(a)(2))

xiv. If you cease combusting solid waste you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with § 60.2710(a)(2). Your source must remain in compliance with this subpart until the effective date of the waste-to-fuel switch. (40 CFR §60.2710(a)(3))

xv. If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any Section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify: (40 CFR §60.2710(a)(4))

1) The name of the owner or operator of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice; (40 CFR §60.2710(a)(4)(i))

2) The currently applicable subcategory under this subpart, and any 40 CFR §part 63 subpart and subcategory that will be applicable after you cease combusting solid waste; (40 CFR §60.2710(a)(4)(ii))

3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting; (40 CFR §60.2710(a)(4)(iii))

4) The date on which you became subject to the currently applicable emission limits; (40 CFR §60.2710(a)(4)(iv))

5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the

waste-to-fuel switch), consistent with paragraphs (a)(2) and (3) of this section. (40 CFR §60.2710(a)(4)(v))

xvi. All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. (40 CFR §60.2710(a)(5))

xvii. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements under this subpart. (40 CFR §60.2710(a)(6))

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the required records for a minimum of five (5) years and make the records readily available to the District upon request. (40 CFR §63.1355(a) and Regulation 2.03, section 6.1)

a. **HAP**

i. Compliance requirements (40 CFR §63.1348)

1) Initial Performance Test Requirements[163] (40 CFR §63.1348(a))

For an affected source subject to this subpart, the owner or operator shall demonstrate compliance with the emissions standards and operating limits by using the test methods and procedures in 40 CFR §63.1349 and 63.7. Any cement kiln that has been subject to the requirements of subpart CCCC or subpart DDDD of 40 CFR §Part 60, and is now electing to cease burning nonhazardous solid waste and become subject to this subpart, must meet all the initial compliance testing requirements each time it becomes subject to this subpart, even if it was previously subject to this subpart.

NOTE to paragraph (a): The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or

[163] The performance test is required to be conducted 180 days after the switch-back date (compliance date).

12B) acceptance criteria. The performance test period is complete at the end of the 30th consecutive operating day. See 40 CFR §63.1341 for definition of operating day and 40 CFR §63.1348(b)(1) for the CEMS operating requirements. The source has the option of performing the compliance test earlier then the compliance date if desired.

(a) PM Compliance. (40 CFR §63.1348(a)(1))

If the facility is subject to limitations on PM emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the PM emissions standards by using the test methods and procedures in 40 CFR §63.1349(b)(1).

(b) Opacity Compliance (40 CFR §63.1348(a)(2))

If the facility is subject to the limitations on opacity under 40 CFR §63.1345, the owner or operator shall demonstrate compliance with the opacity emissions standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(2). Use the maximum 6-minute average opacity exhibited during the performance test period to determine whether the affected source is in compliance with the standard.

(c) D/F compliance (40 CFR §63.1348(a)(3))

(i) If the facility is subject to limitations on D/F emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate initial compliance with the D/F emissions standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(3). The owner or operator of a kiln with an in-line raw mill must demonstrate initial compliance by conducting separate performance tests while the raw mill is operating and the raw mill is not operating. The D/F concentration must be determined for each run and the arithmetic average of the concentrations measured for the three runs must be calculated to determine compliance. The owner or operator of a kiln with an in-line raw mill must demonstrate compliance by conducting separate performance tests while the raw mill is operating and while the raw mill is not operating. Determine the D/F TEQ concentration for each run and calculate the arithmetic average of the TEQ concentrations measured for the three runs to determine continuous compliance. (40 CFR §63.1348(a)(3)(i))

(ii) If the facility is subject to a D/F emissions limitation under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the temperature operating

limits specified in 40 CFR §63.1346 by using the performance test methods and procedures in 40 CFR §63.1349(b)(3)(ii) through (b)(3)(iv). Use the arithmetic average of the temperatures measured during the three runs to determine the applicable temperature limit. (40 CFR §63.1348(a)(3)(ii))

(iii) If activated carbon injection is used and the facility is subject to a D/F emissions limitation under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the activated carbon injection rate operating limits specified in 40 CFR §63.1346 by using the performance test methods and procedures in 40 CFR §63.1349(b)(3)(v). (40 CFR §63.1348(a)(3)(iii))

(iv) If activated carbon injection is used, the owner or operator shall also develop a carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) during the initial performance test and updated during any subsequent performance test conducted under 40 CFR §63.1349(b)(3) that meets the requirements of 40 CFR §63.1349(b)(3)(vi). Compliance is demonstrated if the system is maintained within +/- 5 percent accuracy during the performance test determined in accordance with the procedures and criteria submitted for review in the monitoring plan required in section 63.1350(p). (40 CFR §63.1348(a)(3)(iv))

(d) THC Compliance (40 CFR §63.1348(a)(4))

(i) If the facility is subject to limitations on THC emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the THC emissions standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(4)(i). The owner or operator shall use the average THC concentration obtained during the first 30 kiln operating days after the compliance date of this rule to determine initial compliance. (40 CFR §63.1348(a)(4)(i))

(ii) Total Organic HAP Emissions Tests. If the total organic HAP emissions limit under 40 CFR §63.1343(b) is used to demonstrate compliance in lieu of the THC emissions limit, the owner or operator shall demonstrate compliance with the total organic HAP emissions standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(7). (40 CFR §63.1348(a)(4)(ii))

(iii) If the owner or operator is demonstrating initial compliance, the owner or operator shall conduct the separate performance tests as specified in 40 CFR §63.1349(b)(7) while the raw mill of the inline kiln/raw mill is operating and while the raw mill of the inline kiln/raw mill is not operating. (40 CFR §63.1348(a)(4)(iii))

(iv) The time weighted average total organic HAP concentration measured during the separate initial performance test specified by 40 CFR §63.1349(b)(7) must be used to determine initial compliance. (40 CFR §63.1348(a)(4)(iv))

(v) The time weighted average THC concentration measured during the initial performance test specified by 40 CFR §63.1349(b)(4) must be used to determine the site-specific THC limit. Using the fraction of time the inline kiln/raw mill is on and the fraction of time that the inline kiln/raw mill is off, calculate this limit as a time weighted average of the THC levels measured during raw mill on and raw mill off testing using one of the two approaches in 40 CFR §63.1349(b)(7)(vii) or (viii) depending on the level of organic HAP measured during the compliance test. (40 CFR §63.1348(a)(4)(v))

(e) Mercury Compliance (40 CFR §63.1348(a)(5))

If the facility is subject to limitations on mercury emissions in 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance with the mercury standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(5). The owner or operator shall demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. Compliance with the mercury emissions standard must be determined based on the first 30 operating days the owner or operator operate a mercury CEMS or sorbent trap monitoring system after the compliance date of this rule.

(i) In calculating a 30 operating day emissions value using an integrating sorbent trap CEMS, assign the average Hg emissions concentration determined for an integrating period (e.g., 7 day sorbent trap monitoring system sample) to each relevant hour of the kiln operating days spanned by each integrated sample. Calculate the 30 kiln operating day emissions rate value using the assigned hourly Hg emissions concentrations and the respective flow and production rate values collected during the 30 kiln operating day performance

test period. Depending on the duration of each integrated sampling period, the owner or operator may not be able to calculate the 30 kiln operating day emissions value until several days after the end of the 30 kiln operating day performance test period. (40 CFR §63.1348(a)(5)(i))

(ii) For example, a sorbent trap monitoring system producing an integrated 7-day sample will provide Hg concentration data for each hour of the first 28 kiln operating days (i.e., four values spanning 7 days each) of a 30 operating day period. The Hg concentration values for the hours of the last 2 days of the 30 operating day period will not be available for calculating the emissions for the performance test period until at least five days after the end of the subject period. (40 CFR §63.1348(a)(5)(ii))

(f) HCl Compliance. (40 CFR §63.1348(a)(6))

If the facility is subject to limitations on HCl emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate initial compliance with the HCl standards by using the performance test methods and procedures in 40 CFR §63.1349(b)(6).

(i) For an affected source that is equipped with a wet scrubber, tray tower or dry scrubber, the owner or operator may demonstrate initial compliance by conducting a performance test as specified in 40 CFR §63.1349(b)(6)(i). The owner or operator shall determine the HCl concentration for each run and calculate the arithmetic average of the concentrations measured for the three runs to determine compliance. The owner or operator shall also establish appropriate site-specific operational parameter limits. (40 CFR §63.1348(a)(6)(i))

(ii) For an affected source that is not equipped with a wet scrubber, tray tower or dry scrubber, the owner or operator shall demonstrate initial compliance by operating a CEMS as specified in 40 CFR §63.1349(b)(6)(ii). The owner or operator shall use the average of the hourly HCl values obtained during the first 30 kiln operating days that occur after the compliance date of this rule to determine initial compliance. (40 CFR §63.1348(a)(6)(ii))

(g) Commingled Exhaust Requirements. (40 CFR §63.1348(a)(7))

If the coal mill exhaust is commingled with kiln exhaust in a single stack, the owner or operator may demonstrate compliance with the kiln emission limits by either:

(i) Performing required emissions monitoring and testing on the commingled coal mill and kiln exhaust, or (40 CFR §63.1348(a)(7)(i))

(ii) Perform required emission monitoring and testing of the kiln exhaust prior to the reintroduction of the coal mill exhaust, and also testing the kiln exhaust diverted to the coal mill. All emissions must be added together for all emission points, and must not exceed the limit per each pollutant as listed in S63.1343(b). (40 CFR §63.1348(a)(7)(ii))

2) Continuous Monitoring Requirements (40 CFR §63.1348(b))

The owner or operator shall demonstrate compliance with the emissions standards and operating limits by using the performance test methods and procedures in 40 CFR §63.1350 and 63.8 for each affected source.

(a) General Requirements (40 CFR §63.1348(b)(1))

(i) The owner or operator shall monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p). (40 CFR §63.1348(b)(1)(i))

(ii) Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR §63.1348(b)(1)(ii))

(iii) You may not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You must use all the data collected during all other periods in assessing the operation of the control device

and associated control system. (40 CFR §63.1348(b)(1)(iii))

(iv) If the facility is subject to limitations on mercury emissions (lb/MM tons of clinker) under 40 CFR §63.1343(b), the owner or operator shall determine the hourly production rate of clinker according to the requirements of 40 CFR §63.1350(d). (40 CFR §63.1348(b)(1)(iv))

(b) PM Compliance. (40 CFR §63.1348(b)(2))

If the facility is subject to limitations on PM emissions under 40 CFR §63.1343(b), the owner or operator shall use the monitoring methods and procedures in 40 CFR §63.1350(b) and (d).

(c) D/F Compliance. (40 CFR §63.1348(b)(4))

If the facility is subject to a D/F emissions limitation under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance using a CMS that is installed, operated and maintained to record the temperature of specified gas streams in accordance with the requirements of 40 CFR §63.1350(g).

(d) THC Compliance. (40 CFR §63.1348(b)(6))

(i) If the facility is subject to limitations on THC emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(i) and (j). (40 CFR §63.1348(b)(6)(i))

(ii) THC must be measured either upstream of the coal mill or in the coal mill stack. (40 CFR §63.1348(b)(6)(ii))

(e) Mercury Compliance. (40 CFR §63.1348(b)(7))

(i) If the facility is subject to limitations on mercury emissions in 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(k). If an integrated sorbent trap monitoring system is used to determine ongoing compliance, use the procedures described in 40 CFR §63.1348(a)(5) to assign hourly mercury concentration values and to calculate rolling 30 operating day emissions rates. Since the mercury concentration measured with the sorbent trap is assigned to each relevant hour respectively for each operating day of the integrated period, the owner or operator may schedule the sorbent trap change periods to any time of the day (i.e., the sorbent trap

replacement need not be scheduled at 12:00 midnight nor must the sorbent trap replacements occur only at integral 24-hour intervals). (40 CFR §63.1348(b)(7)(i))

(ii) Mercury must be measured either upstream of the coal mill or in the coal mill stack. (40 CFR §63.1348(b)(7)(ii))

(f) HCl Compliance. (40 CFR §63.1348(b)(8))

If the facility is subject to limitations on HCl emissions under 40 CFR §63.1343(b), the owner or operator shall demonstrate compliance using the performance test methods and procedures in 40 CFR §63.1349(b)(6).

(i) For an affected source that is not equipped with a wet scrubber, tray tower or a dry sorbent injection system, the owner or operator shall demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(l)(1). (40 CFR §63.1348(b)(8)(i))

(ii) For an affected source that is equipped with a wet scrubber, tray tower or a dry sorbent injection system, the owner or operator may demonstrate compliance using the monitoring methods and procedures in 40 CFR §63.1350(l)(2). (40 CFR §63.1348(b)(8)(ii))

(iii) HCl may be measured either upstream of the coal mill or in the coal mill stack. (40 CFR §63.1348(b)(8)(iii))

(iv) As an alternative to paragraph (b)(8)(ii) of this section of the federal regulation, the owner or operator may use an SO_2 CEMS to establish an SO_2 operating level during the initial and repeat HCl performance tests and monitor the SO_2 level using the procedures in 40 CFR §63.1350(l)(3). (40 CFR §63.1348(b)(8)(iv))

(g) Startup and Shutdown Compliance. (40 CFR §63.1348(b)(9))

All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.

3) Changes in operations (40 CFR §63.1348(c))

(a) If a change in operations is planned to be undertaken that may adversely affect compliance with an applicable standard,

operating limit, or parametric monitoring value under this subpart, the source must conduct a performance test as specified in 40 CFR §63.1349(b). (40 CFR §63.1348(c)(1))

(b) In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the owner or operator may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in (c)(2)(i) through (c)(2)(iv) of this section of the federal regulation are met. The owner or operator shall submit temperature and other monitoring data that are recorded during the pretest operations. (40 CFR §63.1348(c)(2))

(i) The owner or operator shall provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (c)(1) of this section of the federal regulation, including when the planned operational change period would begin. (40 CFR §63.1348(c)(2)(i))

(ii) The performance test results must be documented in a test report according to 40 CFR §63.1349(a). (40 CFR §63.1348(c)(2)(ii))

(iii) A test plan must be made available to the Administrator prior to performance testing, if requested. (40 CFR §63.1348(c)(2)(iii))

(iv) The performance test must be completed within 360 hours after the planned operational change period begins. (40 CFR §63.1348(c)(2)(iv))

4) General duty to minimize emissions (40 CFR §63.1348(d))

At all times the owner or operator shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

ii. Monitoring requirements: (40 CFR §63.1350)

1) General monitoring requirements: (40 CFR §63.1350(a))

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of this section. (40 CFR §63.1350(a)(1))

(b) For each existing unit that is equipped with a continuous monitoring system (CMS), maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. (40 CFR §63.1350(a)(3))

(c) Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section of the federal regulation is a violation. (40 CFR §63.1350(a)(4))

2) PM monitoring requirements: (40 CFR §63.1350(b))

(a) A PM CPMS shall be used to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter shall be conducted. The PM CPMS to demonstrate continuous compliance with this operating limit shall be used. The owner or operator shall repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in 40 CFR §63.1349(b)(1) (i) through (vi) of this subpart. The owner or operator shall also repeat the test if the owner or operator changes the analytical range of the instrument, or if the owner or operator replaces the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration. (40 CFR §63.1350(b)(1)(i))

(b) To determine continuous compliance, the owner or operator shall use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. (40 CFR §63.1350(b)(1)(ii))

(c) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the owner or operator shall: (40 CFR §63.1350(b)(1)(iii))

(i) Within 48 hours of the exceedance, visually inspect the APCD; (40 CFR §63.1350(b)(1)(iii)(A))

(ii) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and (40 CFR §63.1350(b)(1)(iii)(B))

(iii) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. Additional testing is not required to be conducted for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph. (40 CFR §63.1350(b)(1)(iii)(C))

(d) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart. (40 CFR §63.1350(b)(1)(iv))

3) Clinker production monitoring requirements: (40 CFR §63.1350(d))

In order to determine clinker production, the owner or operator shall:

(a) Determine hourly clinker production by one of two methods: (40 CFR §63.1350(d)(1))

(i) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 percent accuracy, or (40 CFR §63.1350(d)(1)(i))

(ii) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio

changes at clinker reconciliation, the owner or operator shall use the new ratio going forward, but the owner or operator do not have to retroactively change clinker production rates previously estimated. (40 CFR §63.1350(d)(1)(ii))

(b) Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the after compliance date of this rule (for existing sources). During each quarter of source operation, the owner or operator shall determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow). (40 CFR §63.1350(d)(2))

(c) If clinker production is measured directly, record the daily clinker production rates; if the kiln feed rates are measured and clinker production calculated, record the hourly kiln feed and clinker production rates. (40 CFR §63.1350(d)(3))

(d) Develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of this section of the federal regulation. (40 CFR §63.1350(d)(4))

4) D/F monitoring requirements. (40 CFR §63.1350(g))

If the facility is subject to an emissions limitation on D/F emissions, the owner or operator shall comply with the monitoring requirements of paragraphs (g)(1) through (g)(6) and paragraphs (m)(1) through (m)(4) of this section of the federal regulation to demonstrate continuous compliance with the D/F emissions standard. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of this section of the federal regulation.

(a) The owner or operator shall install, calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln and/or alkali bypass PMCDs. (40 CFR §63.1350(g)(1))

(i) The temperature recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1349(b)(3)(iv). (40 CFR §63.1350(g)(1)(i))

(ii) The calibration reference for the temperature measurement must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to

approval by the Administrator. (40 CFR §63.1350(g)(1)(ii))

(iii) The calibration of all thermocouples and other temperature sensors must be verified at least once every three months. (40 CFR §63.1350(g)(1)(iii))

(b) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to the kiln and/or alkali bypass PMCD. (40 CFR §63.1350(g)(2))

(c) The required minimum data collection frequency must be one minute. (40 CFR §63.1350(g)(3))

(d) Calculate the rolling three-hour average temperature using the average of 180 successive one-minute average temperatures. See 40 CFR §63.1349(b)(3). (40 CFR §63.1350(g)(4))

(e) When the operating status of the raw mill of the in-line kiln/ raw mill is changed from off to on or from on to off, the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings. (40 CFR §63.1350(g)(5))

5) THC monitoring requirements. (40 CFR §63.1350(i))

If the facility is subject to an emissions limitation on THC emissions, the owner or operator shall comply with the monitoring requirements of paragraphs (i)(1) and (i)(2) and (m)(1) through (m)(4) of this section of the federal regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of this section of the federal regulation.

(a) The owner or operator shall install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part. The owner or operator must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. For THC continuous emission monitoring systems certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in appendix A to 40 CFR §part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2 (40 CFR §63.1350(i)(1))

(b) Performance tests on alkali bypass and coal mill stacks must be conducted using Method 25A in appendix A to 40 CFR §part 60 and repeated every 30 months. (40 CFR §63.1350(i)(2))

6) Total organic HAP monitoring requirements. (40 CFR §63.1350(j))

If the owner or operator is complying with the total organic HAP emissions limits, the owner or operator shall continuously monitor THC according to paragraph (i)(1) and (2) of this section or in accordance with Performance Specification 8 or Performance Specification 8A of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part. The owner or operator shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. In addition, the must follow the monitoring requirements in paragraphs (m)(1) through (4) of this section of the federal regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (4) of this section of the federal regulation.

7) Mercury Monitoring Requirements. (40 CFR §63.1350(k))

If a kiln subject to an emissions limitation on mercury emissions is operated, the owner or operator shall install and operate a mercury continuous emissions monitoring system (Hg CEMS) in accordance with Performance Specification 12A (PS 12A) of Appendix C to part 60 of this chapter or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of Appendix C to part 60 of this chapter. The owner or operator shall monitor mercury continuously according to paragraphs (k)(1) through (5) of this section of the federal regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (4) of this section of the federal regulation.

(a) The owner or operator shall use a span value for any Hg CEMS that represents the mercury concentration corresponding to approximately two times the emissions standard and may be rounded up to the nearest multiple of 5 μg/m3 of total mercury or higher level if necessary to include Hg concentrations which may occur (excluding concentrations during in-line raw “mill off” operation). As specified in PS 12A, Section 6.1.1, the data recorder output range must include the full range of expected Hg concentration values which would include those expected during “mill off” conditions. Engineering judgments made and calculations used to determine the corresponding span concentration from the emission standard shall be documented

in the site-specific monitoring plan and associated records. (40 CFR §63.1350(k)(1))

(b) In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in paragraphs (k)(2)(i) through (iii) of this section of the federal regulation. Where the options in paragraphs (k)(2)(i) through (iii) are employed while the kiln is operating in a mill-off mode, the "above span" described in paragraph (k)(2)(iii) may substitute for the daily upscale calibration provided the data normalization process in paragraph (k)(2)(iii) are not required. If data normalization is required, the normal daily upscale calibration check must be performed to quality assure the operation of the CEMS for that day. In this particular case, adjustments to CEMS normally required by Procedure 5 when a daily upscale does not meet the 5 percent criterion are not required, unless paragraph (k)(2)(iii) of this section data normalization is necessary and a subsequent normal daily calibration check demonstrates the need for such adjustment. (40 CFR §63.1350(k)(2))

(i) Include a second span that encompasses the Hg emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 $\mu g/m^3$ of total mercury. The requirements of PS 12A, shall be followed for this second span with the exception that a RATA with the mill off is not required. (40 CFR §63.1350(k)(2)(i))

(ii) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (k)(1) of this section using the following procedure. Conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75 percent of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of PS 12A, Section 7.1 and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The "above span linearity" challenge is successful if the value measured by the Hg CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the Hg CEMS during the above span linearity challenge exceeds +/-10 percent of the certified value of the reference gas, the monitoring system must be evaluated

and repaired and a new "above span linearity" challenge met before returning the Hg CEMS to service, or data above span from the Hg CEMS must be subject to the quality assurance procedures established in paragraph (k)(2)(iii) of this section. In this manner all hourly average values exceeding the span value measured by the Hg CEMS during the week following the above span linearity challenge when the CEMS response exceeds +/-20 percent of the certified value of the reference gas must be normalized using Equation 22. (40 CFR §63.1350(k)(2)(ii))

(iii) Quality assure any data above the span value established in paragraph (k)(1) of this section of the federal regulation using the following procedure. Any time two consecutive one-hour average measured concentrations of Hg exceeds the span value the owner or operator shall, within 24 hours before or after, introduce a higher, "above span" Hg reference gas standard to the Hg CEMS. The "above span" reference gas must meet the requirements of PS 12A, Section 7.1, must target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include "above span" calibrations done before or after the above span measurement period. Record and report the results of this procedure as the owner or operator would for a daily calibration. The "above span" calibration is successful if the value measured by the Hg CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the Hg CEMS exceeds 20 percent of the certified value of the reference gas, then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the "above span" calibration for reporting based on the Hg CEMS response to the reference gas as shown in equation 22 below. Only one "above span" calibration is needed per 24 hour period. (40 CFR §63.1350(k)(2)(iii))

$$\frac{Certified\ reference\ gas\ value}{Measured\ value\ of\ reference\ gas} * Measured\ stack\ gas\ result = Normalized\ stack\ gas\ result$$

Equation 22

(c) You must operate and maintain each Hg CEMS or an integrated sorbent trap monitoring system according to the quality assurance requirements in Procedure 5 of appendix F to part 60 of this chapter. During the RATA of integrated sorbent trap monitoring systems required under Procedure 5, the owner or operator may apply the appropriate exception for sorbent trap section 2 breakthrough in (k)(3)(i) through (iv) of this section of the federal regulation: (40 CFR §63.1350(k)(3))

(i) For stack Hg concentrations >1 μg/dscm, ≤ 10% of section 1 mass; (40 CFR §63.1350(k)(3)(i))

(ii) For stack Hg concentrations ≤ 1 μg/dscm and > 0.5 μg/dscm, ≤ 20% of section 1 mass; (40 CFR §63.1350(k)(3)(ii))

(iii) For stack Hg concentrations ≤ 0.5 μg/dscm and > 0.1 μg/dscm, ≤ 50% of section 1 mass; and (40 CFR §63.1350(k)(3)(iii))

(iv) For stack Hg concentrations ≤ 0.1 μg/dscm, no breakthrough criterion assuming all other QA/QC specifications are met. (40 CFR §63.1350(k)(3)(iv))

(d) Relative accuracy testing of mercury monitoring systems under PS 12A, PS 12B, or Procedure 5 must be conducted at normal operating conditions. If a facility has an inline raw mill, the testing must occur with the raw mill on. (40 CFR §63.1350(k)(4))

(e) If the owner or operator use a Hg CEMS or an integrated sorbent trap monitoring system, the owner or operator shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in paragraphs (n)(1) through (10) of this section of the federal regulation. If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through separate stacks, the owner or operator shall account for the mercury emitted from those stacks by following the procedures in (k)(5)(i) through (iv) of this section of the federal regulation: (40 CFR §63.1350(k)(5))

(i) Develop a mercury hourly mass emissions rate by conducting performance tests annually, within 11 to 13

calendar months after the previous performance test, using Method 29, or Method 30B, to measure the concentration of mercury in the gases exhausted from the alkali bypass and coal mill. (40 CFR §63.1350(k)(5)(i))

(ii) On a continuous basis, determine the mass emissions of mercury in lb/hr from the alkali bypass and coal mill exhausts by using the mercury hourly emissions rate, the exhaust gas flow rate and hourly mercury emission rate to calculate hourly mercury emissions in lb/hr. (40 CFR §63.1350(k)(5)(ii))

(iii) Sum the hourly mercury emissions from the kiln, alkali bypass and coal mill to determine total mercury emissions. Using hourly clinker production, calculate the hourly emissions rate in pounds per ton of clinker to determine the 30 day rolling average.[164] (40 CFR §63.1350(k)(5)(iii))

(iv) If mercury emissions from the coal mill and alkali bypass are below the method detection limit for two consecutive annual performance tests, the owner or operator may reduce the frequency of the performance tests of coal mills and alkali bypasses to once every 30 months. If the measured mercury concentration exceeds the method detection limit, the owner or operator shall revert to testing annually until two consecutive annual tests are below the method detection limit. (40 CFR §63.1350(k)(5)(iv))

(f) If an integrated sorbent trap monitoring system conforming to PS 12B is operated, the owner or operator may use a monitoring period at least 24 hours but no longer than 168 hours in length. The owner or operator shall use a monitoring period that is a multiple of 24 hours (except during relative accuracy testing as allowed in PS 12B). (40 CFR §63.1350(k)(6))

8) HCl monitoring requirements. (40 CFR §63.1350(l))

If the facility is subject to an emissions limitation on HCl emissions in 40 CFR §63.1343, the owner or operator shall monitor HCl emissions continuously according to paragraph (l)(1) or (2) and paragraphs (m)(1) through (4) of this section of the federal regulation or, if the kiln is controlled using a wet or dry scrubber or tray tower, the owner or operator alternatively may parametrically monitor SO_2 emissions continuously according to paragraph (l)(3) of this section of the federal

[164] The 30-day rolling average starts the day after the performance test has been completed.

regulation. The owner or operator shall also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (4) of this section of the federal regulation.

(a) If you monitor compliance with the HCl emissions limit by operating an HCl CEMS, you must do so in accordance with Performance Specification 15 (PS 15) of appendix B to part 60 of this chapter, or, upon promulgation, in accordance with any other performance specification for HCl CEMS in appendix B to part 60 of this chapter. You must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to part 60 of this chapter except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. When promulgated, if you choose to install and operate an HCl CEMS in accordance with PS 18 of appendix B to part 60 of this chapter, you must operate, maintain and quality assure the HCl CEMS using the associated Procedure 6 of appendix F to part 60 of this chapter. For any performance specification that you use, you must use Method 321 of appendix A to part 63 of this chapter as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs (l)(1)(i) and (ii) of this section apply to HCl CEMS other than those installed and certified under PS 15. (40 CFR §63.1350(l)(1))

(i) You must use a measurement span value for any HCl CEMS of 0-10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during “mill off” conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records. (40 CFR §63.1350(l)(1)(i))

(ii) In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in paragraphs (l)(1)(ii)(A) through (C) of this section of the federal regulation. (40 CFR §63.1350(l)(1)(ii))

(A) Include a second span that encompasses the HCl emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required. (40 CFR §63.1350(l)(1)(ii)(A))

(B) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (l)(1)(i) of this section using the following procedure. Conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75 percent of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The "above span linearity" challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new "above span linearity" challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in paragraph (l)(1)(ii)(D) of this section. Any HCl CEMS above span linearity challenge response exceeding +/-20 percent of the certified value of the reference gas requires that all above span hourly averages during the week following the above span linearity challenge must be normalized using Equation

23. (40 CFR §63.1350(l)(1)(ii)(B))

(C) Quality assure any data above the span value established in paragraph (l)(1)(i) of this section using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value you must, within 24 hours before or after, introduce a higher, "above span" HCl reference gas standard to the HCl CEMS. The "above span" reference gas must meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as you would for a daily calibration. The "above span" calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20 percent of the certified value of the reference gas, then you must normalize the stack gas values measured above span as described in paragraph (l)(1)(ii)(D) of this section. (40 CFR §63.1350(l)(1)(ii)(C))

(D) In the event that the 'above span' calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the 'above span' calibration for reporting based on the HCl CEMS response to the reference gas as shown in Equation 23:

$$\frac{Certified\ reference\ gas\ value}{Measured\ value\ of\ reference\ gas} * Measured\ stack\ gas\ result = Normalized\ stack\ gas\ result$$

Equation 23

Only one "above span" calibration is needed per 24-hour period. (40 CFR §63.1350(l)(1)(ii)(D))

(b) Install, operate, and maintain a CMS to monitor wet scrubber or tray tower parameters, as specified in paragraphs (m)(5) and (7) of this section of the federal regulation, and dry scrubber, as specified in paragraph (m)(9) of this section of the federal regulation. (40 CFR §63.1350(l)(2))

(c) If the source is equipped with a wet or dry scrubber or tray tower, and the owner or operator choose to monitor SO_2 emissions, monitor SO_2 emissions continuously according to the requirements of 40 CFR §60.63(e) and (f) of part 60 subpart F of this chapter. If SO_2 levels increase above the 30-day rolling average SO_2 operating limit established during the performance test, the owner or operator shall: (40 CFR §63.1350(l)(3))

(i) As soon as possible but no later than 48 hours after the owner or operator exceed the established SO_2 value conduct an inspection and take corrective action to return the SO_2 emissions to within the operating limit; and (40 CFR §63.1350(l)(3)(i))

(ii) Within 60 days of the exceedance or at the time of the next compliance test, whichever comes first, conduct an HCl emissions compliance test to determine compliance with the HCl emissions limit and to verify or re-establish the SO_2 CEMS operating limit. (40 CFR §63.1350(l)(3)(ii))

(d) If you monitor continuous performance through the use of an HCl CPMS according to 40 CFR §63.1349(b)(6)(v)(A) through (H) of 40 CFR §63.1349, for any exceedance of the 30 kiln operating day HCl CPMS average value from the established operating limit, you must: (40 CFR §63.1350(l)(4))

(i) Within 48 hours of the exceedance, visually inspect the APCD; (40 CFR §63.1350(l)(4)(i))

(ii) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the HCl CPMS measurement to within the established value; (40 CFR §63.1350(l)(4)(ii))

(iii) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct an HCl emissions compliance test to determine compliance with the HCl emissions limit and to verify or reestablish the HCl CPMS operating limit within 45 days. You are not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the HCl emissions compliance test required under this paragraph. (40 CFR §63.1350(l)(4)(iii))

(iv) HCl CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart. (40 CFR §63.1350(l)(4)(iv))

9) Parameter Monitoring Requirements. (40 CFR §63.1350(m))

If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in paragraphs (m)(1) through (4) of this section of the federal regulation by the compliance date specified in 40 CFR §63.1351. You must also meet the applicable specific parameter monitoring requirements in paragraphs 63.1350(m)(5) through (11) that are applicable to you.

(a) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data. (40 CFR §63.1350(m)(1))

(b) You must conduct all monitoring in continuous operation at all times that the unit is operating. (40 CFR §63.1350(m)(2))

(c) Determine the 1-hour block average of all recorded readings. (40 CFR §63.1350(m)(3))

(d) Record the results of each inspection, calibration, and validation check. (40 CFR §63.1350(m)(4))

(e) Liquid flow rate monitoring requirements.

(i) If you have an operating limit that requires the use of a flow measurement device, you must meet the requirements in paragraphs (m)(5)(i) through (iv) of this section of the federal regulation. (40 CFR §63.1350(m)(5))

(ii) Locate the flow sensor and other necessary equipment in a position that provides a representative flow. (40 CFR §63.1350(m)(5)(i))

(iii) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate. (40 CFR §63.1350(m)(5)(ii))

(iv) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances. (40 CFR §63.1350(m)(5)(iii))

(v) Conduct a flow sensor calibration check at least semiannually. (40 CFR §63.1350(m)(5)(iv))

(f) Specific pressure monitoring requirements. (40 CFR §63.1350(m)(6))

(i) If you have an operating limit that requires the use of a pressure measurement device, you must meet the requirements in paragraphs (m)(6)(i) through (vi) of this section of the federal regulation.

(ii) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure. (40 CFR §63.1350(m)(6)(i))

(iii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion. (40 CFR §63.1350(m)(6)(ii))

(iv) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer with a minimum tolerance of 1 percent of the pressure range. (40 CFR §63.1350(m)(6)(iii))

(v) Check pressure tap pluggage daily. (40 CFR §63.1350(m)(6)(iv))

(vi) Using a manometer, check gauge calibration quarterly and transducer calibration monthly. (40 CFR §63.1350(m)(6)(v))

(vii) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor. (40 CFR §63.1350(m)(6)(vi))

(g) Specific pH monitoring requirements. (40 CFR §63.1350(m)(7))

(i) If you have an operating limit that requires the use of a pH measurement device, you must meet the requirements in paragraphs (m)(7)(i) through (iii) of this section of the federal regulation.

(ii) Locate the pH sensor in a position that provides a representative measurement of wet scrubber or tray tower effluent pH. (40 CFR §63.1350(m)(7)(i))

(iii) Ensure the sample is properly mixed and representative of the fluid to be measured. (40 CFR §63.1350(m)(5)(ii))

(iv) Check the pH meter's calibration on at least two points every 8 hours of process operation. (40 CFR §63.1350(m)(5)(iii))

(h) Mass Flow Rate (for Sorbent Injection) Monitoring Requirements. (40 CFR §63.1350(m)(9))

If you have an operating limit that requires the use of equipment to monitor sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (m)(9)(i) through (iii) of this section of the federal regulation. These requirements also apply to the sorbent injection equipment of a dry scrubber.

(i) Locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate. (40 CFR §63.1350(m)(9)(i))

(ii) Install and calibrate the device in accordance with manufacturer's procedures and specifications. (40 CFR §63.1350(m)(9)(ii))

(iii) At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications. (40 CFR §63.1350(m)(9)(iii))

(i) Bag leak detection monitoring requirements. (40 CFR §63.1350(m)(10))

(i) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a BLDS as specified in paragraphs (m)(10)(i) through (viii) of this section of the federal regulation.

(ii) You must install and operate a BLDS for each exhaust stack of the fabric filter. (40 CFR §63.1350(m)(10)(i))

(iii) Each BLDS must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA-454/R-98-015, September 1997. (40 CFR §63.1350(m)(10)(ii))

(iv) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 or fewer milligrams per actual cubic meter. (40 CFR §63.1350(m)(10)(iii))

(v) The BLDS sensor must provide output of relative or absolute PM loadings. (40 CFR §63.1350(m)(10)(iv))

(vi) The BLDS must be equipped with a device to continuously record the output signal from the sensor. (40 CFR §63.1350(m)(10)(v))

(vii) The BLDS must be equipped with an alarm system that will alert an operator automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located such that the alert is detected and recognized easily by an operator. (40 CFR §63.1350(m)(10)(vi))

(viii) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a BLDS must be installed in each baghouse compartment or cell. (40 CFR §63.1350(m)(10)(vii))

(ix) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors. (40 CFR §63.1350(m)(10)(viii))

(j) For each BLDS, the owner or operator must initiate procedures to determine the cause of every alarm within 8 hours of the alarm. The owner or operator must alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following: (40 CFR §63.1350(m)(11))

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions; (40 CFR §63.1350(m)(11)(i))

(ii) Sealing off defective bags or filter media; (40 CFR §63.1350(m)(11)(ii))

(iii) Replacing defective bags or filter media or otherwise repairing the control device; (40 CFR §63.1350(m)(11)(iii))

(iv) Sealing off a defective fabric filter compartment; (40 CFR §63.1350(m)(11)(iv))

(v) Cleaning the BLDS probe or otherwise repairing the BLDS; (40 CFR §63.1350(m)(11)(v))or

(vi) Shutting down the process producing the PM emissions. (40 CFR §63.1350(m)(11)(vi))

10) Continuous Flow Rate Monitoring System. (40 CFR §63.1350(n))

You must install, operate, calibrate, and maintain instruments, according to the requirements in paragraphs (n)(1) through (10) of this section of the federal regulation, for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit and that is required to be monitored by a CEMS.

(a) You must install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the mercury CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate. (40 CFR §63.1350(n)(1))

(b) The flow rate monitoring system must be designed to measure the exhaust flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust flow rate. (40 CFR §63.1350(n)(2))

(c) The flow rate monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (n)(2) of this section of the federal regulation. (40 CFR §63.1350(n)(4))

(d) The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system must be compatible with the output signal of the flow rate sensors used in the monitoring system. (40 CFR §63.1350(n)(5))

(e) The flow rate monitoring system must be designed to complete a minimum of one cycle of operation for each successive 15-minute period. (40 CFR §63.1350(n)(6))

(f) The flow rate sensor must have provisions to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in Appendix C to Part 60 of this chapter for a discussion of CD). (40 CFR §63.1350(n)(7))

(i) Conduct the CD tests at two reference signal levels, zero (e.g., 0 to 20 percent of span) and upscale (e.g., 50 to 70 percent of span). (40 CFR §63.1350(n)(7)(i))

(ii) The absolute value of the difference between the flow monitor response and the reference signal must be equal

to or less than 3 percent of the flow monitor span. (40 CFR §63.1350(n)(7)(ii))

(g) You must perform an initial relative accuracy test of the flow rate monitoring system according to Section 8.2 of Performance Specification 6 of Appendix C to Part 60 of the chapter with the exceptions in paragraphs (n)(8)(i) and (n)(8)(ii) of this section of the federal regulation. (40 CFR §63.1350(n)(8))

(i) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system. (40 CFR §63.1350(n)(8)(i))

(ii) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data. (40 CFR §63.1350(n)(8)(ii))

(h) You must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in paragraph (n)(8). (40 CFR §63.1350(n)(9))

(i) You must operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). (40 CFR §63.1350(n)(10))

11) Development and Submittal (Upon Request) of Monitoring Plans. If you demonstrate compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, you must develop a site-specific monitoring plan[165] according to the requirements in paragraphs (p)(1) through (4) of this section of the federal regulation. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under paragraph (o) of this section of the federal regulation and 40 CFR §63.8(f). If you use a BLDS, you must also meet the requirements specified in paragraph (p)(5) of this section of the federal regulation. (40 CFR §63.1350(p))

[165] The company submitted a revised Operations and Maintenance plan titled Revision 16 on September 14, 2015 and dated September 2015 the previous plan was titled Revision 14 and dated February 2011.

(a) For each CMS required in this section, you must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (p)(1)(i) through (iii) of this section of the federal regulation. You must submit this site-specific monitoring plan, if requested, at least 30 days before your initial performance evaluation of your CMS. (40 CFR §63.1350(p)(1))

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (40 CFR §63.1350(p)(1)(i))

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; (40 CFR §63.1350(p)(1)(ii)) and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations). (40 CFR §63.1350(p)(1)(iii))

(b) In your site-specific monitoring plan, you must also address paragraphs (p)(2)(i) through (iii) of this section of the federal regulation. (40 CFR §63.1350(p)(2))

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR §63.8(c)(1), (c)(3), and (c)(4)(ii); (40 CFR §63.1350(p)(2)(i))

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR §63.8(d); (40 CFR §63.1350(p)(2)(ii)) and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §63.10(c), (e)(1), and (e)(2)(i). (40 CFR §63.1350(p)(2)(iii))

(c) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. (40 CFR §63.1350(p)(3))

(d) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. (40 CFR §63.1350(p)(4))

(e) BLDS Monitoring Plan. (40 CFR §63.1350(p)(5))

Each monitoring plan must describe the items in paragraphs (p)(5)(i) through (v) of this section of the federal regulation. At a minimum, you must retain records related to the site-specific monitoring plan and information discussed in paragraphs (m)(1) through (4), (m)(10) and (11) of this section of the federal regulation for a period of 5 years, with at least the first 2 years on-site;

(i) Installation of the BLDS; (40 CFR §63.1350(p)(5)(i))

(ii) Initial and periodic adjustment of the BLDS, including how the alarm set-point will be established; (40 CFR §63.1350(p)(5)(ii))

(iii) Operation of the BLDS, including quality assurance procedures; (40 CFR §63.1350(p)(5)(iii))

(iv) How the BLDS will be maintained, including a routine maintenance schedule and spare parts inventory list; (40 CFR §63.1350(p)(5)(iv))

(v) How the BLDS output will be recorded and stored. (40 CFR §63.1350(p)(5)(v))

iii. Recordkeeping requirements: (40 CFR §63.1355)

1) The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63 Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. (40 CFR §63.1355(a))

2) The owner or operator of an affected source shall maintain the following relevant records: (40 CFR §63.10(b)(2) as referenced by 40 CFR §63.1355(b))

(a) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment); (40 CFR §63.10(b)(2)(i) as referenced by 40 CFR §63.1355(b))

(b) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown,

and malfunction plan (see 40 CFR §63.6(e)(3)); (40 CFR §63.10(b)(2)(iv) as referenced by 40 CFR §63.1355(b))

(c) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see 40 CFR §63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other after form of recordkeeping, in order to minimize the recordkeeping burden for conforming events); (40 CFR §63.10(b)(2)(v) as referenced by 40 CFR §63.1355(b))

(d) All results of performance tests, and opacity and visible emission observations; (40 CFR §63.10(b)(2)(viii) as referenced by 40 CFR §63.1355(b))

(e) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations; (40 CFR §63.10(b)(2)(ix) as referenced by 40 CFR §63.1355(b))

3) The owner or operator shall maintain the following records: (40 CFR §63.1355(b)):

(a) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9; (40 CFR §63.1355(b)(1)):

(b) All records of applicability determination, including supporting analyses; and (40 CFR §63.1355(b)(2)):

(c) If the owner or operator has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. (40 CFR §63.1355(b)(3)):

4) In addition to the recordkeeping requirements in paragraph (b) of this section of the Federal Regulation, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR §63.10(c). (40 CFR §63.1355(c))

5) The owner or operator shall keep records of the daily clinker production rates and kiln feed rates. (40 CFR §63.1355(e))

6) The owner or operator shall keep records of the date, time and duration of each startup or shutdown period for any affected

source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period. (40 CFR §63.1355(f))

7) The owner or operator shall keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. (40 CFR §63.1355(g)(1))

8) The owner or operator shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §63.1355(g)(2))

9) For each exceedance from an emissions standard or established operating parameter limit, the owner or operator shall keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions. (40 CFR §63.1355(h))

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports as required by General Condition 14.

i. For Dioxins and Furans,

1) Emission unit ID number and emission point ID number

2) Time, date, temperature, and the standard for each three hour period where the temperature exceeded the limits

ii. Notification requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1353)

1) The notification provisions of 40 CFR §part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section of the federal regulation for that notification. (40 CFR §63.1353(a))

2) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in 40 CFR §63.9 as follows: (40 CFR §63.1353(b))

(a) Initial notifications as required by 40 CFR §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR §part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by 40 CFR §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification. (40 CFR §63.1353(b)(1))

(b) Notification of performance tests, as required by 40 CFR §63.7 and 63.9(e). (40 CFR §63.1353(b)(2))

(c) Notification of opacity and visible emission observations required by 40 CFR §63.1349 in accordance with 40 CFR §63.6(h)(5) and 63.9(f). (40 CFR §63.1353(b)(3))

(d) Notification, as required by 40 CFR §63.9(g), of the date that the continuous emission monitor performance evaluation required by 40 CFR §63.8(e) is scheduled to begin. (40 CFR §63.1353(b)(4))

(e) Notification of compliance status, as required by 40 CFR §63.9(h). (40 CFR §63.1353(b)(5))

(f) Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, notify the appropriate permitting agency of the planned performance tests. The notification requirements of 40 CFR §63.7(b) and 63.9(e) do not apply to retesting required for exceedances under this subpart. (40 CFR §63.1353(b)(6))

iii. Reporting requirements in 40 CFR 63 Subpart LLL. (40 CFR §63.1354)

1) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section of the federal regulation for that report. (40 CFR §63.1354(a))

2) The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the

general provisions of this part 63, subpart A as follows: (40 CFR §63.1354(b))

(a) As required by 40 CFR §63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status. (40 CFR §63.1354(b)(1))

(b) As required by 40 CFR §63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by 40 CFR §63.1349. (40 CFR §63.1354(b)(2))

(c) As required by 40 CFR §63.10(d)(4), the owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 CFR §63.6(i) shall submit such reports by the dates specified in the written extension of compliance. (40 CFR §63.1354(b)(3))

(d) As required by 40 CFR §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 CFR §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test. (40 CFR §63.1354(b)(6))

(e) As required by 40 CFR §63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40 CFR §63.7 and described in 40 CFR §63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under 40 CFR §63.8(e). (40 CFR §63.1354(b)(7))

(f) As required by 40 CFR §63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit. (40 CFR §63.1354(b)(8))

(g) The owner or operator shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML

schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in § 63.10(e)(3)(vi). In addition, the summary report shall include: (40 CFR §63.1354(b)(9))

(i) All exceedances of maximum control device inlet gas temperature limits specified in 40 CFR §63.1346(a) and (b); (40 CFR §63.1354(b)(9)(i))

(ii) Notification of any failure to calibrate thermocouples and other temperature sensors as required under 40 CFR §63.1350(g)(1)(iii) of this subpart; and (40 CFR §63.1354(b)(9)(ii))

(iii) Notification of any failure to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under 40 CFR § 63.1346(c)(2). (40 CFR §63.1354(b)(9)(iii))

(iv) Notification of any failure to conduct any combustion system component inspections conducted within the reporting period as required under 40 CFR §63.1347(a)(3). (40 CFR §63.1354(b)(9)(iv))

(v) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347(a). (40 CFR §63.1354(b)(9)(v))

(vi) For each PM CPMS, HCl, Hg, and THC CEMS, D/F temperature monitoring system, or Hg sorbent trap monitoring system, within 60 days after the reporting periods, you must report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems. (40 CFR §63.1354(b)(9)(vi))

(vii) In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance

tests and the results of those actions. (40 CFR §63.1354(b)(9)(vii))

(viii) Within 60 days after the date of completing each CEMS performance evaluation test as defined in 40 CFR §63.2, you must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (b)(9) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR §63.13. (40 CFR §63.1354(b)(9)(viii))

(ix) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (40 CFR §63.1354(b)(9)(ix))

(x) All reports required by this subpart not subject to the requirements in paragraphs (b)(9) introductory text and (b)(9)(viii) of this section must be sent to the Administrator at the appropriate address listed in 40 CFR §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (b)(9) introductory text and (b)(9)(viii) of this section in paper format. (40 CFR §63.1354(b)(9)(x))

(h) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report. (40 CFR §63.1354(b)(10))

3) Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the owner or operator shall report the failure in the semi-annual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction. (40 CFR §63.1354(c))

S4. **Testing** (Regulation 2.16, section 4.3.1)

a. **PM/ HAP/40 CFR §Part 63 Subpart LLL**

i. Performance testing requirements. (40 CFR §63.1349)

1) You must document performance test results in complete test reports that contain the information required by paragraphs (a)(1) through (10) of this section of the federal regulation, as well as all other relevant information. As described in 40 CFR §63.7(c)(2)(i), you must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing. For purposes of determining exhaust gas flow rate to the atmosphere from an alkali bypass stack or a coal mill stack, you must either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in paragraphs 40 CFR §63.1350(n)(1) through (10) of this subpart or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the alkali bypass stack or coal mill stack, you may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (40 CFR §63.1349(a))

(a) A brief description of the process and the air pollution control system; (40 CFR §63.1349(a)(1))

(b) Sampling location description(s); (40 CFR §63.1349(a)(2))

(c) A description of sampling and analytical procedures and any modifications to standard procedures; (40 CFR §63.1349(a)(3))

(d) Test results; (40 CFR §63.1349(a)(4))

(e) Quality assurance procedures and results; (40 CFR §63.1349(a)(5))

(f) Records of operating conditions during the performance test, preparation of standards, and calibration procedures; (40 CFR §63.1349(a)(6))

(g) Raw data sheets for field sampling and field and laboratory analyses; (40 CFR §63.1349(a)(7))

(h) Documentation of calculations; (40 CFR §63.1349(a)(8))

(i) All data recorded and used to establish parameters for monitoring; (40 CFR §63.1349(a)(9)) and

(j) Any other information required by the performance test method. (40 CFR §63.1349(a)(10))

2) PM emissions tests. (40 CFR §63.1349(b)(1))

The owner or operator of a kiln and clinker cooler subject to limitations on PM emissions shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS).

(a) For your PM CPMS, you will establish a site-specific operating limit. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You will use the PM CPMS to demonstrate continuous compliance with your operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR §63.1349(b)(1)(i))

(i) Your PM CPMS must provide a 4-20 milliamp or digital signal output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or the

monitors digital equivalent. (40 CFR §63.1349(b)(1)(i)(A))

(ii) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to three times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to three times your allowable emission limit. (40 CFR §63.1349(b)(1)(i)(B))

(iii) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding Method 5I test runs). (40 CFR §63.1349(b)(1)(i)(C))

(b) Determine your operating limit as specified in paragraphs (b)(1)(iii) through (iv) of this section of the federal regulation. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR §63.1349(b)(1)(ii))

(c) If the average of your three Method 5 or 5I compliance test runs is below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or 5I compliance test with the procedures in (b)(1)(iii)(A) through (D) of this section of the federal regulation. (40 CFR §63.1349(b)(1)(iii))

(i) Determine your PM CPMS instrument zero output with one of the following procedures: (40 CFR §63.1349(b)(1)(iii)(A))

(A) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench. (40 CFR §63.1349(b)(1)(iii)(A)(1))

(B) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air. (40 CFR §63.1349(b)(1)(iii)(A)(2))

(C) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept. (40 CFR §63.1349(b)(1)(iii)(A)(3))

(D) If none of the steps in paragraphs (b)(1)(iii)(A)(1) through (3) of this section of the federal regulation are possible, you must use a zero output value provided by the manufacturer. (40 CFR §63.1349(b)(1)(iii)(A)(4))

(ii) Determine your PM CPMS instrument average in milliamps or digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 3.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1$$

Equation 3

Where:

X_1 = The PM CPMS data points for the three runs constituting the performance test.

Y_1 = The PM concentration value for the three runs constituting the performance test.

n = The number of data points.

(40 CFR §63.1349(b)(1)(iii)(B))

(iii) With your instrument zero expressed in milliamps or digital equivalent, your three run average PM CPMS milliamp or digital equivalent value, and your three run PM compliance test average, determine a relationship of lb/ton-clinker per milliamp or digital equivalent value with Equation 4.

$$R = \frac{Y_1}{(X_1 - z)}$$

Equation 4

Where:

R = The relative lb/ton-clinker per milliamp or digital equivalent for your PM CPMS.

Y_1 = The three run average lb/ton-clinker PM concentration.

X_1 = The three run average milliamp or digital equivalent output from your PM CPMS.

z = The milliamp or digital equivalent of your instrument zero determined from (b)(1)(iii)(A).

(40 CFR §63.1349(b)(1)(iii)(C))

(iv) Determine your source specific 30-day rolling average operating limit using the lb/ton-clinker per milliamp or digital equivalent value from Equation 4 in Equation 5, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_1 = z + (0.75(L))/R$$

Equation 5

Where:

O_l = The operating limit for your PM CPMS on a 30-day rolling average, in milliamps or digital equivalent.

L = Your source emission limit expressed in lb/ton clinker.

z = Your instrument zero in milliamps, or digital equivalent determined from (b)(1)(iii)(A).

R = The relative lb/ton-clinker per milliamp, or digital equivalent, for your PM CPMS, from Equation 4.

(40 CFR §63.1349(b)(1)(iii)(D))

(d) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or digital equivalent output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 6.

(i)

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1$$

Equation 6

Where:

X_1 = The PM CPMS data points for all runs i.

n = The number of data points.

O_h = Your site specific operating limit, in milliamps or digital equivalent.

(40 CFR §63.1349(b)(1)(iv))

(e) To determine continuous operating compliance, you must record the PM CPMS output data for all periods when the process is operating, and use all the PM CPMS data for calculations when the source is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 7 to determine the 30 kiln operating day average.

$$30 kiln\ operating\ day\ average = \frac{\sum_{i=1}^{n} Hpv_i}{n}$$

Equation 7

Where:

Hpv_i = The hourly parameter value for hour i.

n = The number of valid hourly parameter values collected over 30 kiln operating days.

(40 CFR §63.1349(b)(1)(v))

(f) For each performance test, conduct at least three separate test runs each while the mill is on and mill is off, under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run

to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs, including applicable sources as required by (b)(1)(viii), to determine compliance. You need not determine the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. (40 CFR §63.1349(b)(1)(vi))

(g) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run. (40 CFR §63.1349(b)(1)(vii))

(h) When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the main exhaust and alkali bypass and/or inline coal mill must be tested simultaneously and the combined emission rate of PM from the kiln and alkali bypass and/or inline coal mill must be computed for each run using Equation 8 of this section of the federal regulation.

$$E_c = \frac{E_K + E_B + E_C}{P}$$

Equation 8

Where:

E_{Cm} = Combined hourly emission rate of PM from the kiln and bypass stack and/or inline coal mill, lb/ton of kiln clinker production.

E_K = Hourly emissions of PM emissions from the kiln, lb.

E_B = Hourly PM emissions from the alkali bypass stack, lb.

E_C = Hourly PM emissions from the inline coal mill stack, lb.

P = Hourly clinker production, tons.

(40 CFR §63.1349(b)(1)(viii))

(i) The owner or operator of a kiln with an in-line raw mill and subject to limitations on PM emissions shall demonstrate initial compliance by conducting separate performance tests while the raw mill is under normal operating conditions and while the raw mill is not operating, and calculate the time weighted average emissions. The operating limit will then be determined using 63.1349(b)(1)(i) of this section. (40 CFR §63.1349(b)(1)(ix))

3) Opacity tests. (40 CFR §63.1349(b)(2))

If you are subject to limitations on opacity under this subpart, you must conduct opacity tests in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (b)(2)(i) and (ii) of this section of the federal regulation apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating. (40 CFR §63.1349(b)(2))

(a) There are no individual readings greater than 10 percent opacity; (40 CFR §63.1349(b)(2)(i))

(b) There are no more than three readings of 10 percent for the first 1-hour period. (40 CFR §63.1349(b)(2)(ii))

4) D/F Emissions Tests. (40 CFR §63.1349(b)(3))

If you are subject to limitations on D/F emissions under this subpart, you must conduct a performance test using Method 23 of appendix A-7 to part 60 of this chapter. If your kiln or in-line kiln/raw mill is equipped with an alkali bypass, you must conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. You may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating.

(a) Each performance test must consist of three separate runs conducted under representative conditions. The duration of each run must be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf). (40 CFR §63.1349(b)(3)(i))

(b) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and, where applicable, the temperature at the inlet to the alkali bypass PMCD must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report. (40 CFR §63.1349(b)(3)(ii))

(c) Average temperatures must be calculated for each run of the performance test. (40 CFR §63.1349(b)(3)(iii))

(d) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with 40 CFR §63.1346(b), footnote 2. (40 CFR §63.1349(b)(3)(iv))

(i) If sorbent injection is used for D/F control, you must record the rate of sorbent injection to the kiln exhaust, and where applicable, the rate of sorbent injection to the alkali bypass exhaust, continuously during the period of the Method 23 test in accordance with the conditions in 40 CFR §63.1350(m)(9), and include the continuous injection rate record(s) in the performance test report. Determine the sorbent injection rate parameters in accordance with paragraph (b)(3)(vi) of this section of the federal regulation. (40 CFR §63.1349(b)(3)(v)(A))

(ii) Include the brand and type of sorbent used during the performance test in the performance test report. (40 CFR §63.1349(b)(3)(v)(B))

(iii) Maintain a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the performance test. If the carrier gas flow rate is used, determine, record, and maintain a record of the accuracy of the carrier gas flow rate monitoring system according to the procedures in appendix A to part 75 of this chapter. If the carrier gas pressure drop is used, determine, record, and maintain a record of the accuracy of the carrier gas pressure drop monitoring system according to the procedures in 40 CFR §63.1350(m)(6). (40 CFR §63.1349(b)(3)(v)(C))

(e) Calculate the run average sorbent injection rate for each run and determine and include the average of the run average injection rates in the performance test report and determine the applicable injection rate limit in accordance with 40 CFR §63.1346(c)(1). (40 CFR §63.1349(b)(3)(vi))

5) THC emissions test. (40 CFR §63.1349(b)(4))

(a) If you are subject to limitations on THC emissions, you must operate a CEMS in accordance with the requirements in 40 CFR §63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvw and the reference method

(RM) is Method 25A of appendix A to part 60 of this chapter. (40 CFR §63.1349(b)(4)(i))

(b) Use the THC CEMS to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. See 63.1348(a). (40 CFR §63.1349(b)(4)(ii))

(c) If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, you must calculate a kiln-specific THC limit using Equation 9:

$$Cks = \frac{\left(MACT\ Limit * (Qab + Qcm + Qks)\right) - (Qab * Cab) - (Qcm * Ccm)}{Qks}$$

Equation 9

Where:

Cks = Kiln stack concentration (ppmvd).

Qab = Alkali bypass flow rate (volume/hr).

Cab = Alkali bypass concentration (ppmvd).

Qcm = Coal mill flow rate (volume/hr).

Ccm = Coal mill concentration (ppmvd).

Qks = Kiln stack flow rate (volume/hr).

(40 CFR §63.1349(b)(4)(iii))

(d) THC must be measured either upstream of the coal mill or the coal mill stack. (40 CFR §63.1349(b)(4)(iv))

(e) Instead of conducting the performance test specified in paragraph (b)(4)of this section of the federal regulation, you may conduct a performance test to determine emissions of total organic HAP by following the procedures in paragraph (b)(7) of this section of the federal regulation. (40 CFR §63.1349(b)(4)(v))

6) Mercury Emissions Tests. (40 CFR §63.1349(b)(5))

If you are subject to limitations on mercury emissions, you must operate a mercury CEMS or a sorbent trap monitoring system in accordance with the requirements of 40 CFR §63.1350(k). The initial compliance test must be based on the first 30 kiln operating days in which the affected source operates using a mercury CEMS or a sorbent trap monitoring system after the compliance date of the rule. See 40 CFR §63.1348(a).

(a) If you are using a mercury CEMS or a sorbent trap monitoring system, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the

exhaust gas flow rate to the atmosphere according to the requirements in 40 CFR §63.1350(k)(5). (40 CFR §63.1349(b)(5)(i))

(b) Calculate the emission rate using Equation 10 of this section of the federal regulation:

$$E_{30D} = k\frac{\sum_{i=1}^{n} C_i Q_i}{P}$$

Equation 10

Where:

E_{30D} = 30-day rolling emission rate of mercury, lb/MM tons clinker.

C_i = Concentration of mercury for operating hour i, µg/scm.

Q_i = Volumetric flow rate of effluent gas for operating hour i, where Ci and Qi are on the same basis (either wet or dry), scm/hr.

k = Conversion factor, 1 lb/454,000,000 µg.

n = Number of kiln operating hours in the previous 30 kiln operating day period where both C and Qi qualified data are available.

P = Total runs from the previous 30 days of clinker production during the same time period as the mercury emissions measured, million tons.

(40 CFR §63.1349(b)(5)(ii))

7) HCl emissions tests. (40 CFR §63.1349(b)(6))

For a source subject to limitations on HCl emissions you must conduct performance testing by one of the following methods:

(a) If the source is equipped with a wet scrubber, tray tower or dry scrubber, you must conduct performance testing using Method 321 of appendix A to this part unless you have installed a CEMS that meets the requirements 40 CFR §63.1350(l)(1). For kilns with inline raw mills, testing should be conducted for the raw mill on and raw mill off conditions. (40 CFR §63.1349(b)(6)(i)(A))

(b) You must establish site specific parameter limits by using the CPMS required in 40 CFR §63.1350(l)(1). For a wet scrubber or tray tower, measure and record the pressure drop across the scrubber and/or liquid flow rate and pH in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average pressure drop, pH, and average scrubber water flow rate for each sampling run in which the applicable

emissions limit is met. For a dry scrubber, measure and record the sorbent injection rate in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average sorbent injection rate and average sorbent injection rate for each sampling run in which the applicable emissions limit is met. (40 CFR §63.1349(b)(6)(i)(B))

(c) If the source is not controlled by a wet scrubber, tray tower or dry sorbent injection system, you must operate a CEMS in accordance with the requirements of 40 CFR §63.1350(l)(1). See 40 CFR §63.1348(a). (40 CFR §63.1349(b)(6)(ii)(A))

(d) The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of this rule in which the affected source operates using an HCl CEMS. Hourly HCl concentration data must be obtained according to 40 CFR §63.1350(l). (40 CFR §63.1349(b)(6)(ii)(B))

(e) As an alternative to paragraph (b)(6)(i)(B) of this section of the federal regulation, you may choose to monitor SO2 emissions using a CEMS in accordance with the requirements of 40 CFR §63.1350(l)(3). You must establish an SO2 operating limit equal to the average recorded during the HCl stack test where the HCl stack test run result demonstrates compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance. (40 CFR §63.1349(b)(6)(iii))

(f) If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, you must calculate a kiln-specific HCl limit using Equation 11:

$$Cks = \frac{\left(MACT\ Limit * (Qab + Qcm + Qks)\right) - (Qab * Cab) - (Qcm * Ccm)}{Qks}$$

Equation 11

Where:

Cks = Kiln stack concentration (ppmvd).

Qab = Alkali bypass flow rate (volume/hr).

Cab = Alkali bypass concentration (ppmvd).

Qcm = Coal mill flow rate (volume/hr).

Ccm = Coal mill concentration (ppmvd).

Qks = Kiln stack flow rate (volume/hr).

(40 CFR §63.1349(b)(6)(iv))

(g) As an alternative to paragraph (b)(6)(ii) of this section, the owner or operator may demonstrate initial compliance by conducting a performance test using Method 321 of appendix

A to this part. You must also monitor continuous performance through use of an HCl CPMS according to paragraphs (b)(6)(v)(A) through (H) of this section. For kilns with inline raw mills, compliance testing and monitoring HCl to establish the site specific operating limit must be conducted during both raw mill on and raw mill off conditions. (40 CFR §63.1349(b)(6)(v))

(i) For your HCl CPMS, you must establish a 30 kiln operating day site-specific operating limit. If your HCl performance test demonstrates your HCl emission levels to be less than 75 percent of your emission limit (2.25 ppmvd @7% O_2), you must use the time weighted average HCl CPMS indicated value recorded during the HCl compliance test (typically measured as ppmvw HCl at stack O_2 concentration, but a dry, oxygen corrected value would also suffice), your HCl instrument zero output value, and the time weighted average HCl result of your compliance test to establish your operating limit. If your HCl compliance test demonstrates your HCl emission levels to be at or above 75 percent of your emission limit (2.25 ppmvd @7% O_2), you must use the time weighted average HCl CPMS indicated value recorded during the HCl compliance test as your operating limit. You must use the HCl CPMS indicated signal data to demonstrate continuous compliance with your operating limit. (40 CFR §63.1349(b)(6)(v)(A))

(A) Your HCl CPMS must provide a ppm HCl concentration output and the establishment of its relationship to manual reference method measurements must be determined in units of indicated ppm. The instrument signal may be in ppmvw or ppmvd and the signal may be a measurement of HCl at in-stack concentration or a corrected oxygen concentration. Once the relationship between the indicated output of the HCl CPMS and the reference method test results is established, the HCl CPMS instrument measurement basis (ppmvw or ppmvd, or oxygen correction basis) must not be altered. Likewise, any setting that impacts the HCl CPMS indicated HCl response must remain fixed after the site-specific operating limit is set. (40 CFR §63.1349(b)(6)(v)(A)(1))

(B) Your HCl CPMS operating range must be capable of reading HCl concentrations from zero to a level equivalent to 125 percent of the highest expected value during mill off operation. If your HCl CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading an indicated HCl concentration from zero to 10 ppm. (40 CFR §63.1349(b)(6)(v)(A)(2))

(C) During the initial performance test of a kiln with an inline raw mill, or any such subsequent performance test that demonstrates compliance with the HCl limit, record and average the indicated ppm HCl output values from the HCl CPMS for each of the six periods corresponding to the compliance test runs (e.g., average each of your HCl CPMS output values for six corresponding Method 321 test runs). With the average values of the six test runs, calculate the average of the three mill on test runs and the average of the three mill off test runs. Calculate the time weighted result using the average of the three mill on tests and the average of the three mill off tests and the previous annual ratio of mill on/mill off operations. Kilns without an inline raw mill will conduct three compliance tests and calculate the average monitor output values corresponding to these three test runs and not use time weighted values to determine their site specific operating limit. (40 CFR §63.1349(b)(6)(v)(A)(3))

(ii) Determine your operating limit as specified in paragraphs (b)(6)(i) or (iii) of this section. If your HCl performance test demonstrates your HCl emission levels to be below 75 percent of your emission limit, kilns with inline raw mills will use the time weighted average indicated HCl ppm concentration CPMS value recorded during the HCl compliance test, the zero value output from your HCl CPMS, and the time weighted average HCl result of your compliance test to establish your operating limit. Kilns without inline raw mills will not use a time weighted average value to establish their operating limit. If your time weighted HCl compliance

test demonstrates your HCl emission levels to be at or above 75 percent of your emission limit, you will use the time weighted HCl CPMS indicated ppm value recorded during the HCl compliance test to establish your operating limit. Kilns without inline raw mills will not use time weighted compliance test results to make this determination. You must verify an existing operating limit or establish a new operating limit for each kiln, after each repeated performance test. (40 CFR §63.1349(b)(6)(v)(B))

(iii) If the average of your three Method 321 compliance test runs (for kilns without an inline raw mill) or the time weighted average of your six Method 321 compliance test runs (for an kiln with an inline raw mill) is below 75 percent of your HCl emission limit, you must calculate an operating limit by establishing a relationship of the average HCl CPMS indicated ppm to the Method 321 test average HCl concentration using the HCl CPMS instrument zero, the average HCl CPMS indicated values corresponding to the three (for kilns without inline raw mills) or time weighted HCl CPMS indicated values corresponding to the six (for kilns with inline raw mills) compliance test runs, and the average HCl concentration (for kilns without raw mills) or average time weighted HCl concentration (for kilns with inline raw mills) from the Method 321 compliance test with the procedures in paragraphs (b)(6)(v)(C)(1) through (5) of this section. (40 CFR §63.1349(b)(6)(v)(C))

(A) Determine your HCl CPMS instrument zero output with one of the following procedures: (40 CFR §63.1349(b)(6)(v)(C)(1))

i) Zero point data for in situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench. (40 CFR §63.1349(b)(6)(v)(C)(1)(i))

ii) If neither of the steps in paragraphs (b)(6)(v)(C)(1)(i) through (ii) of this section are possible, you must use a zero output value provided by the manufacturer. (40 CFR §63.1349(b)(6)(v)(C)(1)(ii))

(B) If your facility does not have an inline raw mill you will determine your HCl CPMS indicated average in HCl ppm, and the average of your corresponding three HCl compliance test runs, using equation 11a.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_i, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_i$$

Equation 11a

Where:

X_i = The HCL CPMS data points for the three runs constituting the performance test.

Y_i = The HCL concentration value for the three runs constituting the performance test.

n = The number of data points.

(40 CFR §63.1349(b)(6)(v)(C)(2))

(C) You will determine your HCl CPMS indicated average in HCl ppm, and the average of your corresponding HCl compliance test runs, using equation 11b. If you have an inline raw mill, use this same equation to calculate a second three-test average for your mill off CPMS and compliance test data.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_i, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_i$$

Equation 11b

Where:

X_i = The HCL CPMS data points for the three runs constituting the performance test.

Y_i = The HCL concentration value for the three runs constituting the performance test.

n = The number of data points.

(40 CFR §63.1349(b)(6)(v)(C)(3))

(D) With your instrument zero expressed in ppm, your average HCl CPMS ppm value, and your HCl compliance test average, determine a relationship of performance test HCl (as ppmvd @7% O_2) concentration per HCl CPMS indicated ppm with Equation 11c.

$$R = \frac{Y_1}{(X_1 - z)}$$

Equation 11c

Where:

R = The relative lb/ton-clinker per milliamp or digital equivalent for your HCL CPMS.

Y_1 = The average HCl concentration as ppmvd @7% O_2 during the performance test.

X_1 = The average indicated ppm output from your HCl CPMS, and

z = The ppm of your instrument zero determined from paragraph (b)(6)(v)(C)(1) of this section.

(40 CFR §63.1349(b)(6)(v)(C)(4))

(E) Determine your source specific 30 kiln operating day operating limit using HC1 CPMS indicated value from Equation 11c in Equation 11d, below. This sets your operating limit at the HC1 CPMS output value corresponding to 75 percent of your emission limit.

$$O_1 = z + (0.75(L))/R$$

Equation 11d

Where:

O_l = The operating limit for your HCl CPMS on a 30-day average, as indicated ppm;

L = 3 ppmvd @7% O_2;

z = Your instrument zero, determined from paragraph (b)(6)(v)(C)(1) of this section ; and

R = The relative performance test concentration per indicated ppm for your HCl CPMS, from Equation 11c.

(40 CFR §63.1349(b)(6)(v)(C)(5))

(iv) If the average of your HCl compliance test runs is at or above 75 percent of your HCl emission limit (2.25 ppmvd@7% O_2) you must determine your operating limit by averaging the HCl CPMS output corresponding to your HCl performance test runs that demonstrate compliance with the emission limit using Equation 11e.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i$$

Equation 11e

Where:

X_i = The HCl CPMS data points for all runs i.

n = The number of data points.

O_h = Your site specific HCl CPMS operating limit, in indicated ppm.

(40 CFR §63.1349(b)(6)(v)(D))

(v) To determine continuous compliance with the operating limit, you must record the HCl CPMS indicated output data for all periods when the process is operating and use all the HCl CPMS data for calculations when the source is not out of control. You must demonstrate continuous compliance with the operating limit by using all quality-assured hourly average data collected by the HCl CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 kiln operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 11f to determine the 30 kiln operating day average.

$$30 kiln\ operating\ day\ average = \frac{\sum_{i=1}^{n} Hpv_i}{n}$$

Equation 11f

Where:

30 kiln operating day parameter average = The average indicated value for the CPMS parameter over the previous 30 days of kiln operation;

Hpv_i = The hourly parameter value for hour i; and

n = The number of valid hourly parameter values collected over 30 kiln operating days.

(40 CFR §63.1349(b)(6)(v)(E))

(vi) If you exceed the 30 kiln operating day operating limit, you must evaluate the control system operation and re-set the operating limit. (40 CFR §63.1349(b)(6)(v)(F))

(vii) The owner or operator of a kiln with an inline raw mill and subject to limitations on HCl emissions must demonstrate initial compliance by conducting separate performance tests while the raw mill is on and while the raw mill is off. Using the fraction of time the raw mill is on calculate your HCl CPMS limit as a weighted average of the HCl CPMS indicated values measured during raw mill on and raw mill off compliance testing using Equation 11g.

$$R = (b * t) + \left(a * (1 - t)\right)$$

Equation 11g

Where:

R = HCl CPMS operating limit;

b = Average indicated HCl CPMS value during mill on operations, ppm;

t = Fraction of operating time with mill on;

a = Average indicated HCl CPMS value during mill off operations ppm; and

(1-t) = Fraction of operating time with mill off.

(40 CFR §63.1349(b)(6)(v)(G))

(viii) Paragraph (b)(6)(v) of this section expires on July 25, 2017 at which time the owner or operator must demonstrate compliance with paragraphs (b)(6)(i), (ii), or (iii). (40 CFR §63.1349(b)(6)(v)(H))

8) Total Organic HAP Emissions Tests. (40 CFR §63.1349(b)(7))

Instead of conducting the performance test specified in paragraph (b)(4) of this section of the federal regulation, you may conduct a performance test to determine emissions of total organic HAP by following the procedures in paragraphs (b)(7)(i) through (v) of this section of the federal regulation.

(a) Use Method 320 of appendix A to this part, Method 18 of Appendix A of part 60, ASTM D6348-03 or a combination to determine emissions of total organic HAP. Each performance test must consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40

CFR §63.7(e). Each run must be conducted for at least 1 hour. (40 CFR §63.1349(b)(7)(i))

(b) At the same time that you are conducting the performance test for total organic HAP, you must also determine a site-specific THC emissions limit by operating a THC CEMS in accordance with the requirements of 40 CFR §63.1350(j). The duration of the performance test must be at least 3 hours and the average THC concentration (as calculated from the recorded output) during the 3-hour test must be calculated. You must establish your THC operating limit and determine compliance with it according to paragraphs (b)(7)(vii)through (viii) of this section of the federal regulation. It is permissible to extend the testing time of the organic HAP performance test if you believe extended testing is required to adequately capture THC variability over time. (40 CFR §63.1349(b)(7)(ii))

(c) If your source has an in-line kiln/raw mill you must use the fraction of time the raw mill is on and the fraction of time that the raw mill is off and calculate this limit as a weighted average of the THC levels measured during three raw mill on and three raw mill off tests. (40 CFR §63.1349(b)(7)(iii))

(d) If your organic HAP emissions are below 75 percent of the organic HAP standard and you determine your operating limit with paragraph (b)(7)(vii) of this section of the federal regulation your THC CEMS must be calibrated and operated on a measurement scale no greater than 180 ppmvw, as carbon, or 60 ppmvw as propane. (40 CFR §63.1349(b)(7)(iv))

(e) If your kiln has an inline coal mill and/or an alkali bypass with separate stacks, you are required to measure and account for oHAP emissions from their separate stacks. You are required to measure oHAP at the coal mill inlet or outlet and you must also measure oHAP at the alkali bypass outlet. You must then calculate a flow weighted average oHAP concentration for all emission sources including the inline coal mill and the alkali bypass. (40 CFR §63.1349(b)(7)(v))

(f) Your THC CEMS measurement scale must be capable of reading THC concentrations from zero to a level equivalent to two times your highest THC emissions average determined during your performance test, including mill on or mill off operation. Note: This may require the use of a dual range instrument to meet this requirement and paragraph (b)(7)(iv) of this section of the federal regulation. (40 CFR §63.1349(b)(7)(vi))

(g) Determine your operating limit as specified in paragraphs (b)(7)(vii) and (ix) of this section of the federal regulation. If

your organic HAP performance test demonstrates your average organic HAP emission levels are below 75 percent of your emission limit (9 ppmv) you will use the average THC value recorded during the organic HAP performance test, and the average total organic HAP result of your performance test to establish your operating limit. If your organic HAP compliance test results demonstrate that your average organic HAP emission levels are at or above 75 percent of your emission limit, your operating limit is established as the average THC value recorded during the organic HAP performance test. You must establish a new operating limit after each performance test. You must repeat the performance test no later than 30 months following your last performance test and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (40 CFR §63.1349(b)(7)(vii))

(h) If the average organic HAP results for your three Method 18 and/or Method 320 performance test runs are below 75 percent of your organic HAP emission limit, you must calculate an operating limit by establishing a relationship of THC CEMS signal to the organic HAP concentration using the average THC CEMS value corresponding to the three organic HAP compliance test runs and the average organic HAP total concentration from the Method 18 and/or Method 320 performance test runs with the procedures in (b)(7)(vii)(A) and (B) of this section of the federal regulation. (40 CFR §63.1349(b)(7)(viii))

(i) Determine the THC CEMS average values in ppmvw, and the average of your corresponding three total organic HAP compliance test runs, using Equation 12.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1$$

Equation 12

Where:

$\bar{x}$ = The THC CEMS average values in ppmvw.

X_i= The THC CEMS data points for all three runs i.

Y_i= The sum of organic HAP concentrations for test runs i. and

n = The number of data points.

(40 CFR §63.1349(b)(7)(viii)(A))

(ii) You must use your three run average THC CEMS value and your three run average organic HAP concentration from your three Method 18 and/or Method 320

compliance tests to determine the operating limit. Use equation 13 to determine your operating limit in units of ppmvw THC, as propane.

$$T_1 = \left(\frac{9}{Y_1}\right) * X_1$$

Equation 13

Where:

T_l = The 30-day operating limit for your THC CEMS, ppmvw.

Y_1 = The average organic HAP concentration from Eq. 12, ppmvd.

X_1 = The average THC CEMS concentration from Eq. 12, ppmvw.

(40 CFR §63.1349(b)(7)(viii)(B))

(i) If the average of your three organic HAP performance test runs is at or above 75 percent of your organic HAP emission limit, you must determine your operating limit using Equation 14 by averaging the THC CEMS output values corresponding to your three organic HAP performance test runs that demonstrate compliance with the emission limit. If your new THC CEMS value is below your current operating limit, you may opt to retain your current operating limit, but you must still submit all performance test and THC CEMS data according to the reporting requirements in paragraph (d)(1) of this section of the federal regulation.

$$T_h = \frac{1}{n}\sum_{i=1}^{n} X_1$$

Equation 14

Where:

X_1 = The THC CEMS data points for all runs i.

n = The number of data points.

T_h = Your site specific operating limit, in ppmvw THC.

(40 CFR §63.1349(b)(7)(vix))

(j) If your kiln has an inline kiln/raw mill, you must conduct separate performance tests while the raw mill is operating (“mill on”) and while the raw mill is not operating (“mill off”). Using the fraction of time the raw mill is on and the fraction of time that the raw mill is off, calculate this limit as a weighted

average of the THC levels measured during raw mill on and raw mill off compliance testing with Equation 15.

$$R = (y * t) + (x * (1 - t))$$

Equation 15

Where:

R = Operating limit as THC, ppmvw.

y = Average THC CEMS value during mill on operations, ppmvw.

t = Percentage of operating time with mill on.

x = Average THC CEMS value during mill off operations, ppmvw.

(1-t) = Percentage of operating time with mill off.

(40 CFR §63.1349(b)(7)(x))

(k) To determine continuous compliance with the THC operating limit, you must record the THC CEMS output data for all periods when the process is operating and the THC CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the THC CEMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 16 to determine the 30 kiln operating day average.

$$30 kiln\ operating\ day = \frac{\sum_{i=1}^{n} Hpv_i}{n}$$

Equation 16

Where:

Hpv_i = The hourly parameter value for hour i, ppmvw.

n = The number of valid hourly parameter values collected over 30 kiln operating days.

(40 CFR §63.1349(b)(7)(xi))

(l) Use EPA Method 18 or Method 320 of appendix A to part 60 of this chapter to determine organic HAP emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If your source has an in-line kiln/raw mill you must conduct three separate test runs with the raw mill on, and three separate runs under the

conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. Conduct each Method 18 test run to collect a minimum target sample equivalent to three times the method detection limit. Calculate the average of the results from three runs to determine compliance. (40 CFR §63.1349(b)(7)(xii))

(m) If the THC level exceeds by 10 percent or more your site-specific THC emissions limit, you must (40 CFR §63.1349(b)(7)(xiii))

(i) As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the THC CEMS measurements to within the established value; (40 CFR §63.1349(b)(7)(xiii)(A)) and

(ii) Within 90 days of the exceedance or at the time of the 30 month compliance test, whichever comes first, conduct another performance test to determine compliance with the organic HAP limit and to verify or re-establish your site-specific THC emissions limit. (40 CFR §63.1349(b)(7)(xiii)(B))

9) HCl Emissions Tests with SO_2 Monitoring. (40 CFR §63.1349(b)(8))

If you choose to monitor SO_2 emissions using a CEMS to demonstrate HCl compliance, follow the procedures in (b)(8)(i) through (ix) of this section of the federal regulation and in accordance with the requirements of 40 CFR §63.1350(l)(3). You must establish an SO_2 operating limit equal to the average recorded during the HCl stack test. This operating limit will apply only for demonstrating HCl compliance.

(a) Use Method 321 of appendix A to this part to determine emissions of HCl. Each performance test must consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 CFR §63.7(e). Each run must be conducted for at least one hour. (40 CFR §63.1349(b)(8)(i))

(b) At the same time that you are conducting the performance test for HCl, you must also determine a site-specific SO2 emissions limit by operating an SO2 CEMS in accordance with the requirements of 40 CFR §63.1350(l). The duration of the performance test must be three hours and the average SO2 concentration (as calculated from the average output) during the 3-hour test must be calculated. You must establish your SO_2 operating limit and determine compliance with it

according to paragraphs (b)(8)(vii) and (viii)of this section of the federal regulation. (40 CFR §63.1349(b)(8)(ii))

(c) If your source has an in-line kiln/raw mill you must use the fraction of time the raw mill is on and the fraction of time that the raw mill is off and calculate this limit as a weighted average of the SO_2 levels measured during raw mill on and raw mill off testing. (40 CFR §63.1349(b)(8)(iii))

(d) Your SO_2 CEMS must be calibrated and operated according to the requirements of 40 CFR §60.63(f). (40 CFR §63.1349(b)(8)(iv))

(e) Your SO_2 CEMS measurement scale must be capable of reading SO_2 concentrations consistent with the requirements of 40 CFR §60.63(f), including mill on or mill off operation. (40 CFR §63.1349(b)(8)(v))

(f) If your kiln has an inline kiln/raw mill, you must conduct separate performance tests while the raw mill is operating ("mill on") and while the raw mill is not operating ("mill off"). Using the fraction of time the raw mill is on and the fraction of time that the raw mill is off, calculate this limit as a weighted average of the HCl levels measured during raw mill on and raw mill off compliance testing with Equation 17.

$$R = (y * t) + x * (t - 1)$$

Equation 17

Where:

R = Operating limit as SO_2 , ppmvw.

y = Average SO_2 CEMS value during mill on operations, ppmvw.

t = Percentage of operating time with mill on, expressed as a decimal.

x = Average SO_2 CEMS value during mill off operations, ppmvw.

t-1 = Percentage of operating time with mill off, expressed as a decimal.

(40 CFR §63.1349(b)(8)(vi))

(g) If the average of your three HCl compliance test runs is below 75 percent of your HCl emission limit, you may as a compliance alternative, calculate an operating limit by establishing a relationship of SO2 CEMS signal to your HCl concentration corrected to 7 percent O2 by using the SO2 CEMS instrument zero, the average SO2 CEMS values

corresponding to the three compliance test runs, and the average HCl concentration from the HCl compliance test with the procedures in (b)(8)(vii)(A) through (D) of this section. (40 CFR §63.1349(b)(8)(vii))

(i) Determine your SO2 CEMS instrument zero output with one of the following procedures: (40 CFR §63.1349(b)(8)(vii)(A))

(A) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench. (40 CFR §63.1349(b)(8)(vii)(A)(1))

(B) Zero point data for extractive instruments may be obtained by removing the extractive probe from the stack and drawing in clean ambient air. (40 CFR §63.1349(b)(8)(vii)(A)(2))

(C) The zero point may also be established by performing probe-flood introduction of high purity nitrogen or certified zero air free of SO2. (40 CFR §63.1349(b)(8)(vii)(A)(3))

(D) If none of the steps in paragraphs (b)(8)(vii)(A)(1) through (3) of this section are possible, you must use a zero output value provided by the manufacturer. (40 CFR §63.1349(b)(8)(vii)(A)(4))

(ii) Determine your SO_2 CEMS instrument average ppm, and the average of your corresponding three HCl compliance test runs, using equation 18.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1$$

Equation 18

Where:

X_1= The SO_2 CEMS data points for the three runs constituting the performance test.

Y_1= The HCl emission concentration expressed as ppmv corrected to 7 percent O_2 for the three runs constituting the performance test.

n = The number of data points.

(40 CFR §63.1349(b)(8)(vii)(B))

(iii) With your instrument zero expressed in ppmv, your three run average SO_2 CEMS expressed in ppmv, and

your three run HCl compliance test average in ppm corrected to 7 percent O_2, determine a relationship of ppm HCl corrected to 7 percent O_2 per ppm SO_2 with Equation 19.

$$R = \frac{Y_1}{(X_1 - z)}$$

Equation 19

Where:

R = The relative HCl ppmv corrected to 7 percent O_2 per ppm SO_2 for your SO_2 CEMS.

Y_1 = The three run average HCl concentration corrected to 7 percent O_2.

X_1 = The three run average ppm recorded by your SO_2 CEMS.

z = The instrument zero output ppm value.

(40 CFR §63.1349(b)(8)(vii)(C))

(iv) Determine your source specific 30-day rolling average operating limit using ppm HCl corrected to 7 percent O_2 per ppm SO_2 value from Equation 19 in Equation 20, below. This sets your operating limit at the SO_2 CEMS ppm value corresponding to 75 percent of your emission limit.

$$O_1 = z + (0.75(L))/R$$

Equation 20

Where:

O_l = The operating limit for your SO_2 CPMS on a 30-day average, as indicated ppm;

L = Your source HCl emission limit expressed in ppmv corrected to 7 percent O_2;

z = Your instrument zero in ppmv, determined from (1)(i).

R = The relative oxygen corrected ppmv HCl per ppmv SO_2, for your SO_2 CEMS, from Equation 19.

(40 CFR §63.1349(b)(8)(vii)(D))

(h) To determine continuous compliance with the SO2 operating limit, you must record the SO_2 CEMS output data for all periods when the process is operating and the SO2 CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data

collected by the SO_2 CEMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 21 to determine the 30 kiln operating day average.

$$30 kiln\ operating\ day = \frac{\sum_{i=1}^{n} Hpv_i}{n}$$

Equation 21

Where:

Hpv_i = The hourly parameter value for hour i, ppmvw.

n = The number of valid hourly parameter values collected over 30 kiln operating days.

(40 CFR §63.1349(b)(8)(viii))

(i) Use EPA Method 321 of appendix A to part 60 of this chapter to determine HCl emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If your source has an in-line kiln/raw mill you must conduct three separate test runs with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. (40 CFR §63.1349(b)(8)(ix))

(j) If the SO_2 level exceeds by 10 percent or more your site-specific SO2 emissions limit, you must: (40 CFR §63.1349(b)(8)(x))

(i) As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the SO2 CEMS measurements to within the established value; (40 CFR §63.1349(b)(8)(ix)(A)) and

(ii) Within 90 days of the exceedance or at the time of the periodic compliance test, whichever comes first, conduct another performance test to determine compliance with the HCl limit and to verify or re-establish your site-specific SO_2 emissions limit. (40 CFR §63.1349(b)(8)(ix)(B))

ii. Performance test frequency. (40 CFR §63.1349(c))

Except as provided in 40 CFR §63.1348(b), performance tests are required at regular intervals for affected sources that are subject to a dioxin, organic HAP or HCl emissions limit. Performance tests required every 30 months must be

completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS; performance tests required every 12 months must be completed no more than 13 calendar months after the previous performance test.

iii. Performance Test Reporting Requirements. (40 CFR §63.1349(d))

1) You must submit the information specified in paragraphs (d)(1) and (2) of this section of the federal regulation no later than 60 days following the initial performance test. All reports must be signed by a responsible official. (40 CFR §63.1349(d)(1))

(a) The initial performance test data as recorded under paragraph (b) of this section of the federal regulation. (40 CFR §63.1349(d)(1)(i))

(b) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), (7), and (8) of this section of the federal regulation, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test. (40 CFR §63.1349(d)(1)(ii))

2) As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR §63.2, conducted to demonstrate compliance with any standard covered by this subpart, you must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). (40 CFR §63.1349(d)(2))

iv. Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. (40 CFR §63.1349(e))

v. See Appendix E for additional testing requirements.

OPERATING SCENARIO 2. CISWI Kiln

The following sections describe the emission standards, monitoring, recordkeeping, reporting and operational requirements for affected sources when the regulations of 40 CFR 60 Subpart DDDD or the state equivalent (CISWI) are applicable.

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **CO**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the CO emissions to 790 ppmvd corrected to seven percent oxygen (40 CFR §60.2670 and Table 8).

b. **Fuel**

i. While complying with Subpart DDDD, if the owner or operator plans to cease the utilization of solid waste as a fuel and wants to comply with Subpart LLL in lieu of Subpart DDDD, a waste-to-fuel switch is to be implemented. The effective date of the waste-to-fuel switch is the date at least 6 months from the date that solid wastes were last utilized in the kiln. The owner or operator must:

1) Remain in compliance with Subpart DDDD until the effective date of the waste-to-fuel switch. Per 40 CFR §60.2710(a)(2) the owner or operator may choose to remain subject to the provisions of Subpart DDDD rather than Subpart LLL.

2) Provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must address the items listed in 40 CFR §60.2710(a)(4). (See Appendix D of this permit)

3) Begin complying with Subpart LLL on the effective date of the waste-to-fuel switch.

4) Complete all initial compliance demonstrations for Subpart LLL upon becoming subject to Subpart LLL when implementing the waste-to-fuel switch as required in (40 CFR §63.1348(a)).

5) All air pollution control equipment and monitoring systems necessary for compliance with the newly applicable rule must be installed and operational as of the effective date of the waste-to-fuel switch. All monitoring system calibration drift tests and relative accuracy procedures must be performed as of the effective date of the waste-to-fuel switch.

c. **HAP**

i. No owner or operator shall cause to be discharged into the atmosphere from the kiln, any gases which contain Dioxins and Furans (D/F) in excess of:

1) Toxic Equivalency Basis: 0.075 ng/dscm TEQ corrected to seven percent oxygen; or

2) Total Mass Basis: 1.3 ng/dscm corrected to seven percent oxygen (40 CFR §60.2670 Table 8).

ii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the mercury emissions to 0.011 mg/dscm corrected to seven percent oxygen (40 CFR §60.2670 Table 8).

iii. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the cadmium emissions to 0.0014 mg/dscm corrected to seven percent oxygen (40 CFR §60.2670 Table 8).

iv. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the lead emissions to 0.014 mg/dscm corrected to seven percent oxygen (40 CFR §60.2670 Table 8).

v. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the HCl emissions to 3 ppmvd corrected to seven percent oxygen (40 CFR §60.2670 Table 8).

d. **NO_x**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the NO_X emissions to 630 ppmvd corrected to seven percent oxygen (40 CFR §60.2670 and Table 8).

e. **PM**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the filterable PM emissions to 13.5 mg/dscm corrected to seven percent oxygen (40 CFR §60.2670 and Table 8).

f. **SO_2**

i. For the Kiln with preheat tower (K-900/901) the owner or operator shall limit the sulfur dioxide emissions to 600 ppmvd corrected to seven percent oxygen (40 CFR §60.2670 and Table 8).

g. **What are the operator training and qualification requirements? (40 CFR §60.2635)**

i. No CISWI can be operated unless a fully trained and qualified CISWI operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI operator may operate the CISWI directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI operators are temporarily not accessible, you must follow the procedures in § 60.2665. (40 CFR §60.2635(a))

ii. Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph (c) of this section. (40 CFR §60.2635(b))

iii. Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section: (40 CFR §60.2635(c))

1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section: (40 CFR §60.2635(c)(1))

(a) Environmental concerns, including types of emissions; (40 CFR §60.2635(c)(1)(i))

(b) Basic combustion principles, including products of combustion; (40 CFR §60.2635(c)(1)(ii))

(c) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures; (40 CFR §60.2635(c)(1)(iii))

(d) Combustion controls and monitoring; (40 CFR §60.2635(c)(1)(iv))

(e) Operation of air pollution control equipment and factors affecting performance (if applicable); (40 CFR §60.2635(c)(1)(v))

(f) Inspection and maintenance of the incinerator and air pollution control devices; (40 CFR §60.2635(c)(1)(vi))

(g) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions; (40 CFR §60.2635(c)(1)(vii))

(h) Bottom and fly ash characteristics and handling procedures; (40 CFR §60.2635(c)(1)(viii))

(i) Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; (40 CFR §60.2635(c)(1)(ix))

(j) Pollution prevention; and (40 CFR §60.2635(c)(1)(x))

(k) Waste management practices. (40 CFR §60.2635(c)(1)(xi))

2) An examination designed and administered by the instructor. (40 CFR §60.2635(c)(2))

3) Written material covering the training course topics that can serve as reference material following completion of the course. (40 CFR §60.2635(c)(3))

h. **When must the operator training course be completed? (40 CFR §60.2640)**

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section:

i. The final compliance date (Increment 2); (40 CFR §60.2640(a))

ii. Six months after CISWI startup; and (40 CFR §60.2640(b))

iii. Six months after an employee assumes responsibility for operating the CISWI or assumes responsibility for supervising the operation of the CISWI. (40 CFR §60.2640(c))

i. **How do I obtain my operator qualification? (40 CFR §60.2645)**

i. You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2635(b). (40 CFR §60.2645(a))

ii. Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2635(c)(2). (40 CFR §60.2645(b))

j. **How do I maintain my operator qualification? (40 CFR §60.2650)**

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section:

i. Update of regulations; (40 CFR §60.2650(a))

ii. Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling; (40 CFR §60.2650(b))

iii. Inspection and maintenance; (40 CFR §60.2650(c))

iv. Prevention and correction of malfunctions or conditions that may lead to malfunction; and (40 CFR §60.2650(d))

v. Discussion of operating problems encountered by attendees. (40 CFR §60.2645(e))

k. **How do I renew my lapsed operator qualification? (40 CFR §60.2655)**

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section:

i. For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2650; and (40 CFR §60.2655(a))

ii. For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2645(a). (40 CFR §60.2655(b))

l. **What site-specific documentation is required? (40 CFR §60.2660)**

i. Documentation must be available at the facility and readily accessible for all CISWI operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request: (40 CFR §60.2660(a))

1) Summary of the applicable standards under this subpart; (40 CFR §60.2660(a)(1))

2) Procedures for receiving, handling, and charging waste; (40 CFR §60.2660(a)(2))

3) Incinerator startup, shutdown, and malfunction procedures; (40 CFR §60.2660(a)(3))

4) Procedures for maintaining proper combustion air supply levels; (40 CFR §60.2660(a)(4))

5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart; (40 CFR §60.2660(a)(5))

6) Monitoring procedures for demonstrating compliance with the incinerator operating limits; (40 CFR §60.2660(a)(6))

7) Reporting and recordkeeping procedures; (40 CFR §60.2660(a)(7))

8) The waste management plan required under § § 60.2620 through 60.2630; (40 CFR §60.2660(a)(8))

9) Procedures for handling ash; and (40 CFR §60.2660(a)(9))

10) A list of the wastes burned during the performance test. (40 CFR §60.2660(a)(10))

ii. You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator: (40 CFR §60.2660(b))

1) The initial review of the information listed in paragraph (a) of this section must be conducted by the later of the three dates specified in paragraphs (b)(1)(i) through (iii) of this section: (40 CFR §60.2660(b)(1))

(a) The final compliance date (Increment 2); (40 CFR §60.2660(b)(1)(i))

(b) Six months after CISWI startup; and (40 CFR §60.2660(b)(1)(ii))

(c) Six months after being assigned to operate the CISWI. (40 CFR §60.2660(b)(1)(iii))

2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted no later than 12 months following the previous review. (40 CFR §60.2660(b)(2))

iii. You must also maintain the information specified in paragraphs (c)(1) through (3) of this section: (40 CFR §60.2660(c))

1) Records showing the names of CISWI operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews; (40 CFR §60.2660(c)(1))

2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications; and (40 CFR §60.2660(c)(2))

3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours. (40 CFR §60.2660(c)(3))

m. **What if all the qualified operators are temporarily not accessible? (40 CFR §60.2665)**

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible:

i. When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI may be operated by other plant personnel familiar with the operation of the CISWI who have completed a review of the information specified in § 60.2660(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2770; (40 CFR §60.2665(a))

ii. When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section: (40 CFR §60.2665(b))

1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible; and (40 CFR §60.2665(b)(1))

2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI is disapproved, the CISWI may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section: (40 CFR §60.2665(b)(2))

(a) A qualified operator is accessible as required under § 60.2635(a); and (40 CFR §60.2665(b)(2)(i))

(b) You notify the Administrator that a qualified operator is accessible and that you are resuming operation. (40 CFR §60.2665(b)(2)(ii))

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the required records for a minimum of five (5) years and make the records readily available to the District upon request. The calendar date of each record must be maintained. (40 CFR §60.2740)

a. **CO**

i. If a control device is utilized to comply with the emission limitations of 40 CFR §60.2670, operating limits for control device parameters must be established as described in 40 CFR §60.2675. (See Appendix D of this permit)

ii. The owner or operator must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system (40 CFR §60.2675(b)).

iii. Operating parameters must be monitored as described in 40 CFR §60.2730. (See Appendix D of this permit)

iv. Records of operating parameters, as applicable, must be maintained in accordance with 40 CFR §60.2740. (See Appendix D of this permit)

v. Records must be retained of the dates and times for which data show a deviation from operating parameter limits with a description, reasons and corrective actions notes (40 CFR §60.2740(e)).

b. **HAP**

i. For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR §part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system (40 CFR §60.2730(g)).

ii. If a control device is utilized to comply with the emission limitations of 40 CFR §60.2670, operating limits for control device parameters must be established as described in 40 CFR §60.2675. (See Appendix D of this permit)

iii. The owner or operator must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system (40 CFR §60.2675(b)).

iv. Operating parameters must be monitored as described in 40 CFR §60.2730.

(See Appendix D of this permit)

v. Records of operating parameters, as applicable, must be maintained in accordance with 40 CFR §60.2740. (See Appendix D of this permit)

vi. Records must be retained of the dates and times for which data show a deviation from operating parameter limits with a description, reasons and corrective actions notes (40 CFR §60.2740(e)).

c. **NO_x**

i. If a control device is utilized to comply with the emission limitations of 40 CFR §60.2670, operating limits for control device parameters must be established as described in 40 CFR §60.2675. (See Appendix D of this permit)

ii. The owner or operator must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system (40 CFR §60.2675(b)).

iii. Operating parameters must be monitored as described in 40 CFR §60.2730. (See Appendix D of this permit)

iv. Records of operating parameters, as applicable, must be maintained in accordance with 40 CFR §60.2740. (See Appendix D of this permit)

v. Records must be retained of the dates and times for which data show a deviation from operating parameter limits with a description, reasons and corrective actions notes (40 CFR §60.2740(e)).

d. **PM**

i. If a control device is utilized to comply with the emission limitations of 40 CFR §60.2670, operating limits for control device parameters must be established as described in 40 CFR §60.2675. (See Appendix D of this permit)

ii. The owner or operator must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system (40 CFR §60.2675(b)).

iii. Operating parameters must be monitored as described in 40 CFR §60.2730. (See Appendix D of this permit)

iv. Records of operating parameters and alarms, as applicable, must be maintained in accordance with 40 CFR §60.2740. (See Appendix D of this permit)

v. Records must be retained of the dates and times for which data show a deviation from operating parameter limits with a description, reasons and

corrective actions taken (40 CFR §60.2740(e)).

e. **SO_2**

i. If a control device is utilized to comply with the emission limitations of 40 CFR §60.2670, operating limits for control device parameters must be established as described in 40 CFR §60.2675. (See Appendix Dfof this permit)

ii. The owner or operator must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system (40 CFR §60.2675(b)).

iii. Operating parameters must be monitored as described in 40 CFR §60.2730. (See Appendix D of this permit)

iv. Records of operating parameters, as applicable, must be maintained in accordance with 40 CFR §60.2740. (See Appendix D of this permit)

v. Records must be retained of the dates and times for which data show a deviation from operating parameter limits with a description, reasons and corrective actions notes (40 CFR §60.2740(e)).

f. **Unit Operation**

i. The owner or operator shall keep a daily record of the hours of operation of the Kiln (K901).

ii. The owner or operator shall calculate the monthly and 12 consecutive month hours of operation for each month.

iii. If the owner or operator chooses to stack test less frequently than annually, consistent with 40 CFR §60.2720(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year (40 CFR §60.2740(q)). (See Appendix D of this permit)

iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation (40 CFR §60.2740(t)). (See Appendix D of this permit)

v. For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR §241.3(b)(1), you must keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR §241.3(d)(1). If you combust a fuel

that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR §241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR §241.2 and each of the legitimacy criteria in 40 CFR §241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR §241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR §241.4, you must keep records documenting that the material is a listed non-waste under 40 CFR §241.4(a) (40 CFR §60.2740(u)). (See Appendix D of this permit)

vi. All records must be available on site in either paper copy or computer format that can be printed upon request (See Appendix D of this permit) (40 CFR §60.2745).

vii. The owner or operator must keep a record of the applicability determinations made in accordance with 40 CFR §60.10(b)(3) each time the regulations applicable to the kiln changes. The applicability determinations must include an analysis that demonstrates why either the PCMACT or CISWI regulations are or are not applicable at a given time. The record of the applicability determination must be signed by the person making the determination and retained onsite for at least 5 years. (See Appendix D of this permit)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports as required by General Condition 14.

a. **CO/Fuel/HAP/NO_x/PM/SO_2/Unit Operation**

i. While complying with Subpart DDDD, if the owner or operator plans to cease the utilization of solid waste as a fuel and wants to comply with Subpart LLL in lieu of Subpart DDDD, a waste-to-fuel switch is to be implemented. The effective date of the waste-to-fuel switch is the date at least 6 months from the date that solid wastes were last utilized in the kiln. The owner or operator must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must address the items listed in 40 CFR §60.2710(a)(4). (See Appendix D of this permit)

ii. See Appendix D section S3.

iii. A summary of the reporting requirements in accordance with 40 CFR §60.2750 is provided in Appendix A table 5. (See Appendix D of this permit)

S4. **Testing** (Regulation 2.16, section 4.3.1)

i. The owner or operator shall conduct all performance tests as required in 40 CFR §60.2700 and 60.2710. The performance tests shall comply with the performance testing requirements in 40 CFR §60.2690. (See Appendix D of this permit)

ii. The owner or operator shall conduct all performance tests as required in 40

CFR §60.63. The performance tests shall comply with the performance testing requirements in 40 CFR §60.64.

iii. See Appendix E for additional testing requirements.

Appendix D – 40 CFR 60 Subpart DDDD - Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **What operating limits must I meet and by when? (40 CFR §60.2675)**

i. If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to four operating parameters (as specified in table 3 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test. (40 CFR §60.2675(a))

1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii), of this section as appropriate: (40 CFR §60.2675(a)(1))

(a) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and (40 CFR §60.2675(a)(1)(i))

(b) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations. (40 CFR §60.2675(a)(1)(ii))

2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations. (40 CFR §60.2675(a)(2))

3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations. (40 CFR §60.2675(a)(3))

4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance

test demonstrating compliance with the HCl emission limitation. (40 CFR §60.2675(a)(4))

ii. You must meet the operating limits established on the date that the performance test is submitted to the EPA's Central Data Exchange or postmarked, per the requirements of paragraph 60.2795(b). (40 CFR §60.2675(b))

iii. If you use a fabric filter to comply with the emission limitations and you fo not use a PM CPMS for monitoring PM compliance, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action. (40 CFR §60.2675(c))

iv. If you use an electrostatic precipitator to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations. (40 CFR §60.2675(d))

v. If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (*e.g.*, for 50 percent load, multiply the injection rate operating limit by 0.5). (40 CFR §60.2675(e))

vi. If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lowest secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test

demonstrating compliance with the nitrogen oxides emission limitations. (40 CFR §60.2675(f))

vii. If you use a dry scrubber to comply with the emission limitations, you must measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (*e.g.,* for 50 percent load, multiply the injection rate operating limit by 0.5). (40 CFR §60.2675(g))

viii. If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with either a particulate matter CEMS or a particulate matter CPMS, you must maintain opacity to less than or equal to ten percent opacity (1-hour block average). (40 CFR §60.2675(h))

ix. If you use a PM CPMS to demonstrate compliance, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (i)(1) through (5) of this section: (40 CFR §60.2675(i))

1) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record all hourly average output values (milliamps, or the digital signal equivalent) from the PM CPMS for the periods corresponding to the test runs (*e.g.,* three 1-hour average PM CPMS output values for three 1-hour test runs): (40 CFR §60.2675(i)(1))

(i) Your PM CPMS must provide a 4-20 milliamp output, or the digital signal equivalent, and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or digital bits. (40 CFR §60.2675(i)(1)(i))

(ii) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit; and (40 CFR §60.2675(i)(1)(ii))

(iii) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs). (40 CFR §60.2675(i)(1)(iii))

2) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in (i)(1)through (5) of this section: (40 CFR §60.2675(i)(2))

(a) Determine your instrument zero output with one of the following procedures: (40 CFR §60.2675(i)(2)(i))

(i) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench; (40 CFR §60.2675(i)(2)(i)(A))

(ii) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air; (40 CFR §60.2675(i)(2)(i)(B))

(iii) The zero point can also can be established obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept; and (40 CFR §60.2675(i)(2)(i)(C))

(iv) If none of the steps in paragraphs (i)(2)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer. (40 CFR §60.2675(i)(2)(i)(D))

(b) Determine your PM CPMS instrument average in milliamps, or equivalent, and the average of your

corresponding three PM compliance test runs, using equation 1.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \qquad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1$$

Equation 1

Where:

X_1 = the PM CPMS output data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(40 CFR §60.2675(i)(2)(ii))

(c) With your instrument zero expressed in milliamps, or digital equivalent, your three run average PM CPMS milliamp value, or digital equivalent, and your three run average PM concentration from your three compliance tests, determine a relationship of mg/dscm per milliamp or digital signal equivalent, with equation 2.

$$R = \frac{Y_1}{(X_1 - z)}$$

Equation 2

Where:

R = the relative mg/dscm per milliamp, or digital equivalent, for your PM CPMS,

Y_1 = the three run average mg/dscm PM concentration,

X_1 = the three run average milliamp output, or the digital equivalent, from you PM CPMS, and

z = the milliamp or digital equivalent equivalent of your instrument zero determined from paragraph (i)(2)(i) of this section.

(40 CFR §60.2675(i)(2)(iii))

(d) Determine your source specific 30-day rolling average operating limit using the mg/dscm per milliamp value, or per digital signal equivalent, from equation 2 in equation 3, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit:

$$O_1 = z + (0.75(L))/R$$

Equation 3

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent,

L = your source emission limit expressed in mg/dscm,

z = your instrument zero in milliamps or digital equivalent, determined from paragraph (i)(2)(i) of this section, and

R = the relative mg/dscm per milliamp, or per digital signal output equivalent, for your PM CPMS, from equation 2.

(40 CFR §60.2675(i)(2)(iv))

3) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or digital signal output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 4 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (i)(5) of this section:

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1$$

Equation 4

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps or digital signal equivalent.

(40 CFR §60.2675(i)(3))

4) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (*e.g.*, milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis. (40 CFR §60.2675(i)(4))

5) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.*, beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run. (40 CFR §60.2675(i)(5))

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

a. **How do I conduct the initial and annual performance test? (40 CFR §60.2690)**

i. All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations. (40 CFR §60.2690(a))

ii. You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in 40 CFR §60.2740(b)(1)) and the types of waste burned during the performance test. (40 CFR §60.2690(b))

iii. All performance tests must be conducted using the minimum run duration specified in tables 2 and 6 through 9 of this subpart. (40 CFR §60.2690(c))

iv. Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points. (40 CFR §60.2690(c))

v. Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method (except when using Method 9 or Method 22). (40 CFR §60.2690(e))

vi. All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using equation 5 of this section:

$$C_{adj} = C_{meas}(20.9 - 7)/(20.9 - \%O_2)$$

(Eq. 5)

Where:

Cadj = pollutant concentration adjusted to 7 percent oxygen;

Cmeas = pollutant concentration measured on a dry basis;

(20.9−7) = 20.9 percent oxygen−7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

(40 CFR §60.2690(f))

vii. You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (4) of this section: (40 CFR §60.2690(g))

1) Measure the concentration of each dioxin/furan tetra- through octa-isomer emitted using EPA Method 23 at 40 CFR §part 60, appendix A. (40 CFR §60.2690(g)(1))

2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. [Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.]; (40 CFR §60.2690(g)(2))

3) For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with paragraph (g)(1) and (2) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in table 4 of this subpart; and (40 CFR §60.2690(g)(3))

4) Sum the products calculated in accordance with paragraph (g)(3) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency. (40 CFR §60.2690(g)(4))

viii. Method 22 at 40 CFR §part 60, appendix A-7 must be used to determine compliance with the fugitive ash emission limit in table 2 of this subpart or tables 6 through 9 of this subpart. (40 CFR §60.2690(h))

ix. If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR §part 60, appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required to install a continuous opacity monitoring system, consistent with 40 CFR §60.2710 and 40 CFR §60.2730. (40 CFR §60.2690(i))

x. You must determine dioxins/furans total mass basis by following the procedures in paragraphs (j)(1) through (3) of this section: (40 CFR §60.2690(j))

1) Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR §part 60, appendix A-7; (40 CFR §60.2690(j)(1))

2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the

isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.); and (40 CFR §60.2690(j)(2))

3) Sum the quantities measured in accordance with paragraphs (j)(1) and (2) of this section to obtain the total concentration of dioxins/furans emitted in terms of total mass basis. (40 CFR §60.2690(j)(3))

b. **How do I demonstrate initial compliance with the amended emission limitations and establish the operating limits? (40 CFR §60.2700)**

i. You must conduct a performance test, as required under 40 CFR §40 CFR §60.2670 and 60.2690, to determine compliance with the emission limitations in table 2 of this subpart and tables 6 through 9 of this subpart, to establish compliance with any opacity operating limits in 40 CFR §60.2675, to establish the kiln-specific emission limit in 40 CFR §60.2710(y), as applicable, and to establish operating limits using the procedures in 40 CFR §60.2675 or 40 CFR §60.2680. The performance test must be conducted using the test methods listed in table 2 of this subpart and tables 6 through 9 of this subpart and the procedures in 40 CFR §60.2690. The use of the bypass stack during a performance test shall invalidate the performance test. (40 CFR §60.2700(a))

ii. As an alternative to conducting a performance test, as required under § § 60.2690 and 60.2670, you may use a 30-day rolling average of the 1-hour arithmetic average CEMS data, including CEMS data during startup and shutdown as defined in this subpart, to determine compliance with the emission limitations in Table 1 of this subpart or Tables 5 through 8 of this subpart. You must conduct a performance evaluation of each continuous monitoring system within 180 days of installation of the monitoring system. The initial performance evaluation must be conducted prior to collecting CEMS data that will be used for the initial compliance demonstration. (40 CFR §60.2700(b))

c. **By what date must I conduct the initial performance test? (40 CFR §60.2705)**

i. The initial performance test must be conducted no later than 180 days after your final compliance date. Your final compliance date is specified in table 1 of this subpart. (40 CFR §60.2705(a))

ii. If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you conducted a test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months from the date you reintroduce that solid waste. (40 CFR §60.2705(b))

iii. If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days from the date you reintroduce solid waste. (40 CFR §60.2705(c))

d. **By what date must I conduct the initial air pollution control device inspection? (40 CFR §60.2706)**

i. The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations. (40 CFR §60.2706(a))

ii. Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all necessary repairs of the designated facility must be completed. (40 CFR §60.2706(b))

e. **How do I demonstrate continuous compliance with the amended emission limitations and the operating limits? (40 CFR §60.2710)**

i. General compliance with standards, considering some units may be able to switch between solid waste and non-waste fuel combustion, is specified in paragraph (a)(1) through (6) of this section. (40 CFR §60.2710(a))

1) The emission standards and operating requirements set forth in this subpart apply at all times. (40 CFR §60.2710(a)(1))

2) If you cease combusting solid waste you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time). (40 CFR §60.2710(a)(2))

3) If you cease combusting solid waste you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with 40 CFR §60.2710(a)(2). Your source must remain in compliance

with this subpart until the effective date of the waste-to-fuel switch. (40 CFR §60.2710(a)(3))

4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any Section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify: (40 CFR §60.2710(a)(4))

(a) The name of the owner or operator of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice; (40 CFR §60.2710(a)(4)(i))

(b) The currently applicable subcategory under this subpart, and any 40 CFR §part 63 subpart and subcategory that will be applicable after you cease combusting solid waste; (40 CFR §60.2710(a)(4)(ii))

(c) The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting; (40 CFR §60.2710(a)(4)(iii))

(d) The date on which you became subject to the currently applicable emission limits; (40 CFR §60.2710(a)(4)(iv))

(e) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with paragraphs (a)(2) and (3) of this section. (40 CFR §60.2710(a)(4)(v))

5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. (40 CFR §60.2710(a)(5))

6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements under this subpart. (40 CFR §60.2710(a)(6))

ii. You must conduct an annual performance test for the pollutants listed in table 2 of this subpart or tables 6 through 9 of this subpart and opacity for each CISWI as required under 40 CFR §60.2690. The annual performance test must be conducted using the test methods listed in table 2 of this subpart or tables 6 through 9 of this subpart and the procedures in 40 CFR §60.2690. Opacity must be measured using EPA Reference Method 9 at 40 CFR §part 60. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance. (40 CFR §60.2710(b))

iii. You must continuously monitor the operating parameters specified in 40 CFR §60.2675 or established under 40 CFR §60.2680 and as specified in 40 CFR §60.2735. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under 40 CFR §60.2680 or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests. (40 CFR §60.2710(c))

iv. You must burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test. (40 CFR §60.2710(d))

v. For energy recovery units, incinerators, and small remote units, you must perform annual visual emissions test for ash handling. (40 CFR §60.2710(e))

vi. For energy recovery units, you must conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR §part 60 (except where particulate matter continuous monitoring system or CPMS are used) and the pollutants listed in table 7 of this subpart. (40 CFR §60.2710(f))

vii. For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, compliance with the carbon monoxide emission limit may be demonstrated by using the CEMS, as described in 40 CFR §60.2730(o). (40 CFR §60.2710(g))

viii. Coal and liquid/gas energy recovery units with annual average heat input rates greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in 40 CFR §60.2730(n) instead of the CPMS specified in 40 CFR §60.2710(i). Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in 40 CFR §60.2730(n) instead of particulate matter testing with EPA Method 5 at 40 CFR §part 60, appendix A-3 and, if applicable, the continuous opacity monitoring requirements in paragraph (i) of this section. (40 CFR §60.2710(h))

ix. For energy recovery units with annual average heat input rates greater than or equal to 10 MMBTU/hour but less than 250 MMBtu/hr that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, particulate matter CEMS, or particulate matter CPMS, you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in § 60.2730(m). (40 CFR §60.2710(i))

x. For waste-burning kilns, you must conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in table 8 of this subpart unless you choose to demonstrate initial and continuous compliance using CEMS, as allowed in paragraph (u) of this section. If you do not use an acid gas wet scrubber or dry scrubber, you must determine compliance with the hydrogen chloride emissions limit using a HCl CEMS according to the requirements in paragraph (j)(1) of this section. You must determine compliance with the mercury emissions limit using a mercury CEMS or an integrated sorbent trap monitoring system according to paragraph (j)(2) of this section. You must determine compliance with particulate matter using CPMS: (40 CFR §60.2710(j))

1) If you monitor compliance with the HCl emissions limit by operating an HCl CEMS, you must do so in accordance with

Performance Specification 15 (PS 15) of appendix B to 40 CFR §part 60, or, PS 18 of appendix B to 40 CFR §part 60. You must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40 CFR §part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. You must operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of appendix F to 40 CFR §part 60. For any performance specification that you use, you must use Method 321 of appendix A to 40 CFR §part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs (j)(1)(i) and (ii) of this section apply to all HCl CEMS used under this subpart: (40 CFR §60.2710(j)(1))

(a) You must use a measurement span value for any HCl CEMS of 0-10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during “mill off” conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records; and (40 CFR §60.2710(j)(1)(i))

(b) In order to quality assure data measured above the span value, you must use one of the three options in paragraphs (j)(1)(ii)(A) through (C) of this section: (40 CFR §60.2710(j)(1)(ii))

(i) Include a second span that encompasses the HCl emission concentrations expected to be encountered during “mill off” conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required; (40 CFR §60.2710(j)(1)(ii)(A))

(ii) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (j)(1)(i) of this section

using the following procedure. Conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The "above span linearity" challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new "above span linearity" challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in (j)(1)(ii)(D) of this section. In this manner values measured by the HCl CEMS during the above span linearity challenge exceeding +/-20 percent of the certified value of the reference gas must be normalized using equation 6; (40 CFR §60.2710(j)(1)(ii)(B))

(iii) Quality assure any data above the span value established in paragraph (j)(1)(i) of this section using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value you must, within 24 hours before or after, introduce a higher, "above span" HCl reference gas standard to the HCl CEMS. The "above span" reference gas must meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may

include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as you would for a daily calibration. The "above span" calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20 percent of the certified value of the reference gas, then you must normalize the stack gas values measured above span as described in paragraph (j)(1)(ii)(D) of this section. If the "above span" calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then you must determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an "above span" calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour; and (40 CFR §60.2710(j)(1)(ii)(C))

(iv) In the event that the "above span" calibration is not successful (i.e., the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then you must normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the "above span" calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

$$\frac{certified\ reference\ gas\ value}{Measured\ value\ of\ reference\ gas} = Measured\ Stack\ gas = Normalized\ stack\ gas\ result$$

2) (Eq.6)

Only one "above span" calibration is needed per 24-hour period. (40 CFR §60.2710(j)(1)(ii)(D))Compliance with the mercury emissions limit must be determined using a mercury CEMS or integrated sorbent trap monitoring system according to the following requirements: (40 CFR §60.2710(j)(2))

(a) You must operate a mercury CEMS in accordance with performance specification 12A at 40 CFR §part 60,

appendix B or an integrated sorbent trap monitoring system in accordance with performance specification 12B at 40 CFR §part 60, appendix B, these monitoring systems must be quality assured according to procedure 5 of 40 CFR 60, appendix F. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period must be assigned to each hour during the sampling period. If you choose to comply with the production-rate based mercury limit for your waste-burning kiln, you must also monitor hourly clinker production and determine the hourly mercury emissions rate in pounds per million ton of clinker produced.. You must demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations or mass emissions rates, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR §part 60, appendix A-7 of this part. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content; (40 CFR §60.2710(j)(2)(i))

(b) Owners or operators using a mercury CEMS or integrated sorbent trap monitoring systems to determine mass emission rate must install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 at 40 CFR §part 60, appendix B and conducting an annual relative accuracy test of the continuous emission rate monitoring system according to section 8.2 of performance specification 6; and(40 CFR §60.2710(j)(2)(ii))

(c) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury CEMS or integrated sorbent trap monitoring system while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off. (40 CFR §60.2710(j)(2)(iii))

xi. If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following: (40 CFR §60.2710(k))

1) Inspect air pollution control device(s) for proper operation: and (40 CFR §60.2710(k)(1))

2) Develop a site-specific monitoring plan according to the requirements in paragraph (l) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under 40 CFR §60.13(i). (40 CFR §60.2710(k)(2))

xii. For each CMS required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (l) that addresses paragraphs (l)(1)(i) through (vi) of this section: (40 CFR §60.2710(l))

1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system: (40 CFR §60.2710(l)(1))

(a) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); (40 CFR §60.2710(l)(1)(i))

(b) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems; (40 CFR §60.2710(l)(1)(ii))

(c) Performance evaluation procedures and acceptance criteria (e.g., calibrations); (40 CFR §60.2710(l)(1)(iii))

(d) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR §60.11(d); (40 CFR §60.2710(l)(1)(iv))

(e) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR §60.13; and (40 CFR §60.2710(l)(1)(v))

(f) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §60.7(b),(c) introductory text, (c)(1) and (4), (d) through (g). (40 CFR §60.2710(l)(1)(vi))

2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan. (40 CFR §60.2710(l)(2))

3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan. (40 CFR §60.2710(l)(3))

xiii. If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (l) and (m)(1) through (4) of this section: (40 CFR §60.2710(m))

1) Install the flow sensor and other necessary equipment in a position that provides a representative flow; (40 CFR §60.2710(m)(1))

2) Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent; (40 CFR §60.2710(m)(2))

3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and (40 CFR §60.2710(m)(3))

4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. (40 CFR §60.2710(m)(4))

xiv. If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (l) and (n)(1) through (6) of this section: (40 CFR §60.2710(n))

1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop); (40 CFR §60.2710(n)(1))

2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion; (40 CFR §60.2710(n)(2))

3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less; (40 CFR §60.2710(n)(3))

4) Perform checks at the frequency outlined in your site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily); (40 CFR §60.2710(n)(4))

5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually; and (40 CFR §60.2710(n)(5))

6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring

plan. Alternatively, install and verify the operation of a new pressure sensor. (40 CFR §60.2710(n)(6))

xv. If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (l) and (o)(1) through (4) of this section: (40 CFR §60.2710(o))

1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH; (40 CFR §60.2710(o)(1))

2) Ensure the sample is properly mixed and representative of the fluid to be measured; (40 CFR §60.2710(o)(2))

3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day; and (40 CFR §60.2710(o)(3))

4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly. (40 CFR §60.2710(o)(4))

xvi. If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (l) and (p)(1) and (2) of this section: (40 CFR §60.2710(p))

1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and (40 CFR §60.2710(p)(1))

2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. (40 CFR §60.2710(p)(2))

xvii. If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (l) and (q)(1) and (2) of this section: (40 CFR §60.2710(q))

1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and (40 CFR §60.2710(q)(1))

2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. (40 CFR §60.2710(q)(2))

xviii. If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (l) and (r)(1) through (5) of this section: (40 CFR §60.2710(r))

1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (*e.g.*, for a positive pressure fabric filter) of the fabric filter; (40 CFR §60.2710(r)(1))

2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less; (40 CFR §60.2710(r)(2))

3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see 40 CFR §60.17); (40 CFR §60.2710(r)(3))

4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and (40 CFR §60.2710(r)(4))

5) Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed readily by plant operating personnel. (40 CFR §60.2710(r)(5))

xix. For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in 40 CFR §60.2730(l) to measure sulfur dioxide.. The sulfur dioxide CEMS must follow the procedures and methods specified in paragraph (s) of this section. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater: (40 CFR §60.2710(s))

1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both

the CEMS and the test methods specified in paragraphs (s)(1)(i) and (ii) of this section: (40 CFR §60.2710(s)(1))

(a) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17) must be used; and (40 CFR §60.2710(s)(1)(i))

(b) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, must be used. (40 CFR §60.2710(s)(1)(ii))

2) The span value of the CEMS at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart. The span value of the CEMS at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart. (40 CFR §60.2710(s)(2))

3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part. (40 CFR §60.2710(s)(3))

xx. For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in 40 CFR §60.2730 to measure nitrogen oxides. The nitrogen oxides CEMS must follow the procedures and methods specified in paragraphs (t)(1) through (4) of this section: (40 CFR §60.2710(t))

1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (t)(1)(i) and (ii) of this section. (40 CFR §60.2710(t)(1))

(a) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR §part 60, appendix A-4 must be used; and (40 CFR §60.2710(t)(1)(i))

(b) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, must be used. (40 CFR §60.2710(t)(1)(ii))

2) The span value of the CEMS must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of unit. (40 CFR §60.2710(t)(2))

3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part. (40 CFR §60.2710(t)(3))

4) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (iv) of this section. This relationship may be reestablished during performance compliance tests. (40 CFR §60.2710(t)(4))

(a) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A, 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor; (40 CFR §60.2710(t)(4)(i))

(b) Samples must be taken for at least 30 minutes in each hour; (40 CFR §60.2710(t)(4)(ii))

(c) Each sample must represent a 1-hour average; and (40 CFR §60.2710(t)(4)(iii))

(d) A minimum of 3 runs must be performed. (40 CFR §60.2710(t)(4)(iv))

xxi. For facilities using a CEMS or integrated sorbent trap monitoring system for mecury to demonstrate initial and continuous compliance with any of the emission limits of this subpart, you must complete the following: (40 CFR §60.2710(u))

1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS or an integrated sorbent trap monitoring system data during startup and shutdown, as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at appendix A-7 fo this part. The 1-hour arithmetic averages for CEMS must be calculated using the data points required under §60.13(e)(2). Except for CEMS or an integrated sorbent trap monitoring system data during startup and shutdown, the 1-hour arithmetic averages used to calculate the 30-day rolling average emission concentrations

must be correct to 7 percent oxygen (dry basis). Integrated sorbent trap monitoring systems or CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content; and (40 CFR §60.2710(u)(1))

2) Operate all CEMS and integrated sorbent trap monitoring systems in accordance with the applicable procedures under appendices B and F of this part. (40 CFR §60.2710(u)(2))

xxii. Use of the bypass stack at any time is an emissions standards deviation for PM, HCl, lead, cadmium, mercury, nitrogen oxides, sulfur dioxide, and dioxin/furans. (40 CFR §60.2710(v))

xxiii. For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain an oxygen analyzer system as defined in 40 CFR §60.2875 according to the procedures in paragraphs (w)(1) through (4) of this section: (40 CFR §60.2710(w))

1) The oxygen analyzer system must be installed by the initial performance test date specified in 40 CFR §60.2675; (40 CFR §60.2710(w)(1))

2) You must operate the oxygen trim system within compliance with paragraph (w)(3) of this section at all times; (40 CFR §60.2710(w)(2))

3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and (40 CFR §60.2710(w)(31))

4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part. (40 CFR §60.2710(w)(4))

xxiv. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (x)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, ESP secondary power, PM scrubber pressure): (40 CFR §60.2710(x))

1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with paragraphs

(l) and (x)(1)(i) through (iii) of this section: (40 CFR §60.2710(x)(1))

(a) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent. (40 CFR §60.2710(x(1)(i))

(b) The PM CPMS must have a cycle time (*i.e.*, period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and (40 CFR §60.2710(x)(1)(ii))

(c) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter. (40 CFR §60.2710(x)(1)(iii))

2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in 40 CFR §60.2675. (40 CFR §60.2710(x)(2))

3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent. (40 CFR §60.2710(x)(3))

4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or their digital equivalent). (40 CFR §60.2710(x)(4))

5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (x)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan. (40 CFR §60.2710(x)(5))

6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in

assessing the compliance with your operating limit except: (40 CFR §60.2710(x)(6))

(a) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report); (40 CFR §60.2710(x)(6)(i))

(b) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report); (40 CFR §60.2710(x)(6)(ii))

(c) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart. (40 CFR §60.2710(x)(6)(iii))

7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan. (40 CFR §60.2710(x)(7))

8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must: (40 CFR §60.2710(x)(8))

(a) Within 48 hours of the deviation, visually inspect the air pollution control device; (40 CFR §60.2710(x)(8)(i))

(b) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; (40 CFR §60.2710(x)(8)(ii))

(c) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit. Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and

the PM emissions compliance test required under this paragraph (x) of this section; and (40 CFR §60.2710(x)(8)(iii))

(d) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart. (40 CFR §60.2710(x)(8)(iv))

xxv. When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, you must: (40 CFR §60.2710(y))

1) Calculate a kiln-specific emission limit using equation 7:

$$C_{ks} = \left(\left(Emission\ limit * (Q_{ab} + Q_{cm} + Q_{ks}) \right) - (Qab * C_{ab}) - (Q_{cm} * C_{cm}) \right) / Q_{ks}$$

(Eq. 7)

Where:

C_{ks} = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O_2.)

Q_{ab} = Alkali bypass flow rate (volume/hr)

C_{ab} = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O_2.)

Q_{cm} = In-line coal mill flow rate (volume/hr)

C_{cm} = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O_2.)

Q_{ks} = Kiln stack flow rate (volume/hr)

(40 CFR §60.2710(y)(1))

2) Particulate matter concentration must be measured downstream of the in-line coal mill. All other pollutant concentrations must be measured either upstream or downstream of the in-line coal mill. (40 CFR §60.2710(y)(2))

3) For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test must be conducted on an annual basis

(between 11 and 13 calendar months following the previous performance test). (40 CFR §60.2710(y)(3))

f. **By what date must I conduct the annual performance test? (40 CFR §60.2715)**

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

g. **By what date must I conduct the annual air pollution control device inspection? (40 CFR §60.2716)**

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution control device inspection as described in 40 CFR §60.2706.

h. **May I conduct performance testing less often? (40 CFR §60.2720)**

i. You must conduct annual performance tests according to the schedule specified in 40 CFR §60.2715, with the following exceptions: (40 CFR §60.2720(a))

1) You may conduct a repeat performance test at any time to establish new values for the operating limits, as specified in 40 CFR §60.2725. New operating limits become effective on the date that the performance test report is submitted to the EPA's Central Data Exchange or postmarked, per the requirements of 60.2795(b). The Administrator may request a repeat performance test at any time; (40 CFR §60.2720(a)(1))

2) You must repeat the performance test within 60 days of a process change, as defined in 40 CFR §60.2875; and (40 CFR §60.2720(a)(2))

3) You can conduct performance tests less often if you meet the following conditions: Your performance tests for the pollutant for at least 2 consecutive performance tests demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (ii) of this section, as applicable; there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions; and you are not required to conduct a performance test for the pollutant in response to a request by the Administrator in paragraph (a)(1) of this section or a process change in paragraph (a)(2) of this section. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test for the pollutant no more than 37 months following the previous performance test for the pollutant. If the emission level for your CISWI continues to meet the emission level specified

in paragraph (a)(3)(i) or (ii) of this section, as applicable, you may choose to conduct performance tests for the pollutant every third year, as long as there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. Each such performance test must be conducted no more than 37 months after the previous performance test. (40 CFR §60.2720(a)(3))

(a) For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 2 or tables 6 through 9 of this subpart, as applicable, to this subpart; and (40 CFR §60.2720(a)(3)(i))

(b) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observation periods. (40 CFR §60.2720(a)(3)(ii))

4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a)(3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a)(3) of this section. (40 CFR §60.2720(a)(4))

i. **May I conduct a repeat performance test to establish new operating limits? (40 CFR §60.2725)**

i. Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time. (40 CFR §60.2725(a))

ii. You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance. (40 CFR §60.2725(b))

j. **What monitoring equipment must I install and what parameters must I monitor? (40 CFR §60.2730)**

i. If you are using a wet scrubber to comply with the emission limitation under 40 CFR §60.2670, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in table 3 of this subpart. These

devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in table 3 of this subpart at all times except as specified in 40 CFR §60.2735(a). (40 CFR §60.2730(a))

ii. If you use a fabric filter to comply with the requirements of this subpart and you do not use a PM CPMS or PM CEMS for monitoring PM compliance, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section: (40 CFR §60.2730(b))

1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter; (40 CFR §60.2730(b)(1))

2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations; (40 CFR §60.2730(b)(2))

3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less; (40 CFR §60.2730(b)(3))

4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings; (40 CFR §60.2730(b)(4))

5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor; (40 CFR §60.2730(b)(5))

6) The bag leak detection system must be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emission over a preset level is detected. The alarm must be located where it is observed easily by plant operating personnel. (40 CFR §60.2730(b)(6))

7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter; and (40 CFR §60.2730(b)(7))

8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (40 CFR §60.2730(b)(8))

iii. If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations under 40 CFR §60.2670, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in 40 CFR §60.2680. (40 CFR §60.2730(c))

iv. If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum sorbent flow rate once per hour. (40 CFR §60.2730(d))

v. If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following: (40 CFR §60.2730(e))

1) Following the date on which the initial performance test is completed or is required to be completed under 40 CFR §60.2690, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI) or the minimum reagent flow rate measured as 3-hour block averages at all times; and (40 CFR §60.2730(e)(1))

2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit. (40 CFR §60.2730(e)(2))

vi. If you use an electrostatic precipitator to comply with the emission limits of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test. (40 CFR §60.2730(f))

vii. For waste-burning kilns not equipped with a wet scrubber or dry scrubber, you must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere, as specified in 40 CFR §60.210(j), and record the output of the system. you may substitute use of a HCl CEMS for conducting the HCl initial and annual testing with EPA Method 321 at 40 CFR part 63, appendix A. For units other than waste-burning kilns not equipped with a wet scrubber or dry scubber, a facility may substitute the use of a hydrogen chloride CEMS, your are not required to monitor the minimum hydrogen chloride sorbent flow rate, monitoring the minimum scrubber liquor pH, and monitoring minimum injection rate. (40 CFR §60.2730(g))

viii. To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the particulate matter annual performance test. For units equipped with a particulate matter CEMS, you are not required to use other CMS monitoring for PM compliance (*e.g.*, bag leak detectors, ESP secondary power, PM scrubber pressure). A facility may also substitute use of a particulate matter CEMS for conducting the PM initial performance test. (40 CFR §60.2730(h))

ix. To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan initial and annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR §part 60, appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR §part 60, appendix A-7 must install, calibrate, maintain and operate a continuous automated sampling system and must comply with the requirements specified in 40 CFR §60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit. (40 CFR §60.2730(i))

x. To demonstrate initial and continuous compliance with the mercury emissions limit, a facility may substitute use of a mercury CEMS or and integrated sorbent trap monitoring system for the mecury initial and annual performance test. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR §part 60, appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see 40 CFR §60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain and operate the mercury CEMS or integrated sorbent trap monitoring system and must comply with the performance specification 12A or performance specification 12b, respectively, and quality assurance procedure 5. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period must be assigned to each hour during the sampling period. For units equipped with a mercury CEMS or an integrated sorbent trap monitoring system, you are not required to monitor the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS or an integrated sorbent trap monitoring system as specified in § 60.2710(j). (40 CFR §60.2730(j))

xi. To demonstrate initial and continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides initial and annual performance test to demonstrate compliance with the nitrogen oxides emissions limits. For units equipped with nitrogen oxides CEMS, you are not required to monitor the charge rate, secondary chamber temperature and reagent flow for selective noncatalytic reduction, if applicable: (40 CFR §60.2730(k))

1) Install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under 40 CFR §60.13 must be followed for installation, evaluation and operation of the CEMS; and (40 CFR §60.2730(k)(1))

2) Compliance with the emission limit for nitrogen oxides must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data, as outlined in §60.2710(u). (40 CFR §60.2730(k)(2))

xii. To demonstrate initial and continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a CEMS for the sulfur dioxide initial and annual performance test to demonstrate compliance with the sulfur dioxide emissions limits. (40 CFR §60.2730(l))

1) Install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure 1 of appendix F of this part and the procedures under 40 CFR §60.13 must be followed for installation, evaluation and operation of the CEMS; and (40 CFR §60.2730(l)(1))

2) Compliance with the sulfur dioxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data, as outlined in §60.2710(u). (40 CFR §60.2730(l)(2))

xiii. For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, particulate matter CEMS, or particulate matter CPMS, you must install, operate, certify and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m)(1) through (5) of this section by the compliance date specified in 40 CFR §60.2670. Energy recovery units that

use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in 40 CFR §60.2730(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for opacity consistent with 40 CFR §60.2710(f): (40 CFR §60.2730(m))

1) Install, operate and maintain each continuous opacity monitoring system according to performance specification 1 at 40 CFR §part 60, appendix B; (40 CFR §60.2730(m)(1))

2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in 40 CFR §60.13 and according to performance specification 1 at 40 CFR §part 60, appendix B; (40 CFR §60.2730(m)(2))

3) As specified in 40 CFR §60.13(e)(1), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period; (40 CFR §60.2730(m)(3))

4) Reduce the continuous opacity monitoring system data as specified in 40 CFR §60.13(h)(1); and (40 CFR §60.2730(m)(4))

5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected. (40 CFR §60.2730(m)(5))

xiv. For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR §part 60, appendix A-3 or monitor with a particulate matter CPMS according to paragraph (r) of this section, must install, calibrate, maintain and operate a CEMS and must comply with the requirements specified in paragraphs (n)(1) through (10) of this section: (40 CFR §60.2730(n))

1) The PM CEMS must be installed, evaluated and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure 2 of appendix F of this part and 40 CFR §60.13; (40 CFR §60.2730(n)(1))

2) The initial performance evaluation must be completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified

under 40 CFR §60.2690 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40 CFR §part 60, appendix A-3 performance tests, whichever is later; (40 CFR §60.2730(n)(2))

3) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in 40 CFR §60.2710(t)(4)(i) through (iv); (40 CFR §60.2730(n)(3))

4) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions. If PM CEMS are elected for demonstrating compliance, and the initial performance test has not yet been conducted, then initial compliance must be determined by using the CEMS specified in paragraph (n) of this section to measure particulate matter. You must calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR §part 60, appendix A-7 of this part; (40 CFR §60.2730(n)(4))

5) Continuous compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR §part 60, Appendix A-7 of the part from the 1-hour arithmetic average of the CEMS outlet data. (40 CFR §60.2730(n)(5)

6) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified 40 CFR §60.2735; (40 CFR §60.2730(n)(6))

7) The 1-hour arithmetic averages required under paragraph (n)(5) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide) (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be

calculated using the data points required under 40 CFR §60.13(e)(2); (40 CFR §60.2730(n)(7))

8) All valid CEMS data must be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (n)(6) of this section are not met; (40 CFR §60.2730(n)(8))

9) The CEMS must be operated according to performance specification 11 in appendix B of this part; (40 CFR §60.2730(n)(9))

10) Quarterly and yearly accuracy audits and daily drift, system optics, and sample volume checks must be performed in accordance with procedure 2 in appendix F of this part. (40 CFR §60.2730(n)(10))

xv. To demonstrate initial and continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a CEMS for the carbon monoxide initial and annual performance test to demonstrate compliance with the carbon monoxide emissions limits: (40 CFR §60.2730(o))

1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4A or 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under 40 CFR §60.13 must be followed for installation, evaluation, and operation of the CEMS; and (40 CFR §60.2730(o)(1))

2) Compliance with the carbon monoxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data, §60.2710(u). (40 CFR §60.2730(o)(2))

xvi. The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration. (40 CFR §60.2730(p))

xvii. For energy recovery units with a heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate and maintain the continuous oxygen monitoring system as defined in 40 CFR §60.2875 according to the procedures in paragraphs (q)(1) through (4) of this section: (40 CFR §60.2730(q))

1) The oxygen analyzer system must be installed by the initial performance test date specified in 40 CFR §60.2675; (40 CFR §60.2730(q)(1))

2) You must operate the oxygen trim system within compliance with paragraph (q)(3) of this section at all times; (40 CFR §60.2730(q)(2))

3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph (q)(4) of this section is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and (40 CFR §60.2730(q)(3))

4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part. (40 CFR §60.2730(q)(4))

xviii. For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (r)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, ESP secondary power, PM scrubber pressure): (40 CFR §60.2730(r))

1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with 40 CFR §60.2710(l) and (r)(1)(i) through (iii) of this section: (40 CFR §60.2730(r)(1))

(a) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent. (40 CFR §60.2730(r)(1)(i))

(b) The PM CPMS must have a cycle time (*i.e.*, period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes. (40 CFR §60.2730(r)(1)(ii))

(c) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter. (40 CFR §60.2730(r)(1)(iii))

2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in 40 CFR §60.2675. (40 CFR §60.2730(r)(2))

3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent. (40 CFR §60.2730(r)(3))

4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or digital bits). (40 CFR §60.2730(r)(4))

5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (r)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan. (40 CFR §60.2730(r)(5))

6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except: (40 CFR §60.2730(r)(6))

(a) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report); (40 CFR §60.2730(r)(6)(i))

(b) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report); and (40 CFR §60.2730(r)(6)(ii))

(c) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart. (40 CFR §60.2730(r)(6)(iii))

7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan. (40 CFR §60.2730(r)(7))

8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must: (40 CFR §60.2730(r)(8))

(a) Within 48 hours of the deviation, visually inspect the air pollution control device; (40 CFR §60.2730(r)(8)(i))

(b) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; (40 CFR §60.2730(r)(8)(ii))

(c) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation fo the emissions control device(s). Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph; and (40 CFR §60.2730(r)(8)(iii))

(d) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart. (40 CFR §60.2730(r)(8)(iv))

xix. If you use a dry scrubber to comply with the emission limits of this subpart, you must monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test. (40 CFR §60.2730(s))

xx. If you are required to monitor clinker production because you comply with the production-rate based mercury limit for your waste-burning kiln, you must: (40 CFR §60.2730(t))

1) Determine hourly clinker production by one of two methods: (40 CFR §60.2730(t)(1))

(a) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 percent accuracy, or (40 CFR §60.2730(t)(1)(i))

(b) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 percent accuracy. Calculate your hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, you must use the new ratio going forward, but you do not have to retroactively change clinker production rates previously estimated. (40 CFR §60.2730(t)(1)(ii))

2) Determine the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before the final compliance date of this rule and during each quarter of source operation. (40 CFR §60.2730(t)(2))

3) Conduct accuracy checks in accordance with the procedures outlined in your site-specific monitoring plan under § 60.2710(l). (40 CFR §60.2730(t)(3))

k. **Is there a minimum amount of monitoring data I must obtain? (40 CFR §60.2735)**

For each continuous monitoring system required or optionally allowed under 40 CFR §60.2730, you must monitor and collect data according to this section:

i. You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in 40 CFR §60.2770(o)), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation

are not malfunctions. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable. (40 CFR §60.2735(a))

ii. You may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out-of control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods, including data normalized for above scale readings, in assessing the operation of the control device and associated control system. (40 CFR §60.2735(b))

iii. Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements. (40 CFR §60.2735(c))

l. **What records must I keep? (40 CFR §60.2740)**

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (w) of this section for a period of at least 5 years:

i. Calendar date of each record; (40 CFR §60.2740(a))

ii. Records of the data described in paragraphs (b)(1) through (7) of this section: (40 CFR §60.2740(b))

1) The CISWI charge dates, times, weights, and hourly charge rates; (40 CFR §60.2740(b)(1))

2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable; (40 CFR §60.2740(b)(2))

3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable; (40 CFR §60.2740(b)(3))

4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable; (40 CFR §60.2740(b)(4))

5) For affected CISWIs that establish operating limits for controls other than wet scrubbers under 40 CFR §60.2675(d) through (g) or 40 CFR §60.2680, you must maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, you must also maintain records of the load fraction and

corresponding sorbent injection rate records; and (40 CFR §60.2740(b)(5))

6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in 40 CFR §60.2675(c). (40 CFR §60.2740(b)(6))

7) If you monitor clinker production in accordance with § 60.2730(t): (40 CFR §60.2740(b)(7))

(a) Hourly clinker rate produced if clinker production is measured directly; (40 CFR §60.2740(b)(7)(i))

(b) Hourly measured kiln feed rates and calculated clinker production rates if clinker production is not measured directly; (40 CFR §60.2740(b)(7)(ii)

(c) 30-day rolling averages for mercury in pounds per million tons of clinker produced; (40 CFR §60.2740(b)(7)(iii))

(d) The initial and quarterly accuracy of the system of measruing hourly clinker production (or feed mass flow). (40 CFR §60.2740(b)(7)(iv))

iii. Identification of calendar dates and times for which data show a deviation from the operating limits in table 3 of this subpart or a deviation from other operating limits established under 40 CFR §60.2675(d) through (g) or 40 CFR §60.2680 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken. (40 CFR §60.2740(e))

iv. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations. (40 CFR §60.2740(f))

v. Records showing the names of CISWI operators who have completed review of the information in 40 CFR §60.2660(a) as required by 40 CFR §60.2660(b), including the date of the initial review and all subsequent annual reviews. (40 CFR §60.2740(g))

vi. Records showing the names of the CISWI operators who have completed the operator training requirements under 40 CFR §60.2635, met the criteria for qualification under 40 CFR §60.2645, and maintained or renewed their qualification under 40 CFR §60.2650 or 40 CFR §60.2655.

Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications. (40 CFR §60.2740(h))

vii. For each qualified operator, the phone and/or pager number at which they can be reached during operating hours. (40 CFR §60.2740(i))

viii. Records of calibration of any monitoring devices as required under 40 CFR §60.2730. (40 CFR §60.2740(j))

ix. Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment. (40 CFR §60.2740(k))

x. The information listed in 40 CFR §60.2660(a). (40 CFR §60.2740(l))

xi. On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required). (40 CFR §60.2740(m))

xii. Maintain records of the annual air pollution control device inspections that are required for each CISWI subject to the emissions limits in table 2 of this subpart or tables 6 through 9 of this subpart, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency. (40 CFR §60.2740(n))

xiii. For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems. If you monitor emissions with a CEMS, you must indicate which data are CEMS data during startup and shutdown: (40 CFR §60.2740(o))

1) All 6-minute average levels of opacity; (40 CFR §60.2740(o)(1))

2) All 1-hour average concentrations of sulfur dioxide emissions; (40 CFR §60.2740(o)(2))

3) All 1-hour average concentrations of nitrogen oxides emissions; (40 CFR §60.2740(o)(3))

4) All 1-hour average concentrations of carbon monoxide emissions; (40 CFR §60.2740(o)(4))

5) All 1-hour average concentrations of particulate matter emissions; (40 CFR §60.2740(o)(5))

6) All 1-hour average concentrations of mercury emissions; (40 CFR §60.2740(o)(6))

7) All 1-hour average concentrations of HCl CEMS outputs; (40 CFR §60.2740(o)(7))

8) All 1-hour average percent oxygen concentrations; and (40 CFR §60.2740(o)(8))

9) All 1-hour average PM CPMS readings or particulate matter CEMS outputs. (40 CFR §60.2740(o)(9))

xiv. Records indicating use of the bypass stack, including dates, times and durations. (40 CFR §60.2740(p))

xv. If you choose to stack test less frequently than annually, consistent with 40 CFR §60.2720(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year. (40 CFR §60.2740(q))

xvi. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. (40 CFR §60.2740(r))

xvii. Records of all required maintenance performed on the air pollution control and monitoring equipment. (40 CFR §60.2740(s))

xviii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR §60.2740(t))

xix. For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR §241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR §241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR §241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR §241.2 and each of the legitimacy criteria in 40 CFR §241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR §241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR §241.4, you must keep records documenting that the material is a listed non-waste under 40 CFR §241.4(a). (40 CFR §60.2740(u))

xx. Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous. (40 CFR §60.2740(v))

xxi. Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16

U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous. (40 CFR §60.2740(w))

m. **Where and in what format must I keep my records? (40 CFR §60.2745)**

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

a. **What reports must I submit? (40 CFR §60.2750)**

See table 5 of this subpart for a summary of the reporting requirements.

b. **When must I submit my waste management plan? (40 CFR §60.2755)**

You must submit the waste management plan no later than the date specified in table 1 of this subpart for submittal of the final control plan.

c. **What information must I submit following my initial performance test? (40 CFR §60.2760)**

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager:

i. The complete test report for the initial performance test results obtained under 40 CFR §60.2700, as applicable; (40 CFR §60.2760(a))

ii. The values for the site-specific operating limits established in 40 CFR §60.2675 or 40 CFR §60.2680; and (40 CFR §60.2760(b))

iii. If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by 40 CFR §60.2730(b). (40 CFR §60.2760(c))

d. **When must I submit my annual report? (40 CFR §60.2765)**

You must submit an annual report no later than 12 months following the submission of the information in 40 CFR §60.2760. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

e. **What information must I include in my annual report? (40 CFR §60.2770)**

The annual report required under 40 CFR §60.2765 must include the items listed in paragraphs (a) through (p) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in 40 CFR §40 CFR §60.2775, 60.2780, and 60.2785:

i. Company name and address; (40 CFR §60.2770(a))

ii. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report; (40 CFR §60.2770(b))

iii. Date of report and beginning and ending dates of the reporting period; (40 CFR §60.2770(c))

iv. The values for the operating limits established pursuant to 40 CFR §60.2675 or 40 CFR §60.2680; (40 CFR §60.2770(d))

v. If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period; (40 CFR §60.2770(e))

vi. The highest recorded 3-hour average and the lowest recorded 3-hour average (30-day average for energy recovery units), as applicable, for each operating parameter recorded for the calendar year being reported; (40 CFR §60.2770(f))

vii. Information recorded under 40 CFR §60.2740(b)(6) and (c) through (e) for the calendar year being reported; (40 CFR §60.2770(g))

viii. For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested and the date that such performance test was conducted. Submit, following the procedure specified in 40 CFR §60.2795(b)(1), the performance test report no later than the date that you submit the annual report; (40 CFR §60.2770(h))

ix. If you met the requirements of 40 CFR §60.2720(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of 40 CFR §60.2720(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period; (40 CFR §60.2770(i))

x. Documentation of periods when all qualified CISWI operators were unavailable for more than 8 hours, but less than 2 weeks; (40 CFR §60.2770(j))

xi. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §60.11(d), including actions taken to correct a malfunction; (40 CFR §60.2770(k))

xii. For each deviation from an emission or operating limitation that occurs for a CISWI for which you are not using a CMS to comply with the emission

or operating limitations in this subpart, the annual report must contain the following information: (40 CFR §60.2770(l))

1) The total operating time of the CISWI at which the deviation occurred during the reporting period; and (40 CFR §60.2770(l)(1))

2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. (40 CFR §60.2770(l)(2))

xiii. If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart: (40 CFR §60.2770(m))

1) The date and time that each malfunction started and stopped; (40 CFR §60.2770(m)(1))

2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks; (40 CFR §60.2770(m)(2))

3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken; (40 CFR §60.2770(m)(3))

4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period; (40 CFR §60.2770(m)(4))

5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period; (40 CFR §60.2770(m)(5))

6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes; (40 CFR §60.2770(m)(6))

7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI at which the

continuous monitoring system downtime occurred during that reporting period; (40 CFR §60.2770(m)(7))

8) An identification of each parameter and pollutant that was monitored at the CISWI; (40 CFR §60.2770(m)(8))

9) A brief description of the CISWI; (40 CFR §60.2770(m)(9))

10) A brief description of the continuous monitoring system; (40 CFR §60.2770(m)(10))

11) The date of the latest continuous monitoring system certification or audit; and (40 CFR §60.2770(m)(11))

12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period. (40 CFR §60.2770(m)(12))

xiv. If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period. (40 CFR §60.2770(n))

xv. A continuous monitoring system is out of control if any of the following occur: (40 CFR §60.2770(o))

1) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard; (40 CFR §60.2770(o)(1))

2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; and (40 CFR §60.2770(o)(2))

3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard. (40 CFR §60.2770(o)(3))

xvi. For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies. (40 CFR §60.2770(p))

f. **What else must I report if I have a deviation from the operating limits or the emission limitations? (40 CFR §60.2775)**

i. You must submit a deviation report if any recorded 3-hour average (30-day average for energy recovery units or for PM CPMS) parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm

sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation, if a 30-day average measured a CEMS deviated from any emission limitation. (40 CFR §60.2775(a))

ii. The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31). (40 CFR §60.2775(b))

g. **What must I include in the deviation report? (40 CFR §60.2780)**

In each report required under 40 CFR §60.2775, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the four items described in paragraphs (a) through (d) of this section:

i. The calendar dates and times your unit deviated from the emission limitations or operating limit requirements; (40 CFR §60.2780(a))

ii. The averaged and recorded data for those dates; (40 CFR §60.2780(b))

iii. Durations and causes of the following: (40 CFR §60.2780(c))

1) Each deviation from emission limitations or operating limits and your corrective actions; and (40 CFR §60.2780(c)(1))

2) Bypass events and your corrective actions. (40 CFR §60.2780(c)(2))

iv. A copy of the operating limit monitoring data during each deviation and for any test report that documents the emission levels the process unit(s) tested, the pollutant(s) tested and the date that the performance test was conducted. Submit, following the procedure specified in 40 CFR §60.2795(b)(1), the performance test report no later than the date that you submit the deviation report. (40 CFR §60.2780(d))

h. **What else must I report if I have a deviation from the requirement to have a qualified operator accessible? (40 CFR §60.2785)**

i. If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section: (40 CFR §60.2785(a))

1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section: (40 CFR §60.2785(a)(1))

(a) A statement of what caused the deviation; (40 CFR §60.2785(a)(1)(i))

(b) A description of what you are doing to ensure that a qualified operator is accessible; and (40 CFR §60.2785(a)(1)(ii))

(c) The date when you anticipate that a qualified operator will be available. (40 CFR §60.2785(a)(1)(iii))

2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section: (40 CFR §60.2785(a)(2))

(a) A description of what you are doing to ensure that a qualified operator is accessible; (40 CFR §60.2785(a)(2)(i))

(b) The date when you anticipate that a qualified operator will be accessible; and (40 CFR §60.2785(a)(2)(ii))

(c) Request approval from the Administrator to continue operation of the CISWI. (40 CFR §60.2785(a)(2)(iii))

ii. If your unit was shut down by the Administrator, under the provisions of 40 CFR §60.2665(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible. (40 CFR §60.2785(b))

i. **Are there any other notifications or reports that I must submit? (40 CFR §60.2790)**

i. Yes. You must submit notifications as provided by 40 CFR §60.7. (40 CFR §60.2790(a))

ii. If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with 40 CFR §60.2710(a). The notification must identify: (40 CFR §60.2790(b))

1) The name of the owner or operator of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice; (40 CFR §60.2790(b)(1))

2) The currently applicable subcategory under this subpart, and any 40 CFR §part 63 subpart and subcategory that will be applicable after you cease combusting solid waste; (40 CFR §60.2790(b)(2))

3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting; (40 CFR §60.2790(b)(3))

4) The date on which you became subject to the currently applicable emission limits; and (40 CFR §60.2790(b)(4))

5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (b)(2) and (3)of this section. (40 CFR §60.2790(b)(5))

j. **In what form can I submit my reports? (40 CFR §60.2795)**

i. Submit initial, annual and deviation reports electronically or in a paper format, postmarked on or before the submittal due dates. Beginning on April 16, 2021or once the reporting forms has been availablein CEDRI for one year, whichever is later, you must submit subsequent reports on or before the submittal dates to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (https://www3.epa.gov/ttn/chief/cedri/index.html). When the date forms become available in CEDRI will be listed on the CEDRI website. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the report is submitted. (40 CFR §60.2795(a))

ii. Submit results of each performance test and CEMS performance evaluation required by this subpart as follows: (40 CFR §60.2795(b))

1) Within 60 days after the date of completing each performance test (see 40 CFR §60.8) required by this subpart, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section: (40 CFR §60.2795(b)(1))

(a) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, you must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML

schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and (40 CFR §60.2795(b)(1)(i))

(b) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR § 60.4.

2) Within 60 days after the date of completing each continuous emissions monitoring system performance evaluation you must submit the results of the performance evaluation following the procedure specified in either paragraph (b)(1) or (b)(2) of this section: (40 CFR §60.2795(b)(2))

(a) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. CEDRI can be accessed through the EPA's CDX. Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and (40 CFR §60.2795(b)(2)(i))

(b) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR §60.4. (40 CFR §60.2795(b)(2)(ii))

iii. If you are required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, you will be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description identifying the date, time and length of the outage; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator. (40 CFR §60.27959(c))

iv. If you are required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage). If you intend to assert a claim of force majeure, you must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through

due diligence should have known, that the event may cause or caused a delay in reporting. You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator. (40 CFR §60.27959(d))

k. **Can reporting dates be changed? (40 CFR §60.2800)**

If the Administrator agrees, you may change the semiannual or annual reporting dates. See 40 CFR §60.19(c) for procedures to seek approval to change your reporting date.

Table 5 to Subpart DDDD of Part 60—Model Rule—Summary of Reporting Requirements

Report	Due date	Contents	Reference
Waste Management Plan	No later than the date specified in table 1 for submittal of the final control plan	• Waste management plan	40 CFR §60.2755.
Initial Test Report	No later than 60 days following the initial performance test	• Complete test report for the initial performance test • The values for the site-specific operating limits • Installation of bag leak detection systems for fabric filters	40 CFR §60.2760.
Annual report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report	• Name and address • Statement and signature by responsible official • Date of report • Values for the operating limits • Highest recorded 3-hour average and the lowest 3-hour average, as applicable, (or 30-day average, if applicable) for each operating parameter recorded for the calendar year being reported	40 CFR §40 CFR §60.2765 and 60.2770.
		• If a performance test was conducted during the reporting period, the results of the test	
		• If a performance test was not conducted during the reporting period, a statement that the requirements of 40 CFR §60.2720(a) were met	
		• Documentation of periods when all qualified CISWI operators were unavailable for more than 8 hours but less than 2 weeks	
		• If you are conducting performance tests once every 3 years consistent with 40 CFR §60.2720(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in 40 CFR §60.2720(a) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions	
		Any malfunction, deviation, or continuous monitoring system out of control periods information as specified in § 60.2770(k) through (o)	
		Fuel input information for energy recovery unit subcategory verification as specified in § 60.2770(p)	
Emission limitation or operating limit deviation report	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year	• Dates and times of deviation • Averaged and recorded data for those dates • Duration and causes of each deviation and the corrective actions taken • Copy of operating limit monitoring data and any test reports • Dates, times and causes for monitor downtime incidents	40 CFR §60.2775 and 60.2780.
Qualified Operator Deviation Notification	Within 10 days of deviation	• Statement of cause of deviation • Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible	40 CFR §60.2785(a)(1).
Qualified Operator Deviation Status Report	Every 4 weeks following deviation	• Description of efforts to have an accessible qualified operator • The date a qualified operator will be accessible • Request for approval to continue operation	40 CFR §60.2785(a)(2).

Report	Due date	Contents	Reference
Qualified Operator Deviation Notification of Resumed Operation	Prior to resuming operation	• Notification that you are resuming operation	40 CFR §60.2785(b)

[a]This table is only a summary, see the referenced sections of the rule for the complete requirements.

Table 8 to Subpart DDDD of Part 60—Model Rule—Emission Limitations That Apply to Waste-Burning Kilns After May 20, 2011

For the air pollutant	You must meet this emission limitation[b]	Using this averaging time	And determining compliance using this method
Cadmium	0.0014 milligrams per dry standard cubic meter.[c]	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR §part 60, appendix A-8).
Carbon monoxide	110 (long kilns)/790 (preheater/precalciner) parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR §part 60, appendix A-4).
Dioxins/furans (total mass basis)	1.3 nanograms per dry standard cubic meter.[c]	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR §part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.075 nanograms per dry standard cubic meter.[c]	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR §part 60, appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume.[c]	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCl CEMS is being used	If a wet scrubber or dry scrubber is used, performance test (Method 321 at 40 CFR §part 63, appendix A of this part). If a wet scrubber or dry scrubber is not used, HCl CEMS as specified in § 60.2710Ij).
Lead	0.014 milligrams per dry standard cubic meter.[c]	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Performance test (Method 29 at 40 CFR §part 60, appendix A-8).
Mercury	0.011 milligrams per dry standard cubic meter	30-day rolling average	Mercury CEMS or integrated sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B and procedure 5 of appendix F of this part), as specified in § 60.2710Ij).
Nitrogen oxides	630 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR §part 60, appendix A-4).
Particulate matter filterable	13.5 milligrams per dry standard cubic meter	30-day rolling average	PM CPMS (as specified in 40 CFR §60.2710(x))
Sulfur dioxide	600 parts per million dry volume	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR §part 60, appendix A-4).

[a]The date specified in the state plan can be no later than 3 years after the effective date of approval of a revised state plan or February 7, 2018.

[b]All emission limitations are measured at 7 percent oxygen (except for CEMS and integrated sorbent trap monitoring system data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

[c]In lieu of performance testing, you may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as you comply with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in § § 60.2710 and 60.2730. As prescribed in § 60.2710(u), if you use a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, your averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations..

[d]Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in 60.2710(y)(3). They are not subject to the CEMS, integrated sorbent trap monitoring system, or CPMS requirements that otherwise may apply to the main kiln exhaust.

Appendix E – Accepted Control Efficiencies (unless otherwise approved in writing)

Identifier	Description	Accepted efficiency and justification option* or **	Notes
C-133	Fabric Filter (EU U1)	98% for particulate matter*	1 & 2
C-134	Fabric Filter (EU U1)	98% for particulate matter *	1 & 2
C-136	Fabric Filter (EU U1)	98% for particulate matter *	1 & 2
C-145	Fabric Filter (EU U1)	98% for particulate matter *	1 & 2
C-162	Secondary Crusher Fabric Filter (EU U2/3)	0.0014 grains/dscf; 6/26/07 stack test**	1, 3 & 4
C-158	Fabric Filter (EU U2/3)	0.001375 grains/dscf; 5/29/03 stack test**	1, 3 & 5
C-332	Fabric Filter (EU U4)	98% for particulate matter*	1 & 2
C-401-2	Fabric Filter (EU U5)	0.0006 grains/dscf; identical to K- 401-4, 12/08/08 stack test**	1, 3 & 4
C-401-4	Fabric Filter (EU U5)	0.0006 grains/dscf; 12/08/08 stack test**	1, 3 & 4
C-402	Fabric Filter (EU U5)	98% for particulate matter*	1 & 2
C-210-1	Fabric Filter (EU U5)	98% for particulate matter*	1 & 2
C-239	Fabric Filter (EU U5)	98% for particulate matter*	1 & 2
C-231(C-216)	Clay dryer baghouse; Baghouse preceeded by the 216 cyclone (EU U5)	0.0015 grains/dscf; 11/11/10 stack test**	1, 3 & 4
C-335	Fabric Filter (EU U5)	98% for particulate matter*	1 & 2
C-355	Sand Storage Baghouse (EU U5)	0.0006 grains/dscf or 92.95% reduction; 7/02/07 stack test**	1, 3 & 4
C-357	Fabric Filter (EU U5)	0.0005 grains/dscf; 6/07/07 stack test**	1, 3 & 4
C-392	Flyash Storage Silo Baghouse (EU U5)	0.0021 grains/dscf; 6/14/06 stack test**	1, 3 & 5
C-522	Fabric Filter (EU U6)	98% for particulate matter*	1 & 2
C-511	Fabric Filter (EU U6)	98% for particulate matter *	1 & 2
C-510	Fabric Filter (EU U6)	98% for particulate matter *	1 & 2
C-415	Fabric Filter (EU U8)	0.0008 grains/dscf or 99.99% reduction; 12/10/08 stack test**	1, 3 & 4
C-421	Fabric Filter (EU U8)	0.0015 grains/dscf; 12/12/11 stack test**	1, 3 & 4

Identifier	Description	Accepted efficiency and justification option* or **	Notes
C-454	Fabric Filter (EU U9)	0.0007 grains/dscf; 12/11/08 stack test (K-451 representative)**	1, 3 & 4
C-448	Fabric Filter (EU U9)	0.0007 grains/dscf; 12/11/08 stack test (K-451 representative)**	1, 3 & 4
C-451	Fabric Filter (EU U9)	0.0007 grains/dscf; 12/11/08 stack test**	1, 3 & 4
C-445	Fabric Filter (EU U9)	0.0008 grains/dscf or 99.99% reduction; 12/10/08 stack test (K-415 representative)**	1, 3 & 4
C-600	Fabric Filter (EU U11)	98% for particulate matter*	1 & 2
C-557	Fabric Filter (EU U11)	98% for particulate matter*	1 & 2
C-618-3	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-618	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-627	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-560-4	Fabric Filter (EU U12)	98% for particulate matter*	1, 2 & 6
C-559	Fabric Filter (EU U12)	98% for particulate matter *	1, 2 & 6
C-564	Fabric Filter (EU U12)	98% for particulate matter *	1, 2 & 6
C-640	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-642	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-647	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-545 (C-541)/ C-945	Fabric Filter (EU U7/U13)	0.0014 grains/dscf; 04/08/14 stack test**	1, 3 & 4
C-945-32	Fabric Filter (EU U7/U13)	The make of the dust collector, Fuller Plenum Pulse, is the same make as K-231, which has 0.0015 grains/dscf from 11/11/10 stack test.**	1, 3 & 4
C-902-1	Fabric Filter (EU U16/U17)	98% for particulate matter *	1 & 2
C-857-1,2,3	Fabric Filter (EU U16/U17)	98% for particulate matter*	1 & 2

Identifier	Description	Accepted efficiency and justification option* or **	Notes
C-865-5	Fabric Filter (EU U16/U17)	98% for particulate matter*	1 & 2
C-AF-DCI	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-AF-DC2	Fabric Filter (EU U12)	98% for particulate matter*	1 & 2
C-924	Clinker Cooler Baghouse (EU U18)	0.003 grains/dscf; 4/9/14 stack test**	1 & 3
C-915-4	Fabric Filter (EU U18)	0.005 grains/dscf; 6/13/06 stack test**	1, 3 & 5
C-949A	Fabric Filter (EU U19)	0.0019 grains/dscf; 5/21/12 stack test**	1 & 3
C-949B	Fabric Filter (EU U19)	0.0019 grains/dscf; 5/21/12 stack test (K-949A representative)**	1 & 3
C-949-5	Fabric Filter (EU U19)	0.0006 grains/dscf; 5/21/12 stack test**	1 & 3
C-953/954	Fabric Filter (EU U19)	98% for particulate matter*	1 & 2
C-958	Fabric Filter (EU U19)	98% for particulate matter*	1 & 2
C-974	Clinker Storage Baghouse (EU U19)	0.0025 grains/dscf; 06/13/06 stack test**	1, 3 & 5
C-938	Fabric Filter (EU U19)	98% for particulate matter*	1 & 2
C-961	Fabric Filter (EU U19)	0.001 grains/dscf; 12/10/08 stack test**	1, 3 & 4
C-1317	Fabric Filter (EU U19)	98% for particulate matter*	1 & 2
C-1316	Fabric Filter (EU U19)	98% for particulate matter*	1 & 2
C-1012	Fabric Filter (EU U20)	98% for particulate matter*	1 & 2
C-1014	Fabric Filter (EU U20)	0.0023 grains/dscf; 11/15/16 stack test**	1, 3 & 4
C-1027	Fabric Filter (EU U21)	98% for particulate matter*	1 & 2
C-1030	Fabric Filter (EU U21)	0.0015 grains/dscf; 10/12/15 stack test **	1, 3 & 4
C-1103	Fabric Filter (EU U22)	98% for particulate matter*	1 & 2
C-1113	Fabric Filter (EU U22)	98% for particulate matter*	1 & 2
C-1115	Fabric Filter (EU U22)	98% for particulate matter*	1 & 2
C-1128	Fabric Filter (EU U22)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 3 & 4
C-1450	Fabric Filter (EU U24)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 3 & 4
C-1452	Fabric Filter (EU U24)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 3 & 4

Identifier	Description	Accepted efficiency and justification option* or **	Notes
C-1454	Fabric Filter (EU U24)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 3 & 4
C-1487	Fabric Filter (EU U24)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 2, 3 & 4
C-1491	Fabric Filter (EU U24)	The make and manufacturer are the same as those used for the K-1014, which have demonstrated a grain loading of 0.01 gr/dscf* based upon stack testing 12/9/08.**	1, 2, 3 & 4
C-1431	Fabric Filter (EU U24)	98% for particulate matter*	1, 2 & 3
C-1430	Fabric Filter (EU U24)	98% for particulate matter*	1, 2 & 3
C-1601	Dome silo bin vent (EU U24)	98% for particulate matter*	1, 2 & 3
C-1603	Fabric Filter (EU U24)	98% for particulate matter *	1, 2 & 3
C-1629	Fabric Filter (EU U24)	98% for particulate matter*	1, 2, & 3
C-1628	Fabric Filter (EU U24)	98% for particulate matter*	1, 2, & 3
C-1635	Fabric Filter (EU U24)	0.0007 grains/dscf*; May 2012 stack test**	1, 2 & 3
C-1321	Fabric Filter (EU U24)	98% for particulate matter**	1, 2 & 3
C-1499-2	Fabric Filter (EU U25)	98% for particulate matter*	1, 2 & 3
C-1420	Fabric Filter (EU U25)	98% for particulate matter*	1, 2 & 3
C-1425	Fabric Filter (EU U25)	98% for particulate matter*	1, 2 & 3
C-1400	Fabric Filter (EU U25)	98% for particulate matter*	1, 2 & 3
C-1408	Fabric Filter (EU U25)	0.0003 grains/dscf; 12/11/08 stack test**	1, 2, 3 & 4
C-1412	Fabric Filter (EU U25)	0.0003 grains/dscf; 12/11/08 stack test (K-1408 representative)**	1, 2, 3 & 4
C-ELS	Fabric Filter (EU U25)	98% for particulate matter*	1, 2 & 3
C-1243	Fabric Filter (EU U26)	98% for particulate matter *	1, 2 & 3

Identifier	Description	Accepted efficiency and justification option* or **	Notes
C-1244	Fabric Filter (EU U26)	98% for particulate matter*	1, 2 & 3
C-1246	Fabric Filter (EU U26)	98% for particulate matter *	1, 2 & 3
C-1245	Fabric Filter (EU U26)	98% for particulate matter*	1, 2 & 3
C-1247	Fabric Filter (EU U26)	98% for particulate matter*	1, 2 & 3
C-1136-2	Fabric Filter (EU U31)	98% for particulate matter *	1, 2 & 3
C-1135	Fabric Filter (EU U31)	98% for particulate matter*	1, 2 & 3
C-1152	Fabric Filter (EU U31)	0.0118 grains/dscf; 6/26/07 stack test**	1, 2, 3 & 4
C-1160/1162	Fabric Filter (EU U31)	0.0048 grains/dscf; 6/26/07 stack test**; 1160/1162 is 1 dust collector - each number is 1 compartment	1, 2, 3 & 4
C-SNCR	SNCR	Nitrogen Oxides: 50 %*	1, 2 & 3
C-ST-WS	Sweeper Truck	PM10 Filterable: 75 %* PM2.5 Filterable: 75 %*	1, 2 & 3
Water spray	Dust Suppression	PM10 Filterable: 75 %* PM2.5 Filterable: 75 %*	1, 2 & 3
Enclosure	Enclosure control percentage for **partially** controlled transfer of particulate matter	70% unless otherwise accepted by the District in writing.*	1, 2 & 3

Note:

1. Options for control efficiency/emission factor determination:

   * District pre-approved control efficiency
   **Stack test verified control efficiency

2. Until the District receives an approved stack test (Option **), the pre-approved efficiency (Option *) will be used in all calculations to demonstrate compliance with applicable standards and calculations for emission inventory. The District assumed efficiency for baghouses is 98% unless otherwise approved in writing.

3. General Testing Requirements (Regulation 2.16, section 4.3.1)
   See Emission Unit Plantwide Specific Conditions Testing section.

4. The listed stack test results will become greater than 10 years old during this permit cycle and therefore require re-evaluation by stack test before the expiration date of this permit as described in Note 2.

5. The listed control device stack test results are greater than 10 years old and need to be re-verified by stack test within 180 days from the issuance of this permit in order for the stated control efficiencies to be regarded as valid by the District as described in Note 2.

6. The listed control device stack test results are approved by the District pending verification by stack test as required in the Specific Conditions Testing section of their permit units.

Appendix F – District Approved Emission Factors and Calculation Methodologies

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District. The uncontrolled emission factors can be used to calculate a weighted fraction of controlled emissions for each emission point when using grain loading and if a percent control efficiency is not known.

Point source PM Uncontrolled Emission factors:

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-ClamShell	E-ClamShell	0.001638	0.000775	0.000117	lb/tn	13.2.4	0%
K-100	E-100	0.001638	0.000775	0.000117	lb/tn	13.2.4	0%
K-101	E-101	0.001638	0.000775	0.000117	lb/tn	13.2.4	0%
K-102	E-102	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-103	E-103	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-104	E-104	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-137	E-137	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-137-1	E-137-1a	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
	E-137-1b	0.001638	0.000775	0.000117	lb/tn	13.2.5	70%
K-142	E-142	0.001638	0.000775	0.000117	lb/tn	13.2.4	100%
K-140	E-140	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-inlspile	E-inlspile	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-144	E-144	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-146	E-146	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-148	NA	0.001638	0.000775	0.000117	lb/tn	13.2.5	100%
K-143	E-143	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-167	E-167	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-149	E-149	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-150	E-150a	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
	E-150b	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-151	E-151	0.025	0.0087	0.00625	lb/tn	11.19.2-2	70%
K-152	E-152	0.025	0.0087	0.00625	lb/tn	11.19.2-2	70%
K-159	E-159	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-159-1	E-159-1	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-160	E-160	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-LS-Loader	E-LS-OVERS	0.001638	0.000775	0.000117	lb/tn	13.2.4	0%
K-165	E-165	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-153	E-153	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-157	E-157	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-156	E-156	0.02	0.01	0.005	lb/tn	11.6-4	70%
K-309-312	E-309	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-313	E-313	0.0069	0.000775	0.000117	lb/tn	13.2.4	70%
K-314	E-314	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-320	E-320	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-ClayLoader	E-ClayLoader	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-201	E-201	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-202	E-202	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-210	E-210a	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
	E-210b	0.025	0.0087	0.00625	lb/tn	13.2.4	70%
K-209	E-209	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-203	E-203	0.02	0.01	0.005	lb/tn	13.2.4	70%
K-204	E-204	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
	E-204b	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-205	E-205	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-206	E-ClayDry	2	1	0.5	lb/tn	13.2.4	90%*
	E-206	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-207	E-207	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-208	E-208	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-213	E-213	0.000875	0.000414	0.000063	lb/tn	13.2.4	70%
K-354	E-351	0.001269	0.0006	0.000091	lb/tn	13.2.4	70%
K-356	E-356	0.001269	0.0006	0.000091	lb/tn	13.2.4	70%
K-359	E-386	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-360	E-Flyashload	3.14	1.1	0.785	lb/hr	11.12-2	70%
K-375	E-366	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-366	E-360	0.001638	0.000775	0.000117	lb/tn	11.6-4	100%
K-319	E-319	3.14	1.1	0.785	lb/tn	11.12-2	70%
K-215	E-215	0.000875	0.000414	0.000063	lb/tn	13.2.4	100%
K-217	E-217	0.000875	0.000414	0.000063	lb/tn	13.2.4	100%
K-351-353	E-Sand	0.000875	0.000414	0.000063	lb/tn	13.2.4	100%
K-358-1	E-358-1	0.000875	0.000414	0.000063	lb/tn	13.2.4	100%
K-386	E-375	0.000875	0.000414	0.000063	lb/tn	13.2.4	100%
K-329	E-329	0.001638	0.000775	0.000117	lb/tn	11.6-4	100%
K-317	E-215b	0.0021	0.00099	0.000525	lb/tn	11.12-2	70%
	E-317	0.001638	0.000775	0.000117	lb/tn	11.6-4	70%
K-315	E-215a	0.0021	0.00099	0.000525	lb/tn	11.12-2	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
	E-315	0.001638	0.000775	0.000117	lb/tn	11.6-4	70%
K-324	E-324	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-325	E-325	0.38	0.19	0.095	lb/tn	13.2.4	70%
K-322	E-322	0.000621	0.000294	0.000044	lb/tn	13.2.4	70%
K-316	E-217a	0.0021	0.00099	0.000525	lb/tn	11.12-2	70%
	E-316	0.001638	0.000775	0.000117	lb/tn	11.6-4	70%
K-318	E-217b	0.0021	0.00099	0.000525	lb/tn	11.12-2	70%
	E-318	0.001638	0.000775	0.000117	lb/tn	11.6-4	70%
K-321	E-321	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-323	E-323	0.38	0.19	0.095	lb/tn	13.2.4	70%
K-327	E-327	0.38	0.19	0.095	lb/tn	11.6-4	70%
K-250	E-250	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-401	E-401	0.001638	0.000775	0.000117	lb/tn	13.2.4	70%
K-519	E-519	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-520	E-520	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-520.1	E-520a	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
	E-520b	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-RawLoader	E-RawLoader	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-516	E-516	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-517	E-517	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-518	E-518	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-521	E-521	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-523	E-523	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-524	E-524	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-526	E-526	0.24	0.12	0.06	lb/tn	11.6-4	90%[t]
K-536	E-536	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-538	E-538	0.032	0.016	0.008	lb/tn	11.6-4	0%
K-541	E-541	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-560-2	E-560-2	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-945-27	E-945-27	0.062	0.031	0.0155	lb/tn	11.6-4	90%[t]
K-540-1	E-540-1	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-560-2	E-560-2	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-945-29	E-945-29	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-945-30	E-945-30	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-990	E-990	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-992	E-992	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-PAC	E-PAC	0.61	0.61	0.61	lb/tn	11.17	0%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-AF 4	E-AF 4	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K-AF 5	E-AF 5	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K-AF 6	E-AF 6	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K- AF 7	E- AF 7	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K- AF 8	E- AF 8	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K- AF9	E- AF9	0.001638	0.000043	0.000024	lb/tn	11.6-4	0%
K-AF 1	E-AF 1	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-AF DS	E-AF DS	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-AF 2	E-AF 2	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-AF ELEV	E-AF ELEV	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-AF 3	E-AF 3	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-AF Bin	E-AF Bin	0.001638	0.000775	0.000117	lb/tn	11.6-4	0%
K-406	E-406	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-407	E-407	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-408	E-408	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-409	E-409	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-411	E-411	0.028	0.014	0.007	lb/tn	11.6-4	0%
K-412	E-412	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-413	E-413	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-414	E-414	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-428	E-428	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-429	E-429	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-430	E-430	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-434	E-434	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-435	E-435	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-436	E-436	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-437	E-437	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-439	E-439	0.028	0.014	0.007	lb/tn	11.6-4	0%
K-440	E-440	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-441	E-441	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-442	E-442	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-601W	E-443a/625d	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
K-602E	E-443b/625c	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
K-601	E-601	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-602	E-602	0.062	0.031	0.0155	lb/tn	11.6-4	100%
K-554	E-625a	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
	E-554	0.062	0.031	0.0155	lb/tn	11.12-4	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-555	E-625b	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
	E-555	0.062	0.031	0.0155	lb/tn	11.12-5	70%
K-556	E-625c	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
	E-556	0.062	0.031	0.0155	lb/tn	11.12-3	70%
K-616	E-616	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-561	E-561	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
K-560	E-560	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-560-7	E-560-7	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-560-2	E-560-2	0.062	0.031	0.0155	lb/tn	11.6-4	70%
	E-541B	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-617	E-617	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-562	E-562	0.0069	0.0033	0.001725	lb/tn	11.12-2	70%
K-621-3	E-621-3	0.062	0.031	0.0155	lb/tn	11.6-3	70%
K-622	E-622	0.062	0.031	0.0155	lb/tn	11.6-3	100%
K-623	E-623	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-623-3	E-623-3	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-624	E-624	0.38	0.19	0.095	lb/tn	11.6-4	70%
K-645	E-645	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-328-1	E-328-1	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-639	E-639	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-637	E-637	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-648	E-648	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-651	E-651	0.062	0.031	0.0155	lb/tn	11.6-4	70%
K-Coal2	E-Coal2	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-PC2	E-PC2	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-1302a	E-1302a	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-1302b	E-1302b	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-1302-1	E-1302-1	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-1302-2	E-1302-2	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-1303	E-1303	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-1304-1	E-1304-1	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-1306-1	E-1306-1	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-1307	E-1307	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-1309	E-1309	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-902	E-902	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-849	E-849	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%
K-850	E-850	0.001022	0.000484	0.000073	lb/tn	13.2.4	0%

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K-855	E-855	0.24	0.12	0.06	lb/hr	13.2.4	70%
K-857-1,2,3	E-857	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-865	E-865	0.001022	0.000484	0.000073	lb/tn	13.2.4	70%
K-909	E-909a	30.27	2.60322	0.163458	lb/tn kiln feed	Test 05-07	0%
	E-909b	30.27	2.60322	0.163458	lb/tn kiln feed	Test 05-08	0%
K-909-4	E-909-4	0.015588	0.007373	0.001116	lb/tn	13.2.4	100%
K-911	E-911	0.015588	0.007373	0.001116	lb/tn	13.2.4	100%
K-911-1	E-911-1	0.015588	0.007373	0.001116	lb/tn	13.2.4	100%
K-914	E-914	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-912	E-912	0.015588	0.007373	0.001116	lb/tn	13.2.5	70%
	E-912a	0.015588	0.007373	0.001116	lb/tn	13.2.10	70%
	E-912b	0.015588	0.007373	0.001116	lb/tn	13.2.6	70%
K-913	E-913a	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
	E-913b	0.015588	0.007373	0.001116	lb/tn	13.2.6	70%
	E-913	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-915	E-915	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-Limestone Loader	E-Limestone Loader	0.000235	0.000111	0.000017	lb/tn	13.2.4	0%
K-Clinker Loader	E-Clinker Loader	0.000235	0.000111	0.000017	lb/tn	13.2.5	0%
K-Gyp Loader	E-Gyp Loader	0.000235	0.000111	0.000017	lb/tn	13.2.6	0%
K-1311	E-Gyp Hopper	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1312	E-1312a	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
	E-1312b	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1314	E-1314a	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
	E-1314b	0.000235	0.000111	0.000017	lb/tn	13.2.5	70%
K-Syngyp Loader	E-Syngyp Loader 1	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
	E-Syngyp Loader 2	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
	E-Syngyp Loader 3	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1318/1318-1	E-1318	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1319	E-1319	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1351/1350-1	E-1350-1	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1352	E-1352	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1353/1350-2	E-1350-2	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%

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K-1354	E-1354	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-949	E-949a	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
	E-949b	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-949-3	E-949-3	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-950	E-950	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-Crush Crusher	E-B	0.0054	0.0087	0.00135	lb/tn	11.19.2-3	70%
K-Crush Screen	E-C	0.025	0.0024	0.00625	lb/tn	11.19.2-3	70%
K-Crush Loader	E-A	0.015588	0.007373	0.001116	lb/tn	13.2.2	70%
K-Crush Belt	E-D	0.015588	0.007373	0.001116	lb/tn	13.2.3	70%
K-951-1-6	E-951	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-952	E-952	0.015588	0.007373	0.001116	lb/tn	13.2.3	70%
K-955	E-955	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-956	E-956a	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
	E-956b	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
	E-956c	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-975	E-975	0.015588	0.007373	0.001116	lb/tn	13.2.4	100%
K-1000	E-1000a	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1000-1	E-1000-1	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1001	E-1001	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1001-1	E-1001-1	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1002	E-1002	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1003	E-1003	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-1005	E-1005	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1006	E-1006	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1007	E-1007	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1008	E-1008	0.028	0.014	0.007	lb/tn	11.6-4	0%
K-1009	E-1009	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1009-1	E-1009-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1038	E-1038	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1036b	E-1036b	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1070	E-1070	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1011	E-1011	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1015	E-1015	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1015-1	E-1015-1	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1016	E-1016	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1016-1	E-1016-1	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%

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K-1017	E-1017	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1018	E-1018	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-1020	E-1020	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1021	E-1021	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1021-1	E-1021-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1022	E-1022	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1023	E-1023	0.028	0.014	0.007	lb/tn	11.6-4	0%
K-1024	E-1024	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1024-1	E-1024-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1025	E-1025	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1030-23	E-1030-23	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1038	E-1038	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1032	E-1032	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1035	E-1035	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1036	E-1036a	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1071	E-1071	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1026	E-1026	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1105	E-1011	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1124	E-1105	0.188	0.094	0.047	lb/tn	11.6-4	70%
K-1116	E-585	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1126	E-1116	0.188	0.094	0.047	lb/tn	11.6-4	70%
K-1127	E-1122	0.048	0.024	0.012	lb/tn	11.6-2	70%
	E-1124	0.048	0.024	0.012	lb/tn	11.6-3	70%
K-1129	E-1127	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1130	E-1129	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-1133	E-1130	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1122	E-1114	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1114	E-LimeTruck	0.048	0.024	0.012	lb/tn	11.6-5	0%
K-1322	E-1320	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1320	E-1175b	0.048	0.024	0.012	lb/tn	11.6-5	70%
K-Silo 6 and 9	E-1322a	0.73	0.47	0.1825	lb/tn	11.6-4	70%
K-Silo 5 and 8	E-1322b	0.73	0.47	0.1825	lb/tn	11.6-4	70%
K-Silo 4 and 7	E-1322c	0.73	0.47	0.1825	lb/tn	11.6-4	70%
K-1468	E-1468	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1485	E-1485	0.098	0.049	0.0245	lb/tn	36017-13-C	70%
K-1478	E-1478	0.048	0.024	0.012	lb/tn	11.6-4	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-1490	E-1490a	0.048	0.024	0.012	lb/tn	11.6-5	70%
	E-1490b	0.048	0.024	0.012	lb/tn	11.6-6	70%
K-1443	E-1443	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1493	E-1493	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1433	E-1433	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1438	E-1438	0.098	0.049	0.0245	lb/tn	11.12-2	70%
K-1600	E-1600	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1602	E-1602	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1604	E-1604	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1611	E-1611	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1611-2	E-1611-2	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1627	E-1627	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1631	E-1631	0.098	0.049	0.0245	lb/tn	11.12-2	70%
K-Dome Bypass	E-Dome Bypass	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-SILO 10	E-SILO 10	0.73	0.47	0.1825	lb/tn	11.12-2	100%
K-SILO 11	E-SILO 11	0.73	0.47	0.1825	lb/tn	11.12-2	100%
K-SILO 12	E-1499b	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-1499	E-SILO 13b, 14b, 16b	0.048	0.024	0.012	lb/tn	11.12-2	70%
K-1424/1427	E-CS-1,2,3	0.048	0.024	0.012	lb/tn	11.12-2	70%
	E-Silo12	0.048	0.024	0.012	lb/tn	11.12-2	70%
K-Silo 1-3	E-OFM	0.048	0.024	0.012	lb/tn	11.12-2	70%
	E-1499	0.73	0.47	0.1825	lb/tn	11.6-4	70%
K-1403-1	E-CSILO1	0.048	0.024	0.012	lb/tn	11.12-2	70%
K-1403	E-CSILO3	0.048	0.024	0.012	lb/tn	11.12-2	70%
K-1404	E-CSILO2	0.048	0.024	0.012	lb/tn	11.12-2	70%
	E-1404	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1410	E-1410	0.098	0.049	0.0245	lb/tn	11.12-2	70%
K-1403-2	E-1403	0.048	0.024	0.012	lb/tn	11.12-2	70%
	E-1403-2	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1406	E-1406	0.098	0.049	0.0245	lb/tn	11.12-2	70%
K-SILO13	E-SILO13a	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-SILO14	E-SILO14a	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-SILO15	E-SILO15a	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-SILO16	E-SILO16	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-SILO17	E-SILO17	0.73	0.47	0.1825	lb/tn	11.12-2	70%
K-1229	E-SILO13b	0.048	0.024	0.012	lb/tn	11.6-4	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-1220	E-1220	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1204	E-1204	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1205	E-1205	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1209	E-1209	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1210	E-1210	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1219	E-1219	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1233-1	E-1233-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1231	E-1231	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1235	E-1235	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1237	E-1237	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1237-2	E-1237-2	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1238	E-1238	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1238-1	E-1238-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1241	E-1241	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1226	E-1226	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1237-1	E-1237-1	0.048	0.024	0.012	lb/tn	11.6-4	100%
K-1206	E-SILO15b	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1207	E-1206	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1230	E-1229	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1232	E-1231	0.048	0.024	0.012	lb/tn	11.6-5	70%
K-1212	E-1210	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1217	E-1217	0.048	0.024	0.012	lb/tn	11.6-5	70%
K-1232	E-1231	0.048	0.024	0.012	lb/tn	11.6-6	70%
K-1211	E-1209	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1218	E-1218	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-964	E-964	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1136	E-1136	0.015588	0.007373	0.001116	lb/tn	13.2.4	70%
K-1137	E-1137	0.000235	0.000111	0.000017	lb/tn	13.2.4	70%
K-1138	E-1138	0.188	0.094	0.047	lb/tn	11.6-4	70%
K-1139	E-1139	0.188	0.094	0.047	lb/tn	11.6-4	70%
K-1140	E-1140	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1141	E-1141	0.24	0.12	0.06	lb/tn	11.6-4	70%
K-1148	E-1148	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1150	E-1150	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1155	E-1155	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1181	E-1181a	0.028	0.014	0.007	lb/tn	11.6-4	0%
	E-1181b	0.048	0.024	0.012	lb/tn	11.6-4	70%

Equipment ID	Emission Point ID	District Uncontrolled EF PM	District Uncontrolled EF PM10	District Uncontrolled EF PM2.5	EF units	AP-42 reference or other	Accepted enclosure reduction
K-1185	E-1185	0.048	0.024	0.012	lb/tn	11.6-4	70%
K-1175	E-1175	0.188	0.094	0.047	lb/tn	11.6-4	70%

*The Clay Dryer reduction of 90% is attributed based on integrated control by cyclone.

ᵗThe unit U7U/13 cyclone reduction of 90% is attributed based on integrated control by cyclone.

Material Transfer Operations:

Material Handled*	Average Moisture %	PM Emission Factor (lb/ton handled)	PM-10 Emission Factor (lb/ton handled)	PM-2.5 Emission Factor (lb/ton handled)
Limestone Average Moisture Content (%)	5	1.64E-03	7.75E-04	1.17E-04
Clay Average Moisture Content (%)	10	6.21E-04	2.94E-04	4.44E-05
Dry Clay Average Moisture Content (%)	2	5.91E-03	2.79E-03	4.23E-04
Iron Ore Average Moisture Content (%)	5	1.64E-03	7.75E-04	1.17E-04
Coal Average Moisture Content (%) As Rcvd	7	1.02E-03	4.84E-04	7.32E-05
TDF Shreds & Components Average Moisture Content[1]	5	1.64E-03	4.26E-05	2.36E-05
Shredded RDF	5	1.64E-03	7.75E-04	1.17E-04
Sand Average Moisture Content (%)	6	1.27E-03	6.00E-04	9.09E-05
Bottom Ash	10	6.21E-04	2.94E-04	4.44E-05
Gypsum Average Moisture Content (%)	20	2.35E-04	1.11E-04	1.68E-05
Flyash Average Moisture Content (%)	1	1.56E-02	7.37E-03	1.12E-03
Clinker Average Moisture Content (%)	1	1.56E-02	7.37E-03	1.12E-03

*Moisture Content source information was provided per Kosmos PTE submittal received 8/19/2014

Process Fugitives:

The emission factors were determined using the drop point emissions equation in AP-42, Chapter 13.2.4.

$$E = (k) * (0.0032) * \left[\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}\right]$$

E = PM emission factor (lb/ton)

k = particle size multiplier

U = mean wind speed (mph)[166]

M = material moisture content (%)

Storage Piles:

The emission factors were determined based on the following equations for transfer emissions and wind emissions:

Transfer Emissions

$$E = (k) * (0.0032) * \left[\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}\right]$$

[166] Mean wind speed is obtained annually for completion of the survey of emissions. For PTE, maximum monthly mean wind speed (mph) source is from the month of March (NOAA, 1947 2012)."

E = PM emission factor (lb/ton)

k = particle size multiplier

U = mean wind speed (mph)[166]

M = material moisture content (%)

Wind Emissions

$$EF = (1.7) * \left(\frac{s}{1.5}\right) * \left(\frac{f}{15}\right) * \left(\frac{365-p}{235}\right)$$

EF = PM emission factor (lb/acre/day)

s = silt content of the aggregate (%) = 5.0%

f = percent of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

p = number of days with >= 0.01 in. of precipitation per year

$$E = (A) * (n) * \left(\frac{EF}{2000\ lb/ton}\right)$$

E = Emissions (tpy)

A = size of the pile (acres)

n = number of days per year the pile is continuously active = 365 days

PM_{10} Emissions = (0.5) * (PM Emissions)

$PM_{2.5}$ Emissions = (0.15) * (PM Emissions)

<u>Paved Roads:</u>

The emission factors were determined using the following equation found in AP-42, Chapter 13.2.1:

$$E_{paved} = [(k) * (sL)^{0.91} * (W)^{1.02}]\left(1 - \frac{P}{4*N}\right)$$

E_{paved} = PM emission factor (lb/VMT)

k = particulate size multiplier (lb/VMT)

sL = road surface silt loading (g/m^2)

W = average weight of the vehicles travelling the roads (tons)

P = number of "wet" days with at least 0.01 in of precipitation during the averaging period

N = number of days in the averaging period

<u>Unpaved Roads:</u>

The emission factors were determined using the following equation found in AP-42, Chapter 13.2.2:

$$E_{unpaved} = \left[(k) * \left(\frac{s}{12}\right)^a * \left(\frac{W}{3}\right)^b\right]\left(\frac{365-P}{365}\right)$$

$E_{unpaved}$ = PM emission factor

k = particle size multiplier (lb/VMT)

s = surface material silt content (%)

W = mean vehicle weight (tons)

a = particle size empirical constant

b = particle size empirical constant

P = number of "wet" days with at least 0.01 in of precipitation during the averaging period = 123 days

Heavy Equipment:

The emission factors were determined using the following equation found in AP-42, Chapter 13.2.2:

$$E_{heavy\ eqp.} = \left[(k) * \left(\frac{s}{12}\right)^{a} * \left(\frac{W}{3}\right)^{b}\right]\left(\frac{365-P}{365}\right)$$

$E_{unpaved}$ = PM emission factor

k = particle size multiplier (lb/VMT)

s = surface material silt content (%) = 10.0%

W = mean vehicle weight (tons) = 34 tons

a = particle size empirical constant

b = particle size empirical constant

P = number of "wet" days with at least 0.01 in of precipitation during the averaging period

Combustion:

The emission factors found in AP-42; Chapter 3.3-1 and 3.3-2 for Emergency Generators and 75hp Engine; Chapter 1.4-1, 1.4-2 and 1.4-3 for natural gas used in kiln, clay dryer and raw mills; 1.3-1, 1.3-2, 1.3-6 and 1.3-9 for kiln fuel oil.

Kiln emissions other than point source PM emission factors above:

The following list of controlled emission factors may be used for controlled emission calculations as long as the basis of the emission factor is confirmed from a stack test conducted within 10 years or AP-42.

Pollutant	Emission Factor			
VOC (THC)	0.05	lb/ton kiln feed	20.00	lb/hr
CO	CEMS DATA		392.00	lb/hr
NOx	CEMS DATA		1920.00	lb/hr
SO_2	CEMS DATA		220.00	lb/hr
CO_2 (tonnes/year)	CEMS DATA		720000.00	lb/hr
Hexavalent Chromium	7.41E-07	lb/ton kiln feed	2.96E-04	lb/hr
Trivalent Chromium	2.64E-05	lb/ton kiln feed	1.06E-02	lb/hr
Arsenic	6.00E-06	lb/ton kiln feed	2.40E-03	lb/hr
Benzene	6.16E-04	lb/ton kiln feed	2.46E-01	lb/hr
Beryllium	5.56E-07	lb/ton kiln feed	2.22E-04	lb/hr
Cadmium	9.16E-06	lb/ton clinker	2.06E-03	lb/hr
Cobalt	2.46E-06	lb/ton kiln feed	9.84E-04	lb/hr
Copper	1.04E-05	lb/ton kiln feed	4.16E-03	lb/hr
Formaldehyde	1.03E-03	lb/ton kiln feed	4.12E-01	lb/hr
Lead	4.04E-05	lb/ton kiln feed	1.62E-02	lb/hr
Mercury	2.70E-05	lb/ton kiln feed	1.08E-02	lb/hr
Methylene Chloride	1.12E-05	lb/ton kiln feed	4.48E-03	lb/hr
Manganese	1.07E-04	lb/ton kiln feed	4.28E-02	lb/hr
Nickel	6.11E-05	lb/ton kiln feed	2.44E-02	lb/hr
Zinc*(AP-42)	3.40E-04	lb/ton clinker	7.65E-02	lb/hr
Hydrochloric Acid	1.40E-02	lb/ton kiln feed	5.60E+00	lb/hr
Naphthalene	9.34E-05	lb/ton kiln feed	3.74E-02	lb/hr

Pollutant	Emission Factor			
Toluene	1.48E-04	lb/ton kiln feed	5.92E-02	lb/hr
Xylene	5.28E-05	lb/ton kiln feed	2.11E-02	lb/hr
Vinyl Chloride	2.62E-05	lb/ton kiln feed	1.05E-02	lb/hr
1,2,4-Trichlorobenzene	6.57E-07	lb/ton kiln feed	2.63E-04	lb/hr
Tetrachloroethene	2.97E-06	lb/ton kiln feed	1.19E-03	lb/hr
Styrene	4.14E-05	lb/ton kiln feed	1.66E-02	lb/hr
Selenium	3.99E-06	lb/ton kiln feed	1.60E-03	lb/hr
Phenol	1.23E-04	lb/ton kiln feed	4.92E-02	lb/hr
Ethylbenzene	1.32E-05	lb/ton kiln feed	5.28E-03	lb/hr
1,4-Dichlorobenzene	1.37E-06	lb/ton kiln feed	5.48E-04	lb/hr
Dibenzofuran	3.43E-05	lb/ton kiln feed	1.37E-02	lb/hr
Chloromethane	1.60E-04	lb/ton kiln feed	6.40E-02	lb/hr
Chloroethane	4.76E-06	lb/ton kiln feed	1.90E-03	lb/hr
Chlorobenzene	4.84E-05	lb/ton kiln feed	1.94E-02	lb/hr
Carbon Tetrachloride	2.84E-07	lb/ton kiln feed	1.14E-04	lb/hr
Carbon disulfide	8.07E-05	lb/ton kiln feed	3.23E-02	lb/hr
Bromomethane	3.76E-05	lb/ton kiln feed	1.50E-02	lb/hr
Isopropyl benzene (Cumene)	2.79E-06	lb/ton kiln feed	1.12E-03	lb/hr
Acenaphthylene	4.18E-06	lb/ton kiln feed	1.67E-03	lb/hr
2-Methylnapthalene	1.58E-05	lb/ton kiln feed	6.32E-03	lb/hr
Acetophenone	1.94E-05	lb/ton kiln feed	7.76E-03	lb/hr
Phenanthrene	1.25E-05	lb/ton kiln feed	5.00E-03	lb/hr
Ammonia (w/ SNCR)	10.929	lb/hour	10.93	lb/hr
Ammonia (w/o SNCR)	7.617	lb/hour	7.62	lb/hr

VOC emission factor derived from February 25, 2001 stack test at Kosmos Cement Company (Louisville, KY).

Unless otherwise noted, HAP emission factors are the highest values from stack test data obtained from the 2009 TDF stack testing (Demo and Baseline) and the December 2011 RDF stack testing (Baseline conditions only).

Cadmium was not detected in the 2009 or 2011 stack tests; therefore, representative stack testing from a similar affected facility was used to calculate emissions. Cadmium emission factor was derived from: CEMEX California Cement LLC / February 3-6, 2004 Stack Test / Kiln K3 (Q3).

Arsenic, Beryllium, and Cobalt were detected on the front end but were not detected on the back end of the sampling train impingers during the RDF Baseline stack testing in December 2011. The method detection limit was conservatively used as the result for the back end of the sampling train impingers to calculate an emission factor for Arsenic, Beryllium, and Cobalt.

Ammonia emissions factors were derived from data gatherd on 04/27/2005 during testing of the pilot scale SNCR

Appendix G – NOx RACT Plan: Amendment 2

1. The oxides of nitrogen (NOx, expressed as NO_2) emission from the cement kiln shall not exceed 4.755 pounds per ton of clinker produced by the kiln, based upon a rolling 30-day average.

2. The NOx emission rate for the cement kiln shall be determined using the methods and procedures specified in NOx RACT Plan Appendix A - Amendment 2 and Appendix B - Amendment 2.

3. Kosmos Cement Company (Kosmos) shall install, calibrate, maintain, and operate a NOx continuous emissions monitoring system (CEMS) for the cement kiln and shall keep records and submit reports and other notifications as specified in NOx RACT Plan Appendix A - Amendment 2 and Appendix B - Amendment 2.

4. Kosmos shall keep a record identifying all deviations from the requirements of this NOx RACT Plan and shall submit to the District a written report of all deviations that occurred during the preceding semi-annual period. Semi-annual periods shall run from January 1 to June 30 and July 1 to December 31. The semi-annual report shall contain the information specified in NOx RACT Plan Appendix A - Amendment 2 Section II. A. and B. If no deviation occurred during the semi-annual period, the report shall contain a negative declaration. Each report shall be submitted within 60 days following the end of the semi-annual period.

5. In lieu of the requirements in this NOx RACT Plan, Kosmos may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, record keeping, or reporting, provided the following conditions are met:

    a. The alternative requirements are established and incorporated into an operating permit pursuant to a Title V Operating Permit issuance, renewal, or significant permit revision process as established in Regulation 2.16,

    b. The alternative requirements are consistent with the streamlining procedures and guidelines set forth in section II.A. of White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, March 5, 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. The overall effect of compliance with alternative requirements shall consider the effect on an intrinsic basis, such as pounds per ton of clinker produced by the kiln,

    c. The U.S. Environmental Protection Agency (EPA) has not objected to the issuance, renewal, or revision of the Title V Operating Permit, and either

    d. If the public comment period preceded the EPA review period, then the District had transmitted any public comments concerning the alternative requirements to EPA with the proposed permit, or

e. If the EPA and public comment periods ran concurrently, then the District had transmitted any public comments concerning the alternative requirements to EPA no later than 5 working days after the end of the public comment period.

The District's determination of approval of any alternative requirements is not binding on EPA. Noncompliance with any alternative requirement established pursuant to the Title V Operating Permit process constitutes a violation of this NOx RACT Plan.

Requirements for NOx CEMS

1. General Operating Requirements

   a. Kosmos shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring oxides of nitrogen (NOx) emissions discharged to the atmosphere from the cement kiln and record the output of the system.

   b. The NOx CEMS shall be operated and data recorded during all periods of operation of the cement kiln except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks and zero and span adjustments.

   c. The 1-hour average NOx emission rates measured by the CEMS shall be expressed in pounds per ton of clinker produced by the cement kiln and shall be used to calculate the average emission rates. At least 2 data points shall be used to calculate each 1-hour average.

   d. The NOx rates expressed in pounds per ton of clinker produced shall be calculated using the exhaust flow rate of 233,500 dry standard cubic feet per minute. As an alternative, the NOx emission rates may be calculated using exhaust flow rates obtained by a flow measuring monitor as approved by the District. A flow measuring monitor shall meet the requirements in NOx RACT Plan Appendix B - Amendment 2.

   e. The procedures under 40 CFR §60.13 (d), (e), (f), and (h) shall be followed for installation, evaluation, and operation of the CEMS.

   f. The NOx CEMS shall be installed and operated in compliance with the requirements of 40 CFR Part 60 Appendix B Performance Specification 2 and the quality assurance and certification requirements of Performance Specification 2 shall be met as well as the requirements in this Appendix.

   g. The span value for the NOx CEMS shall be determined so that all expected concentrations can be accurately measured and recorded as indicated in NOx RACT Plan Appendix B - Amendment 2.

   h. The Quality Assurance Procedures in 40 CFR Part 60 Appendix F shall be followed. All reporting required by 40 CFR Part 60 Appendix F to be submitted to the Agency shall instead be submitted to the District.

   i. When NOx emission data or flow monitor data (if a flow monitor is used) are not obtained because of CEMS breakdowns, repairs, calibration checks, or zero and span adjustments, emission data shall be obtained by using one of the following options to provide emission data for a minimum of 75% of the operating hours in each kiln operating day, in at least 22 out of 30 successive cement kiln operating days:

i. Standby monitoring systems, 40 CFR Part 60 Appendix A Method 7 or Method 7a, or other approved reference methods, or

ii. Data substitution as follows:

A) If the missing data period is 6 hours or less, then substitute an average of the quality-assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data, and

B) If the missing data period is greater than 6 hours, then substitute the greatest emission rate or flow (if a flow monitor is used) recorded during the previous 168 quality-assured monitor operating hours at a clinker production rate that is within 10% of the current operating rate. If there are not enough data to satisfy this requirement, then substitute data from a higher clinker production rate or the maximum design flow or emission rate.

All "estimated" data shall be reported with a clear notation that they are estimated and not obtained from a certified monitor or EPA-approved test method.

j. The clinker production rate shall be determined and recorded during all periods of operation of the cement kiln except for breakdowns and repairs of the system used to determine the clinker production rate (raw materials weigh feeder and associated data acquisition system). Data shall be recorded during periods of calibration for the weigh feeder, which at a minimum shall be performed annually.

k. The clinker production rate determined from monitoring the rate of raw materials input to the cement kiln shall be calculated by dividing the rate of raw materials input to the cement kiln by the current raw materials conversion factor. The raw materials conversion factor shall be determined on a quarterly basis and this conversion factor shall be used in the calculation of the clinker production rate until the next quarterly raw materials conversion rate test is performed. The raw materials conversion rate factor shall be determined by weighing and recording the raw materials input to the cement kiln with the weigh feeder and weighing and recording the clinker output from the cement kiln with the use of a certified scale over a four- to twelve-hour period and an average calculated from those data. The current raw materials conversion factor shall be included with the semi-annual emissions report.

l. If a flow monitor is used in the determination of the pounds NOx per ton of clinker produced by the cement kiln, then the flow monitoring system shall meet all the requirements specified in NOx RACT Plan Appendix B - Amendment 2.

m. The data acquisition and handling system used in recording and reporting the necessary information required for the determination of compliance with the limit set for the pounds of NOx per ton of clinker produced by the cement kiln shall meet all of the requirements specified in NOx RACT Plan Appendix B - Amendment 2.

n. A monitoring plan shall be created and kept current for the system used to determine compliance with the pounds of NOx per ton of clinker produced by the cement kiln limit. The most current version of the monitoring plan shall be submitted to the District and also be easily accessed by the monitoring system operation personnel.

2. Reporting and record keeping requirements

a. Kosmos shall keep records and submit semi-annual reports for each operating day including the following information:

i. Calendar date,

i. The average hourly NOx emission rates measured, expressed as pounds per ton of clinker produced by the cement kiln,

iii. The 30-day average NOx emission rates, expressed as pounds per ton clinker produced by the cement kiln, calculated at the end of each cement kiln operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 cement kiln operating days. The average shall not include data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments,

iv. Identification of the cement kiln operating days when the calculated rolling 30-day average NOx emission rates are in excess of the NOx emissions standard of the NOx RACT Plan - Amendment 2. Kosmos shall submit excess emission reports for any excess emissions that occurred during the reporting period. This report shall include the magnitude of the excess emissions in pounds per ton of clinker produced and the date and time of the commencement and completion of each period of excess emissions as well as the nature and cause of each period of excess emissions and any corrective actions taken or preventive measures adopted,

v. Identification of the cement kiln operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken,

vi. Identification of the times when emission data have been excluded from the calculation of average emission rates, the reasons for excluding data, and description of corrective action taken,

vii. Identification of times when hourly averages have been obtained based on 40 CFR Part 60 Appendix A Method 7 or Method 7a,

viii. Identification of times which the CEMS (including all monitors) was inoperative, including the date and time and the nature of the system repairs or adjustments except for zero and span checks,

ix. Identification of the times when the pollutant concentration exceeded full span of the CEMS,

x. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with 40 CFR Part 60 Appendix B Performance Specification 2,

xi. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Part 60 Appendix F Procedure 1,

xii. Results of the quarterly raw materials conversion factor testing, and

xiii. Clinker production rates used to determine the pounds of NOx per ton of clinker produced by the cement kiln.

All semi-annual reports and Summary Reports shall be postmarked by the 60th day following the end of each semi-annual period.

b. Kosmos shall submit a Summary Report with every semi-annual report. The Summary Report shall be in the format given in 40 CFR §60.7 Figure 1.

c. All records required by this NOx RACT Plan - Amendment 2 shall be maintained by Kosmos for a period of 5 years following the date of such record.

Requirements for Flow Monitors and Additional Requirements for NOx CEMS

1. Installation of the Flow Monitor

Install the flow monitor in a location that provides representative volumetric flow over all operating conditions. Such a location is one that provides an average velocity of the flue gas flow over the stack or duct cross section, provides a representative NO_x emission rate (in lb/ton of clinker produced by the cement kiln), and is representative of the pollutant concentration monitor location. Where the moisture content of the flue gas affects volumetric flow measurements, use the procedures in both Reference Methods 1 and 4 of 40 CFR Part 60 Appendix A to establish a proper location for the flow monitor. The District recommends (but does not require) performing a flow profile study following the procedures in 40 CFR Part 60 Appendix A Method 1 section 2.5 or 2.4 for each of the three operating or load levels indicated in section 5.b. to determine the acceptability of the potential flow monitor location and to determine the number and location of flow sampling points required to obtain a representative flow value. The procedure in 40 CFR Part 60 Appendix A Test Method 1 section 2.5 may be used even if the flow measurement location is greater than or equal to 2 equivalent stack or duct diameters downstream or greater than or equal to ½ duct diameter upstream from a flow disturbance. If a flow profile study shows that cyclonic (or swirling) or stratified flow conditions exist at the potential flow monitor location that are likely to prevent the monitor from meeting the performance specifications of this Appendix, then the District recommends either (1) selecting another location where there is no cyclonic (or swirling) or stratified flow condition or (2) eliminating the cyclonic (or swirling) or stratified flow condition by straightening the flow, e.g., by installing straightening vanes. The District also recommends selecting flow monitor locations to minimize the effects of condensation, coating, erosion, or other conditions that could adversely affect flow monitor performance.

2. Acceptability of Monitor Location

If the flow monitor is installed in a location that does not satisfy these physical criteria, but nevertheless the monitor achieves the performance specifications of this Appendix, then the location is acceptable, notwithstanding the requirements of this Appendix.

Whenever Kosmos successfully demonstrates that modifications to the exhaust duct or stack (such as installation of straightening vanes, modifications of ductwork, and the like) are necessary for the flow monitor to meet the performance specifications, the District may approve an interim alternative flow monitoring methodology and an extension to the required certification date for the flow monitor.

Where no location exists that satisfies the physical siting criteria in the previous two paragraphs, where the results of flow profile studies performed at two or more alternative flow monitor locations are unacceptable, or where installation of a flow monitor in either the stack or the ducts is demonstrated to be technically infeasible, Kosmos may petition the District for an alternative method for monitoring flow.

3. Equipment Specifications

a. Instrument Span

To the extent practicable, measure at a range such that the majority of readings obtained during normal operation are between 25 and 75 percent of full-scale range of the instrument**.** Select the full-scale range of the flow monitor so that it can accurately measure all potential volumetric flow rates at the flow monitor installation site. For this purpose, determine the span value of the flow monitor using the following procedure:

i. Determine the MPV or maximum potential flow rate (MPF) in scfh (wet basis) from velocity traverse testing.

ii. Use the highest velocity measured at or near the maximum unit operating load.

iii. Calculate the MPV in units of wet standard fpm.

iv. Then, if necessary, convert the MPV to equivalent units of flow rate (e.g., scfh or kscfh) or differential pressure (inches of water), consistent with the measurement units used for the daily calibration error test to calculate the span value.

v. Multiply the MPV (in equivalent units) by 125 percent, and round up the result to no less than 2 significant figures.

vi. Report the full-scale range setting, and calculations of the span value, MPV, and MPF to the District and include this information in the monitoring plan.

If conditions change such that the maximum potential velocity may change significantly, adjust the range to assure the continued accuracy of the flow monitor. Calculate an adjusted span using the procedures in this section. Select the full-scale range of the instrument to be greater than or equal to the adjusted span value. Record and report the new full-scale range setting, calculations of the span value, MPV, and MPF, and the adjusted span value to the District and include this information in the monitoring plan. Record and report the adjusted span and reference values as parts of the records for the calibration error test. Whenever the span value is adjusted, use reference values for the calibration error test based on the most recent adjusted span value.

Perform a calibration error test according to section 3.ii. whenever making a change to the flow monitor span or range. Recertification is required whenever making a significant change in the flow monitor's range that requires an internal modification to the monitor.

b. Design for Quality Control Testing

i. Design of the Flow Monitor

Design all the flow monitors to meet the applicable performance specifications.

ii. Calibration Error Test

Design and equip each flow monitor to allow for a daily calibration error test consisting of at least two reference values: (1) Zero to 20 % of span

or an equivalent reference value (e.g., pressure pulse or electronic signal) and (2) 50 to 70 % of span. Flow monitor response, both before and after any adjustment, must be recorded. Design each flow monitor to allow a daily calibration error test of (1) the entire flow monitoring system, from and including the probe tip (or equivalent) through and including the data acquisition and handling system, or (2) the flow monitoring system from and including the transducer through and including the data acquisition and handling system.

iii. Interference Check

A) Design and equip each flow monitor with a means to ensure that the moisture expected to occur at the monitoring location does not interfere with the proper functioning of the flow monitoring system. Design and equip each flow monitor with a means to detect, on at least a daily basis, pluggage of each sample line and sensing port, and malfunction of each resistance temperature detector (RTD), transceiver, or equivalent.

B) Design and equip each differential pressure flow monitor to provide (1) an automatic, periodic back purging (simultaneously on both sides of the probe) or equivalent method of sufficient force and frequency to keep the probe and lines sufficiently free of obstructions on at least a daily basis to prevent velocity sensing interference, and (2) a means for detecting leaks in the system on at least a quarterly basis (manual check is acceptable).

C) Design and equip each thermal flow monitor with a means to ensure on at least a daily basis that the probe remains sufficiently clean to prevent velocity sensing interference.

D) Design and equip each ultrasonic flow monitor with a means to ensure on at least a daily basis that the transceivers remain sufficiently clean (e.g., backpurging system) to prevent velocity sensing interference.

4. Performance Specifications

a. Calibration Error

The calibration error of flow monitors shall not exceed 3.0 % based upon the span of the instrument as calculated using Equation A-6 of 40 CFR Part 75 Appendix A.

b. Relative Accuracy for Flow

The relative accuracy of flow monitors shall not exceed 10.0 %. Where the average of the flow monitor measurements of gas velocity during one or more operating levels of the relative accuracy test audit is less than or equal to 10.0 fps, the mean value of the flow monitor velocity measurements shall not exceed ±2.0 fps of the reference method mean value in fps wherever the relative accuracy specification above is not achieved.

5. Certification Testing

a. Flow Monitor 7-day Calibration Error Test

Measure the calibration error of each flow monitor according to the following procedures:

i. Introduce the reference signal corresponding to the values specified in section 3.b.ii to the probe tip (or equivalent) or to the transducer.

ii. During the 7-day certification test period, conduct the calibration error test while the cement kiln is operating once each operating day (as close to 24-hour intervals as practicable). In the event that extended cement kiln outages occur after the commencement of the test, the 7 consecutive operating days need not be 7 consecutive calendar days.

iii. Record the flow monitor responses by means of the data acquisition and handling system.

iv. Calculate the calibration error using Equation A-6 of 40 CFR Part 75 Appendix A.

v. Do not perform any corrective maintenance, repair, or replacement upon the flow monitor during the 7-day certification test period other than that required for normal daily operation as specified by the monitor manufacturer or by the NO_x RACT Plan - Amendment 2.

vi. Do not make adjustments between the zero and high reference level measurements on any day during the 7-day test.

vii. If the flow monitor operates within the calibration error performance specification (i.e., less than or equal to 3 % error each day and requiring no corrective maintenance, repair, or replacement during the 7-day test period) the flow monitor passes the calibration error test portion of the certification test.

viii. Record all maintenance activities and the magnitude of any adjustments.

ix. Record output readings from the data acquisition and handling system before and after all adjustments.

x. Record and report all calibration error test results using the unadjusted flow rate measured in the calibration error test prior to resetting the calibration.

xi. Record all adjustments made during the 7-day period at the time the adjustment is made and report them in the certification application.

b. Relative Accuracy

i. Perform relative accuracy test audits for the flow monitor at three different exhaust gas velocities, expressed in terms of percent of flow monitor span, or different operating levels. Select the operating levels as follows: (1) A frequently used low operating level selected within the range between the minimum safe and stable operating level and 50 % load, (2) A frequently

used high operating level selected within the range between 80 % of the maximum operating level and the maximum operating level, and (3) The normal operating level.

ii. If the normal operating level is within 10.0 % of the maximum operating level of either (1) or (2) above, use a level that is evenly spaced between the low and high operating levels used. The maximum operating level shall be equal to the design capacity less any physical or regulatory limitations or other deratings. Calculate flow monitor relative accuracy at each of the three operating levels. If a flow monitor fails the relative accuracy test on any of the three levels of a three-level relative accuracy test audit, the three-level relative accuracy test audit shall be repeated.

iii. If the kiln is normally operated at only one level, then it is acceptable to perform relative accuracy test audits at the normal operating level only.

c. Calculations

Using the data from the relative accuracy test audits, calculate relative accuracy in accordance with the procedures and equations specified in section VI.

d. Reference Method Measurement Location

Select a location for reference method measurements that is (1) accessible, (2) in the same proximity as the monitor or monitoring system location, and (3) meets the requirements of Method 1 (or 1A) in 40 CFR Part 60 Appendix A for volumetric flow, except as otherwise indicated in this section or as approved by the District.

e. Reference Method Traverse Point Selection

Select traverse points that (1) ensure acquisition of representative samples of flue gas flow rate over the flue cross section, and (2) meet the requirements of 40 CFR Part 60 Appendix A Method 1 (or 1A)(for volumetric flow).

f. Sampling Strategy

Conduct the reference method tests so they will yield results representative of the flue gas flow rate from the cement kiln and can be correlated with the flow monitor CEMS measurements. To properly correlate the volumetric flow rate data with the reference method data, mark the beginning and end of each reference method test run (including the exact time of day) on the individual chart recorder or other permanent recording device.

g. Correlation of Reference Method and Continuous Emission Monitoring System

i. Confirm that the monitor or monitoring system and reference method test results are on consistent moisture basis (e.g., since the flow monitor measures flow rate on a wet basis, Method 2 test results shall also be on a wet basis).

ii. Compare flow-monitor and reference method results on an scfh basis. Also, consider the response times of the flow monitoring system to ensure comparison of simultaneous measurements.

iii. For each relative accuracy test audit run, compare the measurements obtained from the monitor or continuous emission monitoring system against the corresponding reference method values. Tabulate the paired data in a table such as the one shown in Figure 2 of 40 CFR Part 75 Appendix A.

h. Number of Reference Method Tests

Perform a minimum of 9 sets of paired monitor (or monitoring system) and reference method test data for every required relative accuracy test. For the certification and annual quality assurance relative accuracy test audits for flow monitors, perform a minimum of 9 sets at each operating level as specified in section e.ii. Conduct each set within a period of 30 to 60 minutes.

Note: The tester may choose to perform more than 9 sets of reference method tests. If this option is chosen, the tester may reject a maximum of 3 sets of the test results as long as the total number of test results used to determine the relative accuracy or bias is greater than or equal to 9. Report all data, including the rejected data, and reference method test results.

i. Reference Methods

The following methods from 40 CFR Part 60 Appendix or their approved alternatives are the reference methods for performing relative accuracy test audits: Method 1 or 1A for siting; Method 2 (or 2A, 2C, or 2D) for velocity; and Method 4 for moisture.

6. Calculations

a. Flow Monitor Calibration Error

For each reference value, calculate the percentage calibration error based upon span using the equation A-6 as given in 40 CFR Part 75 Appendix A.

b. Relative Accuracy for Flow Monitors

Analyze the relative accuracy test audit data from the reference method test for flow monitors using the following procedures:

i. Summarize the results on a data sheet. An example is shown in Figure 3 of 40 CFR Part 75 Appendix A.

ii. Calculate the mean of the monitor or monitoring system measurement values.

iii. Calculate the mean of the reference method values.

iv. Using data from the source CEMS, calculate the arithmetic differences between the reference method and monitor measurement data sets.

v. Calculate the arithmetic mean of the difference, the standard deviation, the confidence coefficient, and the monitor or monitoring system relative

accuracy using the procedures and equations found in 40 CFR Part 75 Appendix A as is specified in the following sections.

c. Arithmetic Mean

Calculate the arithmetic mean of the differences using equation A-7 as given in 40 CFR Part 75 Appendix A.

d. Standard Deviation

Calculate the standard deviation of a data set using equation A-8 as given in 40 CFR Part 75 Appendix A.

e. Confidence Coefficient

Calculate the confidence coefficient using equation A-9 as given in 40 CFR Part 75 Appendix A.

f. Relative Accuracy

Calculate the relative accuracy of a data set using equation A-10 as given in 40 CFR Part 75 Appendix A.

7. Quality Assurance and Quality Control

a. Calibration Error Test

Perform the daily calibration error test of each flow monitoring system according to the procedure in this section.

i. Perform the daily calibration error tests on each scale that has been used since the previous calibration error test. For example, if the flow has not exceeded the low scale value (based on the maximum expected concentration) since the previous calibration error test, the calibration error test may be performed on the low scale only. If, however, the flow has exceeded the low scale span value for one hour or longer since the previous calibration error test, perform the calibration error test on both the low and high scales.

ii. All daily calibration error tests shall be performed while the unit is in operation at normal, stable conditions (i.e. "on-line").

b. Daily Flow Interference Check

Perform the daily flow monitor interference checks specified in section 3.b.iii. while the unit is in operation at normal, stable conditions.

c. Recalibration

The District recommends adjusting the calibration, at a minimum, whenever the daily calibration error exceeds the limits of the applicable performance specification for the flow monitor in section IV.

d. Out-of-Control Period

i. An out-of-control period occurs when the calibration error of a flow monitor exceeds 6.0 % based upon the span value, which is twice the

applicable specification of this section. The out-of-control period begins with the hour of completion of the failed calibration error test and ends with the hour of completion following an effective recalibration. Whenever the failed calibration, corrective action, and effective recalibration occur within the same hour, the hour is not out of control if 2 or more valid readings are obtained during that hour.

ii. An out-of-control period also occurs whenever interference of a flow monitor is identified. The out-of-control period begins with the hour of completion of the failed interference check and ends with the hour of completion of an interference check that is passed.

e. Quality Assurance of Data With Respect to Daily Assessments

When a monitoring system passes a daily assessment (i.e., daily calibration error test or daily flow interference check), data from that monitoring system are prospectively validated for 26 clock hours (i.e., 24 hours plus a 2-hour grace period) beginning with the hour in which the test is passed, unless another assessment (i.e. a daily calibration error test, an interference check of a flow monitor, or a relative accuracy test audit) is failed within the 26-hour period.

f. Data Invalidation with Respect to Daily Assessments

Data from a monitoring system are invalid beginning with the first hour following the expiration of a 26-hour data validation period.

g. Daily Assessment Start-Up Grace Period

For the purpose of quality assuring data with respect to a daily assessment (i.e. a daily flow interference check), a start-up grace period may apply when a unit begins to operate after a period of non-operation. The start-up grace period for a daily calibration error test is independent of the start-up grace period for a daily flow interference check. To qualify for a start-up grace period for a daily assessment, there are two requirements:

i. The unit must have resumed operation after being in outage for 1 or more hours (i.e., the unit must be in a start-up condition) as evidenced by a change in unit operating time from zero in one clock hour to an operating time greater than zero in the next clock hour, and

ii. For the monitoring system to be used to validate data during the grace period, the previous daily assessment of the same kind must have been passed on-line within 26 clock hours prior to the last hour in which the unit operated before the outage. In addition, the monitoring system must be in-control with respect to quarterly and semi-annual or annual assessments.

If both of the above conditions are met, then a start-up grace period of up to 8 clock hours applies, beginning with the first hour of unit operation following the outage. During the start-up grace period, data generated by the monitoring system are considered quality-assured. For each monitoring system, a start-up grace period for a calibration error test or flow interference check ends when either: (1)

A daily assessment of the same kind (i.e., calibration error test or flow interference check) is performed, or (2) 8 clock hours have elapsed (starting with the first hour of unit operation following the outage), whichever occurs first.

h. Data Recording

Record and tabulate all calibration error test data according to month, day, clock-hour, and magnitude in scfh. Program monitors that automatically adjust data to the corrected calibration values (e.g., microprocessor control) to record either: (1) the unadjusted flow rate measured in the calibration error test prior to resetting the calibration, or (2) the magnitude of any adjustment. Record the following applicable flow monitor interference check data: (1) sample line/sensing port pluggage, and (2) malfunction of each RTD, transceiver, or equivalent.

8. Quarterly Assessments

For a differential pressure flow monitor or flow monitoring system, perform a leak check of all sample lines (a manual check is acceptable) during each unit operating quarter. This requirement is effective as of the calendar quarter following the calendar quarter in which the flow monitor or flow emission monitoring system is provisionally certified.

9. Annual Assessments

For the flow monitor, perform the relative accuracy test audit (RATA) assessment once annually (within four calendar quarters) after the calendar quarter in which the monitor or monitoring system was last tested, as specified below for the type of test and the performance achieved. This requirement is effective as of the calendar quarter following the calendar quarter in which the monitor or continuous monitoring system is provisionally certified.

a. Relative Accuracy Test Audit (RATA)

Perform relative accuracy test audits annually and, to the extent practicable, no less than 4 months apart for the flow monitor. The three-level audit shall be performed at the three different operating or load levels specified in V.B.

b. Out-of-Control Period

An out-of-control period occurs under any of the following condition : the relative accuracy of a flow monitor exceeds 10.0 %, for low flow situations (£10.0 fps) or the flow monitor mean value (if applicable) exceeds ±2.0 fps of the reference method mean whenever the relative accuracy is greater than 15.0 %. For a flow relative accuracy test audit at 3 operating levels, the out-of-control period begins with the hour of completion of the first failed relative accuracy test audit at any of the three operating levels, and ends with the hour of completion of a satisfactory three-level relative accuracy test audit.

10. Other Audits

Affected units may be subject to relative accuracy test audits at any time. If a monitor or continuous emission monitoring system fails the relative accuracy test during the audit, the monitor or continuous emission monitoring system shall be considered to be out-of-

control beginning with the date and time of completion of the audit, and continuing until a successful audit test is completed following corrective action.

11. Span Determination for the NO_x Monitor

a. To the extent practicable, measure the NO_x emissions at a range such that the majority of readings obtained during normal operation are between 25 and 75 % of full-scale range of the instrument.

b. Maximum Potential Concentration

i. The monitor must be capable of accurately measuring up to 125 % of the maximum potential concentration (MPC) as determined below in this section. To determine the maximum potential concentration, Kosmos may use NO_x emission test results or historical fully quality assured CEMS data over the previous 30 unit operating days. Multiply the MPC by 125 % and round up to the nearest multiple of 100 ppm to determine the span value. The span value shall be used to determine the concentrations of the calibration gases.

ii. Report the full-scale range setting and calculations of the MPC, maximum potential NO_x emission rate, and span to the District and record them in the monitoring plan. Select the full-scale range of the instrument to be consistent with section 11.a, and to be greater than or equal to the span value. This selected monitor range with a span rounded up from 125 % of the maximum potential concentration shall be the "high scale" of the NO_x pollutant concentration monitor.

iii. If NO_x emission testing is used to determine the maximum potential NO_x concentration, use the following guidelines:

A) Use Method 7E from 40 CFR Part 60 Appendix A to measure total NO_x concentration.

B) Operate the unit at the minimum safe and stable production level, the normal production level, and the maximum production level. If the normal load and maximum load are identical, an intermediate level need not be tested.

C) Operate at the highest excess O_2 level expected under normal operating conditions.

D) Make at least 3 runs with 3 traverse points of at least 20 minutes duration at each operating condition.

E) Select the highest NO_x concentration from all measured values as the maximum potential concentration for NO_x. If historical CEM data are used to determine the MPC, the data must represent various operating conditions, including the minimum safe and stable production level, normal production level, and production level load.

F) Calculate the MPC and span using the highest hourly NO_x concentration in ppm.

c. Maximum Expected Concentration

i. If the majority of NO_x concentrations are expected to be less than 25 % of the full-scale range of the instrument selected under section 11.b, use a "low scale" measurement range.

ii. Calculate the span for the additional (lower) range by multiplying the maximum expected concentration by 125 % and by rounding up the resultant concentration to the nearest multiple of 10 ppm. The span value of this additional (lower) range shall also be used to determine the concentrations of the calibration gases.

iii. Include the full-scale range setting and calculations of the MEC and span and report these to the District and record them in the monitoring plan.

iv. Select the full-scale range of the instrument to be consistent with section 11.a., and to be greater or equal to the lower range span value. This selected monitor range with a span rounded up from 125 % of the maximum expected concentration is the "low scale" of NO_x pollutant concentration monitors.

d. Auto-ranging monitors

For monitors that can continuously and automatically adjust their range of measurement, the monitor shall be capable at any time of accurately measuring up to 125 % of the maximum potential concentration as defined in section 11.ii. Define the span value for an auto-ranging monitor as 125 % of the maximum potential concentration and 125 % of the maximum expected concentration if a second span is determined to be necessary under section 11.iii. Determine concentrations of the calibration gases based upon the span value.

e. Adjustment of Span

i. Whenever the fuel supply, emission controls, or other process parameters change such that the maximum expected concentration or the maximum potential concentration may change significantly, adjust the NO_x pollutant concentration span and monitor range to assure the continued accuracy of the monitoring system. Determine the adjusted span value using the procedures in sections 11.ii. or 11.iii. Select the new full-scale range of the instrument to be greater than or equal to the adjusted span value and to be consistent with the guidelines of section 11.i.

ii. Record and report the new full-scale range setting, calculations of the span value, MPC, and MEC (if appropriate), maximum potential NO_x emission rate and the adjusted span value to the District and record them in the monitoring plan. In addition, record and report the adjusted span as part of the records for the daily calibration error test and linearity check.

iii. Whenever the span value is adjusted, use calibration gas concentrations based on the most recent adjusted span value. Perform a cylinder gas

audit (CGA) according to 40 CFR Part 60 Appendix F whenever making a change to the monitor span or range. Recertification is required whenever a significant change is made in the monitor's range that requires an internal modification to the monitor (e.g., a change of measurement cell length).

12. Data Acquisition and Handling Systems

Automated data acquisition and handling systems shall meet the following requirements:

a. Read and record the full range of potential NO_x emission concentrations and volumetric flow from zero through span, raw materials input rates to the cement kiln, and flow (if used),

b. Provide a continuous, permanent record of all measurements and required information as an ASCII flat file capable of transmission via an IBM-compatible personal computer diskette or other electronic media,

c. Interpret and convert the individual output signals from a flow monitor (if used) and a NO_x CEMS to produce a continuous readout of pollutant mass emission rates in the units of pounds NO_x per ton of clinker produced by the cement kiln,

d. Calculate and record intermediate values necessary to obtain emissions rates such as NO_x concentration, raw materials input to the cement kiln, and flow (if used), and

e. Calculate and record emissions in units of the standard (pounds NO_x per ton of clinker produced by the cement kiln).

13. Data Preparation

If the NO_x concentration is in ppm, multiply it by 1.194×10^{-7} (lb/dscf)/ppm to convert it to units of lb/dscf. If the NO_x concentration is in mg/dscm, multiply it by 6.24×10^{-8} (lb/dscf)/(mg/dscm) to convert it to lb/dscf. Then, use the appropriate gas flow rate and clinker production rate to calculate the emissions in terms of pounds NO_x per ton of clinker produced by multiplying lb/dscf by the appropriate dscf and dividing by the appropriate tons of clinker production rate from the cement kiln.

14. NO_x Emission Rate (Monitoring System)

For each test run in a data set, calculate the average NO_x emission rate (in lb per ton of clinker produced), by means of the data acquisition and handling system, during the time period of the test run. Tabulate the results as shown in 40 CFR Part 75 Appendix A Figure 4 (replace lb/mmBtu with lb/tons of clinker produced by the cement kiln).

15. Relative Accuracy

Use the equations and procedures in 40 CFR Part 60 Appendix B Specification 2 to calculate the relative accuracy for the NO_x CEMS. In using Equation 2-1, "d" is, for each run, the difference between the NO_x emission rate values (in lb per ton of clinker produced by the cement kiln) obtained from the reference method data and the NO_x CEMS.

16. Quality Assurance and Quality Control Procedures

Quality Control Program

Develop and implement a quality control program for the continuous emission monitoring systems and their components. As a minimum, include in each quality control program a written plan that describes in detail complete, step-by-step procedures and operations for each of the following activities:

a. Calibration Error Test and Linearity Check Procedures. Identify calibration error test and linearity check procedures specific to the CEMS that may require variance from the procedures in this NO_x RACT Plan - Amendment 2.

b. Calibration and Linearity Adjustments. Explain how each component of the CEMS will be adjusted to provide correct responses to calibration gases, reference values, and/or indications of interference both initially and after repairs or corrective action. Identify equations, conversion factors, assumed moisture content, and other factors affecting calibration of each CEMS.

c. Preventive Maintenance. Keep a written record of procedures, including those specified by the manufacturers, needed to maintain the CEMS in proper operating condition and a schedule for those procedures. Include provisions for maintaining an inventory of spare parts.

d. Audit Procedures. Keep a written record of procedures and details peculiar to the installed CEMS that are to be used for relative accuracy test audits, such as sampling and analysis methods.

e. Record keeping and Reporting. Keep a written record describing procedures that will be used to implement the record keeping and reporting requirements.

Appendix H – De Minimis Values for TAC Emissions[167]

De Minimis*					
Chemical	CAS No.	Lb/Yr	Lb/Ave Period	Lb/Hr	C/NC
Arsenic and arsenic compounds	7440-38-2	0.1104		0.000124	C
Cadmium and cadmium compounds	7440-43-9	0.2688		0.000302	C
Chromium hexavalent & Cr compounds	7440-47-3	0.03984		4.48E-05	C
Chromium trivalent & Cr compounds	16065-83-1	109.5	0.1	0.1	NC
Formaldehyde	50-00-0	36.96		0.04158	C
Nickel and nickel compounds	7440-02-0	1.824		0.002052	C
Aluminum (fume or dust)	7429-90-5	1095	1	1	NC
Ammonia	7664-41-7	48000	48000	54	NC
Cobalt and cobalt compounds	7440-48-4	0.192		0.000216	C
Copper and copper compounds	7440-50-8	43.8	0.04	0.04	NC
Hydrochloric acid [Hydrogen chloride]	7647-01-0	9600	9600	10.8	NC
Lead compounds	Various	38.4		0.0432	C
Manganese and Manganese compounds	7439-96-5	24	24	0.027	NC
Naphthalene	91-20-3	13.92		0.01566	C
Beryllium and beryllium compounds	7440-41-7	0.2016		0.000227	C
Mercury and mercury compounds	7439-97-6	144	144	0.162	NC
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	1.25E-05		1.4E-08	C
Selenium and selenium compounds	7782-49-2	9600	9600	10.8	NC

*If the basis of the de minimis value is the noncancer risk (NC) and the averaging period is not annual, then the annual pound-per-year (lb/yr) value is for informational purposes, and eligibility for being de minimis is determined by the pound-per-hour and pound-per-averaging period values.

[167] The updated BAC List with deminimis values can be found at https://louisvilleky.gov/government/air-pollution-control-district/technical-documents-and-resources-star-regulated.

Appendix I – EAD results

The Plantwide Risk and individual TAC risk are as follows:

	All existing & new		All new P/PE	
All TAC / All P/PE / Industrial Total R_C	4.46	< 75	1.88	< 38
All TAC / All new P/PE / Non-Ind. Total R_C	6.59	< 7.5	3.78	< 3.8
Individual TAC / Individual P/PE / Industrial Max. R_{NC}	*	<3.0	*	<3.0
Non-Ind. Max. R_{NC}	*	<1.0	*	<1.0
Individual TAC / All P/PE / Industrial Max. R_{NC}	Maximum 0.409	< 3.0	--	--
Non-Ind. Max. R_{NC}		< 1.0	--	--

*See table below for individual Process Risk values for Individual TAC. New Processes are U5, U8, U9, U13, U19 and U24. EA Goal of Industrial Risk < 10, HQ < 3 and EA Goal of Non-Industrial Risk < 1.0, HQ < 1.0 are demonstrated based on the revised plantwide EAD submitted August 27, 2014 and the U20-U21 EAD submitted on December 17, 2014

Maximum Individual Risk/HQ
Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)

TAC	CAS	Total	U3		U5		U8	
		HQ	Risk	HQ	Risk	HQ	Risk	HQ
Arsenic & Compounds	7440-38-2	0.035	0.002	2.67E-5	0.057	8.75E-4	0.020	3.04E-4
Cadmium & Compounds	7440-43-9	0.0031	0.00	0.00	0.00	0.00	0.00	0.00
Hexavalent Chromium	7440-47-3	0.067	0.004	4.50E-5	0.067	6.91E-4	0.018	1.90E-4
Trivalent Chromium	16065-83-1		0.00	0.00	0.00	0.00	0.00	0.00
Formaldehyde	50-00-0	0.003	0.00	0.00	0.00	0.00	0.00	0.00
Nickel & Compounds	7440-02-0	0.142	0.00	0.00	0.00	0.00	0.00	0.00
Copper & Compounds	7440-50-8		0.00	0.00	0.00	0.00	0.00	0.00
Ammonia	7664-41-7	0.0051	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt & Compounds	7440-48-4	0.001	0.00	0.00	0.00	0.00	0.00	0.00
Hydrochloric Acid	7647-01-0	0.026	0.00	0.00	0.00	0.00	0.00	0.00
Lead & Compounds	7439-92-1		0.00	0.00	0.00	0.00	0.00	0.00
Manganese & Compounds	7439-96-5	0.1242	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	91-20-3	0.0011	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)								
Beryllium	7440-41-7	0.00093	0.00	0.00	0.00	0.00	0.00	0.00
Mercury & Compounds	7439-97-6		0.00	0.00	0.00	0.00	0.00	0.00
Benzene	71-43-2	0.00055	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	132-64-9		0.00	0.00	0.00	0.00	0.00	0.00
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.000022	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
TAC	CAS	U9		U11		U12		U13	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Arsenic & Compounds	7440-38-2	0.021	3.26E-4	0.053	8.11E-4	0.031	4.82E-4	0.726	1.11E-2
Cadmium & Compounds	7440-43-9	0.00	0.00	0.00	0.00	0.000	0.00	0.033	9.29E-4
Hexavalent Chromium	7440-47-3	0.020	2.04E-4	0.049	5.08E-4	0.00	0.00	0.436	4.52E-3
Trivalent Chromium	16065-83-1	0.00	0.00	0.00	0.00	0.00	0.00	--	1.29E-4
Formaldehyde	50-00-0	0.00	0.00	0.00	0.00	0.00	0.00	0.346	2.96E-3
Nickel & Compounds	7440-02-0	0.00	0.00	0.00	0.00	0.00	0.00	0.379	1.03E-1
Copper & Compounds	7440-50-8	0.00	0.00	0.00	0.00	0.00	0.00	--	1.52E-4
Ammonia	7664-41-7	0.00	0.00	0.00	0.00	0.00	0.00	--	5.06E-3
Cobalt & Compounds	7440-48-4	0.00	0.00	0.024	4.73E-5	0.00	0.00	0.00	0.00
Hydrochloric Acid	7647-01-0	0.00	0.00	0.00	0.00	0.00	0.00	--	2.57E-2
Lead & Compounds	7439-92-1	0.00	0.00	0.00	0.00	0.00	0.00	0.013	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
Manganese & Compounds	7439-96-5	0.00	0.00	0.00	0.00	0.00	0.00	--	5.38E-2
Naphthalene	91-20-3	0.00	0.00	0.00	0.00	0.00	0.00	0.115	1.11E-3
Beryllium	7440-41-7	0.00	0.00	0.00	0.00	0.00	0.00	0.044	9.28E-4
Mercury & Compounds	7439-97-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzene	71-43-2	0.00	0.00	0.00	0.00	0.00	0.00	0.037	5.54E-4
Dibenzofuran	132-64-9	0.00	0.00	0.00	0.00	0.00	0.00	--	2.58E-4
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.00	0.00	0.00	0.00	0.00	0.00	0.033	2.18E-5

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
TAC	CAS	U18		U19		U20		U21	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Arsenic & Compounds	7440-38-2	0.020	3.03E-4	0.291	4.46E-3	2.3E-4	1.97E-4	2.3E-4	2.65E-4
Cadmium & Compounds	7440-43-9	0.00	0.00	0.068	1.92E-3	0.00	0.00	0.00	0.00
Hexavalent Chromium	7440-47-3	0.030	3.14E-4	0.446	4.63E-3	8.3E-5	5.70E-4	8.3E-5	5.91E-4
Trivalent Chromium	16065-83-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Formaldehyde	50-00-0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel & Compounds	7440-02-0	0.00	0.00	0.059	1.61E-2	0.00	0.00	0.00	0.00
Copper & Compounds	7440-50-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia	7664-41-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt & Compounds	7440-48-4	0.009	1.85E-5	0.136	2.73E-4	4.0E-4	2.60E-5	4.0E-4	2.88E-5

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
Hydrochloric Acid	7647-01-0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lead & Compounds	7439-92-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese & Compounds	7439-96-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	91-20-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	7440-41-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mercury & Compounds	7439-97-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzene	71-43-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	132-64-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
TAC	CAS	U22		U24		U25		U26	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Arsenic & Compounds	7440-38-2	0.032	4.96E-4	0.312	4.78E-3	0.094	1.43E-3	0.084	1.28E-3
Cadmium & Compounds	7440-43-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hexavalent Chromium	7440-47-3	0.139	1.44E-3	1.336 (0.695)*	1.39E-2 (7.22E-3)*	0.401	4.16E-3	0.334	3.47E-3
Trivalent Chromium	16065-83-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Formaldehyde	50-00-0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nickel & Compounds	7440-02-0	0.00	0.00	0.054	1.47E-2	0.00	0.00	0.00	0.00
Copper & Compounds	7440-50-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia	7664-41-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt & Compounds	7440-48-4	0.00	0.00	0.108	2.16E-4	0.00	0.00	0.029	5.80E-5
Hydrochloric Acid	7647-01-0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lead & Compounds	7439-92-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manganese & Compounds	7439-96-5	0.00	0.00	--	5.31E-2	0.00	0.00	0.00	0.00
Naphthalene	91-20-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	7440-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)									
	41-7								
Mercury & Compounds	7439-97-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzene	71-43-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	132-64-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)							
TAC	CAS	U27		U28		U31	
		Risk	HQ	Risk	HQ	Risk	HQ
Arsenic & Compounds	7440-38-2	0.196	3.01E-3	0.106	1.63E-3	0.174	2.67E-3
Cadmium & Compounds	7440-43-9	0.00	0.00	0.00	0.00	0.010	2.72E-4
Hexavalent Chromium	7440-47-3	0.466	4.83E-3	0.164	1.70E-3	0.747	7.75E-3
Trivalent Chromium	16065-83-1	0.00	0.00	0.00	0.00	0.00	0.00
Formaldehyde	50-00-0	0.00	0.00	0.00	0.00	0.00	0.00
Nickel & Compounds	7440-02-0	0.00	0.00	0.00	0.00	0.030	8.20E-3
Copper & Compounds	7440-50-8	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia	7664-41-7	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt & Compounds	7440-48-4	0.097	1.94E-4	0.00	0.00	0.060	1.21E-4
Hydrochloric Acid	7647-01-0	0.00	0.00	0.00	0.00	0.00	0.00
Lead & Compounds	7439-92-1	0.00	0.00	0.00	0.00	0.00	0.00
Manganese & Compounds	7439-96-5	0.00	0.00	0.00	0.00	--	1.73E-2
Naphthalene	91-20-3	0.00	0.00	0.00	0.00	0.00	0.00
Beryllium	7440-41-7	0.00	0.00	0.00	0.00	0.00	0.00
Mercury & Compounds	7439-97-6	0.00	0.00	0.00	0.00	0.00	0.00
Benzene	71-43-2	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Individual Risk/HQ Industrial (Risk < 10, HQ < 3), Non-Industrial (Risk < 1.0, HQ < 1.0)							
Dibenzofuran	132-64-9	0.00	0.00	0.00	0.00	0.00	0.00
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.00	0.00	0	0.00	0.00	0.00

*Overall maximum values of 1.336 and 1.39E-2 for Risk and HQ respectively are industrial which meet the (Risk < 10, HQ < 3) requirement. Maximum non-industrial receptor values are 0.695 Risk, and 7.22E-3 HQ which meet the (Risk < 1.0, HQ < 1.0) requirement.

Appendix J – Fugitive Dust Control Plan for Unpaved Roads

(Submitted 8/22/2014)

Executive Summary

Kosmos Cement Company is required to maintain and operate its manufacturing facility in a manner consistent with good air pollution control practices for minimizing emissions, as defined in KRS Chapter 77 Air Pollution Control.

The Fugitive Dust Control Plan has been prepared to comply with the requirements of Regulation 1.14 of the Louisville Metro Air Pollution Control District (LMAPCD) and has been developed at the request of the LMAPCD.

Air Pollution Control District
Suite 303
701 W. Ormsby
Louisville, KY 40203-3137
(502) 574-6000

Introduction

This plan identifies measures to control fugitive particulate emissions from paved and unpaved roads at Kosmos Cement Company, 15301 Dixie Highway. This plan is divided into three sections:

1. Site Description
2. Control measures to minimize fugitive particulate emissions
3. Primary Contact List

The Plant Manager is responsible for implementing the procedures outlined in this Fugitive Dust Control Plan. This Plan will be maintained within the Environmental files at the Kosmos Cement Company.

Plant Manager: Ricardo Quiroga

Section 1 – Site Description

Kosmos Cement Company is located in southwest Jefferson County at 15301 Dixie Highway. Kosmos Cement Company produces cement for local and remote distribution. The Kosmos Cement Company cement manufacturing site consists of approximately 1,600 acres. Kosmos Cement Company uses a multitude of mobile equipment on paved and unpaved roads, involved in material handling, occasional construction, and one-site vehicular traffic. Various materials are used in the cement manufacturing process such as coal, coke, petcoke, tire derived fuel (TDF), limestone, clay(s), gypsum, millscale, and other delivered to the site and placed in storage piles.

<u>Unpaved Roads</u>

Unpaved roads at the Kosmos Cement Company site consist primarily of natural aggregate and raw material fines. Unpaved roads access are limited to contractors, employees, agency personnel, and others that may be provided access in the course of performing required operational duties.

Potential fugitive dust from unpaved roads may be caused by:

- Dry road conditions;
- Wind erosion;
- Vehicle traffic; and
- Material fallout from vehicle traffic.

Paved Roads

The paved roads are concrete surfaced. Paved roads access is limited to contractors, employees, agency personnel, and others that may be provided access in the course of performing required operational duties.

Potential fugitive dust from paved roads may include:

- Material tracked from unpaved surfaces onto paved roads by vehicle traffic;
- Material fallout from vehicle traffic; and
- Construction activities.

Section 2 – Control Measures to Minimize Fugitive Particulate Emissions

Site Monitoring

- Treatment frequency shall be adjusted to control fugitive dust emissions. Monitoring shall performed throughout each business day by Kosmos Cement Company personnel. Areas that require additional/beyond normal attention shall be logged by the water truck driver(s). Additional/beyond normal conditions are defined as periods of time outside daily business hours and during extreme weather events.

- When weather conditions have contributed to the control of fugitive dust emissions, watering operations may be suspended until such time as it appears necessary for the control of fugitive dust emissions. Watering operations may be suspended when conditions are unsafe for either personnel or equipment.

Unpaved Roads

- Kosmos Cement Company utilizes a water truck(s) to keep the roadways and entrance and exit areas within the site wet in order to control fugitive dust emissions. An additional water truck, as needed, shall be used during the summer months (typically June through September) as a back-up or to assist with watering efforts during hot/windy weather.

- The watering operations shall be performed at a frequency of at least once every two hours for the active unpaved roads (i.e., scheduled to be used for the whole shift). Further, the facility shall water more frequently if there is visible evidence of fugitive dust emissions (e.g., dust clouds resulting from wind). The only exception to the once per two hours of water operations is when the unpaved roads are not active (i.e., not schedule to be used for the whole shift) or during times when precipitation such as rainfall, snow, and/or ice have adequately suppressed the dust or have contributed to unsafe conditions for equipment or personnel.

- Kosmos Cement Company shall maintain records, daily, for the watering operations performed on all unpaved roads, or a statement that rain occurred. If a statement that rain occurred is made, it shall include the start and stop time of rainfall. All records shall include the date of the entry and the name of the person making the entry.

Paved Roads

- All passenger vehicles, including employee vehicles entering and leaving the site, shall be limited to paved roads and parking lots to prevent the generation of dust, unless required for direct performance or operational duties. Should operational duties cause dust to transfer to paved roads, the material shall be cleaned using a water truck side spray, wet street sweeper, or water hose, as needed.
- Roads shall be maintained in such a manner as to prevent the tracking of debris onto any public roads.
- Kosmos Cement Company shall utilize a water truck(s) to keep the paved roadways, entrance areas, and exit areas within the site wet in order to control fugitive dust emissions. An additional water truck shall be used, as needed, during the summer months (typically June through September) as a back-up or to assist with watering efforts during hot/windy weather.
- For 8 hours per weekday, watering operations shall be continuous until the roads are saturated. Weekend operation shall be planned on an as-needed basis, based on the weather forecast.

Section 3 – Primary Contact List

Personnel involved in activities that could produce fugitive particulate emissions are expected to comply with the requirements listed within this Kosmos Cement Company Fugitive Dust Control Plan. The following primary contact list is intended for use only by personnel employed by the LMAPCD and is being provided for LMAPCD's use as needed to obtain information regarding any questions or issues surrounding the processes contained within this plan. In the absence of the Plant Manager, all operation, production, quality, and maintenance managers and on-site operation supervisors have full authority to make the necessary fugitive dust emission mitigation decisions. The Plant Manager and other managers can be reached by calling the main Kosmos phone number, 502-935-7331.

Appendix K – Protocol Checklist for Performance Test

A completed protocol should include the following information:

- ☐ 1. Facility name, location, and ID #;
- ☐ 2. Responsible Official and environmental contact names;
- ☐ 3. Permit numbers that are requiring the test to be conducted;
- ☐ 4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- ☐ 5. Alternative test methods or description of modifications to the test methods to be used;
- ☐ 6. Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- ☐ 7. Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
- ☐ 8. Maximum rated production capacity of the system;
- ☐ 9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
- ☐ 10.Method to be used for determining rate of production during the performance test;
- ☐ 11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- ☐ 12. Description of normal operation cycles;
- ☐ 13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- ☐ 14. Process flow diagram;
- ☐ 15. The type and manufacturer of the control equipment, if any;
- ☐ 16. The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
- ☐ 17. How quality assurance and accuracy of the data will be maintained, including;
    - Sample identification and chain-of-custody procedures
    - If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- ☐ 18. Pipe, duct, stack, or flue diameter to be tested;
- ☐ 19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
- ☐ 20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR §Part 60;
    - Method 1 if stack diameter is >12"
    - Method 1a if stack diameter is greater than or equal to 4" and less than 12"
    - Alternate method of determination for <4"
    - If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.
- ☐ 21. The Stack Test Review fee shall be submitted with each stack test protocol.

Appendix L - Determination of Benchmark Ambient Concentration (BAC)

Determination of Benchmark Ambient Concentration (BAC) **Category _____ No. _____**

TAC _____ **CAS No.** _____-_____-____

_____ **Mol. Wt.** _____

BAC_C = _____ µg/m³ Annual **BAC_{NC} = _____ µg/m³ _____ Averaging Period**

De Minimis_____ lb/hour; _____ lb/_____; _____ lb/year

I. Carcinogen Risk - BAC_C [Annual Averaging Period] Carcinogen . . . . ☐ yes ☐ no

1. ☐ IRIS ☐ no 10^{-6} risk = _____ µg/m³ URE _____ $(\mu g/m^3)^{-1}$ ___-___-___
2. ☐ Cal ☐ no 10^{-6} risk = _____ µg/m³ IUR _____ $(\mu g/m^3)^{-1}$ ___-___-___
3. ☐ MI ☐ no 10^{-6} risk = _____ µg/m³ ___-___-___
4. ☐ NTP Part A ☐ yes ☐ no Part B ☐ yes ☐ no
5. ☐ IARC Group 1 ☐ yes ☐ no Group 2A ☐ yes ☐ no Group 2B ☐ yes ☐ no
6. ☐ ATSDR ☐ no
7. ☐ Sec. 3.3.4 method _____☐ no 10^{-6} risk = _____ µg/m³ ___-___-___
8. ☐ Default 0.0004 µg/m³

II. Chronic Noncancer Risk - BAC_{NC} [Averaging Period as Specified]

1. ☐ IRIS ☐ no RfC = _____ µg/m³ Annual ___-___-___
2. ☐ Cal ☐ no REL = _____ µg/m³ Annual ___-___-___
3. ☐ IRIS[1] ☐ no RfD = _____µg/kg/day ⊗ 70/20 =_____µg/m³ Annual ___-___-___
4. ☐ MI ☐ no ITSL = _____ µg/m³_____ Averaging Period ___-___-___
5. ☐ TLV ☐ NIOSH _____ µg/m³ ⊗ 0.01 = _____ µg/m³ 8-Hr ___-___-___
6. ☐ RTECS[1] _____ _____ = _____ µg/m³ Annual
7. ☐ Default 0.04 µg/m³ Annual

III. De Minimis

1. ☐ Carcinogen (BAC_C) _____ µg/m³ ⊗ 0.54 = _____ lb/hour
   (BAC_C) _____ µg/m³ ⊗ 480 = _____ lb/year
2. ☐ Chronic Noncancer Risk _____ Averaging Period
   (BAC_{NC}) _____ µg/m³ ⊗ _____ = _____ lb/hour
   (BAC_{NC}) _____ µg/m³ ⊗ _____ = _____ lb/_____
   _____ lb/_____ ⊗ _____ _____ = _____ lb/year

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

Prepared by _____ ___-___-___

Appendix M – Compliance Assurance Monitoring Plan Emission Unit U-13 Preheater & Kiln[168]

I. Background

A. Emissions Unit: U-13

(1) Description: Preheater and Kiln (U13-E900, formerly E82)[169]
(2) Identification: Kiln Baghouse C-945 (formerly Control ID C-28) & Kiln (K-901)
(3) Facility:
Kosmos Cement Company
15301 Dixie Highway
Louisville, Kentucky 40272

B. Plan Overview

Kosmos proposes the monitoring methodology outlined in this plan and previously submitted District permit application forms[170] to serve as the Compliance Assurance Monitoring (CAM) Plan for the Preheater and Kiln Emission Unit (U-13) subject to District Regulation 7.08. Because Kosmos is submitting this plan without an Administrator-provided applicability determination, Kosmos would like to reserve the right to revise the CAM Plan and provide subsequent submissions.

The CAM Technical Guidance Document[171] was used to develop this plan for monitoring control device performance and assessing a "reasonable assurance" of compliance with the applicable emission limitation. Kosmos's CAM Plan for U-13 addresses controlling particulate matter (PM) emissions from an existing kiln subject to District Regulation 7.08 emission standards. The Preheater and Kiln Emission Unit (U-13) is equipped with fabric filter control technology and has a continuous opacity monitoring system (COMS). COMS data will be used to assess continuous compliance with District Regulation 7.08 emission standards.

C. Applicable Regulation, Emission Limit, and Monitoring Requirements:

(1) District Regulation: 7.08
(2) Emission limits:

(i) Regulation 7.08, Section 3.1.2:
No owner or operator shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is in excess of the quantity in Table 1. (Table 1 to District Regulation 7.08)
(ii) Permit 156-97-TV does not contain an emission limit for the Kiln (K-901), Baghouse C-28 (K-945), or Stack S-11 with a District Regulation 7.08 citation.
(iii) Permit TV-13-1001-C[172]:

[168] Excerpt taken from Company submittal received 11/17/2015.

[169] Emission Point ID from District Permit TV-13-1001-C *Process and Control equipment description* listed on cover page.

[170] District Form 9400-K from September 2011 Title V Renewal Application for Emission ID# U-7/U-13 contains applicable compliance monitoring requirements incorporated in this CAM plan submission.

[171] CAM Technical Guidance Document: http://cfpub.epa.gov/oarweb/mkb/cam.cfm

[172] Permit TV-13-1001-C, Comment 9, Page 131 of 174 states: "The potential PM emissions from Kiln (U13-E82) can exceed the standards uncontrolled, but cannot exceed the standard controlled."

a. For the Kiln (U13-E82) the owner or operator shall not allow PM emissions to exceed 45.14 lb/hr based on a 30 day rolling average. (Regulation 7.08, section 3.1.2)

b. For the Kiln (U13-E82) the owner or operator shall not cause emissions of particulate matter that equals or exceeds 20% opacity. (Regulation 7.08, section 3.1.1)

c. For the Kiln (U13-E82) the owner or operator shall utilize baghouse (K-945) control at all times the associated process equipment is in operation and shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (Regulation 2.03, Section 6.1)

(3) Monitoring Requirements:

(i) Regulation 7.08 does not prescribe any specific monitoring requirements for emission standards listed in Regulation 7.08, Section 3.1.2.

(ii) Permit 156-97-TV does not contain monitoring requirements for the Kiln emission point for purposes of demonstrating compliance with District Regulation 7.08.

(iii) Permit TV-13-1001-C does not contain Regulation 7.08 specific monitoring requirements for the Kiln Emission Point. Regulatory requirements listed 40 CFR 60.13 and 40 CFR 60, Appendix B PS-1, referenced in District Permit 156-97-TV will be used for purposes of demonstrating continuous compliance with District Regulation 7.08 emission standards.

D. Control Technology

(1) Baghouse K-945 (C-28) is a fabric filter baghouse.

(2) Baghouse K-945 (C-28) is an inherent piece of process equipment used for:

(i) The purpose of material recovery (clinker).

(ii) Removing PM from the kiln flue gas upstream of the kiln's induced draft (ID) fan which is used to control the pyro-processing rate of the kiln. A clean inlet air stream to the kiln's ID fan is essential to safe and proper operation of the emission unit.

II. Monitoring Approach

A. Indicator: Continuous Opacity Monitoring System (COMS) digital output data.

B. Measurement Approach:

(1) The owner or operator (Kosmos) shall install, calibrate, maintain and operate in accordance with 40 CFR 60.13 and 40 CFR 60, Appendix B PS-1, a continuous opacity monitoring system (COM) to measure the opacity of emissions discharged into the atmosphere from stack S-11.[173]

(2) Should the COM fail for any reason for more than 24 hours, the owner or operator (Kosmos), shall, to remain in compliance, perform a Method 9 test (40 CFR 60 Appendix A) for at least 30 minutes, during each day, under normal operating conditions, on stack S-11. The COM failure shall be reported to the District as per Regulation 1.07.5

C. Indicator Range

(1) The indicator level is COMS digital output data which demonstrates continuous compliance with the established opacity limit listed on Page 78 of District Permit 156-97-TV, Emission Unit U-13 Additional Condition 1.a.i.

[173] Monitoring requirement listed in District Permit 156-97-TV Operating permit for Emission Unit U-13; See Additional Condition 2.a.v and 2.a.vi on Page 80 or permit 156-97-TV.

(2) The Opacity limit in District Permit 156-97-TV for baghouse C-28 is of comparable stringency to District Regulation 7.08 standards of 45.14 lb/hr PM and 20% opacity for the kiln. Therefore, continuous compliance with operating the COMS in accordance with 40 CFR §60.13 and 40 CFR §60 Appendix B PS-1 will reasonably assure continuous compliance with District Regulation 7.08 PM (45.14 lb/hr PM on a 30 day rolling average) and Opacity (less than 20%) standards.

D. Performance Criteria

(1) Data Representativeness:

COMS digital output data is directly correlated to PM emissions measured by an EPA reference method (Method 5 - Determination of Particulate Matter Emissions from Stationary Sources) during kiln performance testing; COMS digital output data correlated to direct pollutant measurement (via performance testing) represents the 2nd highest level of emissions monitoring/estimation in the EPA emissions estimation hierarchy.

(2) Verification of Operation Status:

(i) Emission Unit U-13 COMS is installed, maintained, calibrated, and operated in accordance with 40 CFR 60.13 and 40 CFR 60, Appendix B PS-1 as required by District Permit 156-97-TV.

(3) QA/QC Practices and Criteria:

(i) Emission Unit U-13 COMS is installed, maintained, calibrated, and operated in accordance with 40 CFR 60.13 and 40 CFR 60, Appendix B PS-1 as required by District Permit 156-97-TV.

(4) Monitoring Frequency and Data Collection Procedure:

(i) Kiln air pollution control device (APCD) baghouse K-945:

See District Form 9400-K submitted with the September 2011 Title V Renewal Application.

(ii) COMS:

See District Form 9400-K Submitted with the September 2011 Title V Renewal Application.

III. Justification

A. Background

The Kosmos facility manufactures Portland cement. The pollutant-specific emission unit is the Preheater and Kiln Emission Unit (U-13). Cement clinker is discharged from the kiln into the clinker cooler. The main kiln baghouse (K-945) is served by an induced draft (ID) fan which helps regulate the pyro-processing rate of the kiln. The kiln is served by a baghouse (K-45 / C-28) that is inherent for material recovery of clinker and safe operation of the kiln ID fan.

B. Rationale for Selection of Performance Indicator

COMS digital output data was selected as the performance indicator because it is indicative of proper baghouse operation; COMS operation and monitoring data is required to comply with applicable PM emission standards listed in District Permit 156-97-TV. Opacity emission standards listed on Page 78 or District Permit 156-97-TV, Emission Unit U-13 Additional Condition 1.a.i are of comparable stringency to District Regulation 7.08 emission standards; therefore, when baghouse K-945 is operating properly as confirmed by COMS digital output data, opacity and PM emissions from the kiln exhaust stack will be below District Regulation 7.08 emission standards.

C. Rationale for Selection of Indicator Level

The selected indicator range of Emission Unit U-13 COMS digital output data (and the establishment of its relationship to manual reference method measurements) was selected because it is required by 40 CFR Part 64. Pursuant to 40 CFR §64.3(d)(2)(vi), comparable requirements and specifications established by the permitting authority (District Permit 156-97-TV federally enforceable permit conditions) requires that the owner or operator shall use such system (Emission Unit U-13 COMS) to satisfy the requirements of this part (40 CFR Part 64 – Compliance Assurance Monitoring). Moreover, the maintenance, calibration, operation, and performance testing requirements listed 40 CFR §60.13 and 40 CFR Part 60 Appendix B PS-1 as required by District Permit 156-97-TV for the Emission Unit U-13 COMS meet all the requirements of Monitoring design criteria listed in 40 CFR §64.3 independent of 40 CFR §64.3(d) Special criteria for the use of continuous emission, opacity or predictive monitoring systems.

Appendix N – Compliance Assurance Monitoring Plan Emission Unit U-18 Clinker Cooler[174]

I. Background

A. Emissions Unit: U-18

(1) Description: Clinker Cooler

(2) Identification: Cooler Baghouse C-924/S-924 (Emission Point E-924/C-924, formerly E-97/C-35)

(3) Facility:
Kosmos Cement Company – Louisville Plant
15301 Dixie Highway
Louisville, Kentucky 40272

B. Applicable Regulation, Emission Limit, and Monitoring Requirements:

(1) District Regulation: 7.08

(2) Emission limits:

(i) Regulation 7.08, Section 3.1.2:
No owner or operator shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is in excess of the quantity in Table 1. (Table 1 to District Regulation 7.08)

(ii) Permit 156-97-TV does not contain an emission limit for Emission Point E-97 / C-35 for District Regulation 7.08.

(iii) Permit 1-05-C:
The owner or operator shall not allow PM emissions to exceed 40.27 lb/hr for the clinker cooler (E-97)

(3) Monitoring Requirements:

(i) Regulation 7.08 does not prescribe any specific monitoring requirements for emission standards listed in Regulation 7.08, Section 3.1.2.

(ii) Permit 156-97-TV does not contain monitoring requirements for the Kiln emission point for purposes of demonstrating compliance with District Regulation 7.08.

(iii) Permit 1-05-C does not contain Regulation 7.08 specific monitoring requirements for the Emission Point E-97. Monitoring requirements for 40 CFR 63 Subpart LLL contained in permit 1-05-C are referenced for purposes of demonstrating compliance with District Regulation 7.08.

D. Control Technology

(1) Baghouse K-924 (C-35) is a fabric filter baghouse.

(2) Baghouse K-924 (C-35) is an inherent piece of process equipment used for the purpose of material recovery (clinker).

II. Monitoring Approach

A. Indicators

(1) Continuous Opacity Monitors (COMs)

(2) PM Continuous Parametric Monitoring Systems (PM CPMS / CPMS)

[174] Excerpt taken from Company submittal received 2/12/2015.

(3) differential transmitters monitored by programmable logic controller (PLC)
(4) fan motor amperage (monitored via PLC)
(5) level indicators (monitored via PLC)
(6) damper controls (operated via PLC)

B. Measurement Approach

(1) COMs or PM CPMS will continuously measure the opacity (COMs) or particular emissions (PM CPMS) from baghouse K-924 stack.

(2) The owner or operator shall, during any period that the continuous opacity monitor (COM) is down for more than twenty-four hour period, perform a Method 9 test on Stack S-294 once per day until the COM is back in operation. The result of such test(s) shall be supplied to the District in the source's semi-annual report.

(3) The owner or operator will perform a Method 9 test on Stack S-924 once per day during any period that the PM CPMS is down for more than a twenty-four hour period. The owner or operator will perform a Method 9 test on Stack S-924 once per day until the PM CPMS is back in operation.

C. Indicator Range

The indicator level is less than 10% opacity.

D. Performance Criteria

(1) Data Representativeness:

Measurements are being made at this emission point by COMs or a CPMS

(2) Verification of Operation Status:

(i) COMs are installed, maintained, calibrated, and operated as required by the general provisions in Subpart A of 40 CFR 63 and according to PS-1 of appendix B to 40 CFR Part 60.

(ii) CPMS are installed, maintained, calibrated, operated, incorporated in to the site-specific monitoring plan, and performance tested as required by 40 CFR §63.1348(a), 40 CFR §63.1349(b), 40 CFR §63.1350(b), 40 CFR §63.1349(m), and 40 CFR §63.7.

(iii) Verification of operation status is not applicable for a Method 9 test conducted when the COMs are down for more than a twenty-four hour period.

(iv) Verification of operation status is not applicable for a Method 9 test conducted when the CPMS is down for more than a twenty-four hour period.

(3) QA/QC Practices and Criteria:

(i) COMs are installed, maintained, calibrated, and operated as required by the general provisions in Subpart A of 40 CFR 63 and according to PS-1 of appendix B to 40 CFR Part 60.

(ii) CPMS are installed, maintained, calibrated, operated, incorporated in to the site-specific monitoring plan, and performance tested as required by 40 CFR §63.1348(a), 40 CFR §63.1349(b), 40 CFR §63.1350(b), 40 CFR §63.1349(m), and 40 CFR §63.7.

(4) Monitoring Frequency and Data Collection Procedure:

(i) Verify C-35 fan is running and belts are on; verify C-35 dampers are working properly; frequency is daily.

(ii) Verify C-35 cleaning mechanism is working properly; verify bags are clean and not filled with dust; verify C-35 dust removal system is working properly; Inspect area around collector C-35 for signs of dust; frequency is every two weeks.

(iii) Replace all worn bags for C-35; frequency is as needed.

III. Justification

A. Background

The Kosmos facility manufactures Portland cement. The pollutant-specific emission unit is the clinker cooler. Cement clinker is discharged from the kiln into the clinker cooler. The cooler is served by cooling fans that force ambient air up through the bottom of the cooler plates and through the hot clinker as it is conveyed through the cooler. The cooler is served by a heat exchanger and a baghouse (K-924 / C-35) that is inherent for material recovery of clinker.

B. Rationale for Selection of Performance Indicator

(1) COMs or, if applicable, a Method 9 test (only required when the COMs are down for more than a twenty-four hour period) was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the requirements of Regulation 7.08, Permit 156-97-TV, Permit 1-05-C and emission standards listed in 40 CFR Part 63 Subpart LLL. When the baghouse is operating properly, opacity from the exhaust stack will be within the indicator range. Any increase in opacity above the indicator range indicates reduced performance of the baghouse used for clinker recovery; therefore, the presence of opacity above the indicator range is used as a performance indicator for the emission unit.

(2) CPMS or, if applicable, a Method 9 (only required when the CPMS are down for more than a twenty-four hour period) was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the requirements of Regulation 7.08, Permit 156-97-TV, Permit 1-05-C and emission standards listed in 40 CFR Part 63 Subpart LLL. When the baghouse is operating properly, opacity from the exhaust stack will be within the indicator range. Any increase in opacity above the indicator range indicates reduced performance of the baghouse used for clinker recovery; therefore, the presence of opacity above the indicator range is used as a performance indicator for the emission unit.

C. Rationale for Selection of Indicator Level

The selected indicator range is less than 10% opacity. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. An indicator range of less than 10% opacity was selected because the presence of opacity above the indicator range is indicative of an increase in particulate emissions.

Appendix O – Consent Decree Specific Conditions[175]

The following requirements are incorporated from District Construction Permit C-0060-1055-17-V, effective date 10/17/2017

S1. **Standards** (Regulation 2.16, section 4.1.1)

a. **General Requirements in the Consent Decree**

i. Environmental Mitigation (Consent Decree, V)

Defendant[176] shall implement the Environmental Mitigation Project ("Project") described in Appendix A to this Consent Decree, as the following: (Consent Decree, 12)

1) Energy Audits (Consent Decree, Appendix A)

(a) By no later than 12 months following the Effective Date[177], Defendant shall submit, for approval, a proposal to conduct energy audits of all Facilities. The proposal shall be deemed acceptable to EPA if EPA does not respond within 30 days of receipt of the proposal. (Consent Decree, Appendix A, 1)

(b) The audit proposal shall contain a description of the audits (including of the physical areas and processes to be audited) that Defendant will undertake, identify the Contractor to be used to conduct the audits, the certifications of the Contractor, and a proposed schedule for the audits. (Consent Decree, Appendix A, 2)

(c) Audits shall, at a minimum, include both a preliminary (walkthrough) audit as well as a detailed diagnostic audit of all stationary (e.g., clinker crusher, buildings) and mobile (e.g., quarry loader, diesel locomotive) components of a Facility that have direct or indirect potential to emit NO_x. (Consent Decree, Appendix A, 3)

(d) By no later than 36 months following the Effective Date, Defendant shall complete the energy efficiency audits of all Facilities. The energy efficiency audits shall identify actions that, if implemented, would directly or indirectly reduce NO_x emissions ("Energy Audit"). Defendant shall share the results of the Energy Audits with the United States and the State Agency Settlors.[178] (Consent Decree, Appendix A, 4)

[175] Unless otherwise noted, all requirements specified in this appendix are cited from the Consent Decree, *United States District Court for the Eastern District of Tennessee at Knoxville* filed on 11/29/2016.

[176] In this construction permit, "defendant" means Kosmos Cement Company located at Louisville, Kentucky.

[177] The effective date of the Consent Decree is 11/19/2016.

[178] In this construction permit, "State Agency Settlors" means Louisville Metro Air Pollution Control District.

2) Energy Efficiency Actions (Consent Decree, Appendix A)

(a) By no later than 48 months following the Effective Date, Defendant shall spend a total of $150,000, exclusive of Defendant's own oversight costs, on energy efficiency projects ("Energy Efficiency Actions") with direct or indirect reductions of NO_x emissions. (Consent Decree, Appendix A, 5)

(b) Defendant shall make good faith efforts to undertake all Energy Efficiency Actions identified by the audits at the Demopolis Facility as a first priority and, as a second priority, at the Knoxville Facility. (Consent Decree, Appendix A, 6)

(c) All Energy Efficiency Actions must have quantifiable direct or indirect NO_x emissions reductions. (Consent Decree, Appendix A, 7)

ii. Prohibition on Netting Credits or Offsets from Required Controls (Consent Decree, VIII)

1) NO_x and SO_2 emission reductions resulting from compliance with the requirements of this Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit under the Clean Air Act's Nonattainment NSR and PSD programs. (Consent Decree, 38)

2) The limitations on the generation and use of netting credits or offsets set forth in Paragraph 38 do not apply to emission reductions achieved by Defendant that are surplus to those required under this Consent Decree ("surplus emission reductions"). For purposes of this Paragraph, surplus emission reductions are the reductions over and above those required under this Consent Decree that result from Defendant's compliance with federally enforceable emissions limits that are more stringent than limits imposed under this Consent Decree or from Defendant's compliance with emissions limits otherwise required under applicable provisions of the Clean Air Act or with an applicable State Implementation Plan (SIP) that contains more stringent limits than those imposed under this Consent Decree. (Consent Decree, 39)

3) Nothing in this Consent Decree is intended to preclude the emission reductions generated under this Consent Decree from being considered by U.S. EPA or a State Agency Settlor as creditable contemporaneous emission decreases for the purpose of attainment demonstrations submitted

pursuant to §110 of the Act, 42 U.S.C. §7410, or in determining impacts on National Ambient Air Quality Standards, PSD increments, or air quality-related values, including visibility in a Class I area. (Consent Decree, 40)

iii. Permits requirements (Consent Decree, IX)

1) Placing Consent Decree provisions in either a federally-enforceable non-Title V permit[179] or a source-specific State Implementation Plan revision. (Consent Decree, 42)

(a) For each Facility, Defendant must take steps to include the provisions of this Consent Decree listed in Paragraph 42.b., into either: (i) federally-enforceable, non-Title V permit(s) that shall remain effective (and shall be renewed, as necessary) until Retirement of the Facility's Kilns, in accordance with Paragraph 42.c.; or, (ii) a source specific SIP revision in accordance with Paragraph 42.d. Then, for each Facility, Defendant must obtain a Title V permit (including renewal and/or modified Title V permits) in accordance with Paragraph 43, containing the Consent Decree provisions listed in Paragraph 42.b. (Consent Decree, 42.a)

(b) The following provisions of this Consent Decree constitute emission limitations and standards and such other conditions as are necessary to assure compliance with applicable requirements of the CAA and must be included in each Facility's Title V permit according to 42 U.S.C. § 7661c(a), shall remain applicable unless superseded by future, federally approved requirements pursuant to the CAA and shall survive Termination (XXII) of this Consent Decree: the 30-Day Rolling Average Emission Limit for NO_x for each Kiln (from Table 1 (Paragraph 18); the requirement to demonstrate compliance for each Kiln by calculating a new 30-Day Rolling Average Emission Rate for NO_x for each new Operating Day (Paragraph 19); the requirement for Continuous Operation of SNCR on each Kiln (Paragraph 20); the requirements for NO_x CEMS monitoring (Paragraphs 28-32); the 30-Day Rolling Average Emission Limit for SO_2 for each Kiln from Table 2 (Paragraph 33); the requirement to demonstrate compliance for each Kiln by calculating a new 30-Day Rolling Average Emission Rate for SO_2 for each new Operating Day (Paragraph 33); the requirements for SO_2 CEMS monitoring (Paragraphs 34 through 37); and the definitions contained in Paragraphs 7.a, 7.b, 7.c, 7.d, 7.e,

[179] This construction permit is the federally-enforceable non-Title V permit required by the Consent Decree.

7.h, 7.k, 7.n, 7.o, 7.q (as applicable), 7.r, 7.s, 7.y, 7.z, 7.hh, 7.ii, 7.kk, 7.nn. (Consent Decree, 42.b)

2) Placing requirements of the Consent Decree into Title V permits. Upon issuance of any permit or approval or source-specific SIP revision under Paragraph 42, Defendant shall file any applications necessary to incorporate the requirements of that permit or approval or source-specific SIP revision into the Title V operating permit of the appropriate Facility. Such applications for a Title V permit or for any subsequent renewal or modifications thereof, shall: (i) expressly incorporate the Consent Decree provisions listed in Paragraph 42.b., (ii) specify that such provisions constitute "emission limitations and standards and other conditions which are necessary to assure compliance with applicable requirements of the CAA within the meaning of 42 U.S.C. § 7661c(a)," and (iii) specify that such provisions shall remain applicable unless superseded by future, federally approved requirements pursuant to the CAA and shall not be revised without the express written approval of the U.S. EPA and the applicable State Agency Settlor. Defendant shall not challenge the inclusion of the provisions listed in Paragraph 42.b. in any Title V permit unless such provisions are superseded by future, federally approved requirements pursuant to the CAA, but nothing in this Consent Decree is intended nor shall it be construed to require the establishment of Emission Limits requirements or limitations other than those expressly prescribed in this Consent Decree nor to preclude Defendant from challenging any more stringent Emission Limits should they be proposed for reasons independent of this Consent Decree. (Consent Decree, 43)

3) This Consent Decree shall not terminate (Section XXII) with respect to a Facility until that Facility obtains both (i) non-Title V federally-enforceable permits or SIP amendments (compliant with Paragraph 42.c. or 42.d.) and (ii) Title V permits (compliant with Paragraph 43) for such Facility. (Consent Decree, 46)

iv. Information Collection and Retention (Consent Decree, XV)

1) The United States, the State Agency Settlors, and their representatives, including attorneys, Contractors, and consultants, shall have the right of entry into any Facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to: (Consent Decree, 82)

(a) Monitor the progress of activities required under this Consent Decree;

(b) Verify any data or information submitted to the United States or the State Agency Settlors in accordance with the terms of this Consent Decree;

(c) Obtain samples and, upon request, splits of any samples taken by a Defendant or its representatives, Contractors, or consultants;

(d) Obtain documentary evidence, including photographs and similar data; and,

(e) Assess a Defendant's compliance with this Consent Decree.

2) Upon request, a Defendant shall provide U.S. EPA and the applicable State Agency Settlor, and their authorized representatives, copies of analytical data from Kiln performance testing performed by Defendant. Upon request, U.S. EPA and the applicable State Agency Settlor shall provide Defendant copies of analytical data from Kiln performance testing performed by U.S. EPA or the State Agency Settlor. (Consent Decree, 83)

3) At the conclusion of the information-retention period provided in the preceding Paragraph, each applicable Defendant shall notify in writing the United States and the State Agency Settlors at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State Agency Settlors, the applicable Defendant shall deliver any such documents, records, or other information to EPA or the State Agency Settlors. Defendant may assert that certain documents, records, or other information are privileged under the attorney client privilege or any other privilege recognized by federal law. If a Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege. (Consent Decree, 85)

4) Defendant may also assert that information required to be provided under this Section, except for information and data necessary to determine compliance with any NO_x or SO_2 emission limits contained in this Consent Decree, is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2. (Consent Decree, 86)

5) This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State Agency Settlors pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits. (Consent Decree, 87)

b. **NOx**

i. By no later than the applicable deadline in Table 1 of Paragraph 18, which is 730 days from the effective date of this Consent Decree, Defendant shall commence continuous operation of SNCR technology of the Kilns.[180] (Consent Decree, 18)

ii. The 30-Day Rolling Average Emission Limit for Louisville Kiln 1 is 2.1 lbs NOx/ton of clinker. (Consent Decree, 18)

iii. Beginning on the operating day which is the 30th operating day after the deadline[180] in Table 1 of Paragraph 18, Defendant shall demonstrate compliance with the applicable 30-Day Rolling Average Emission Limits in accordance with Paragraph 7.a., and thereafter Defendant shall continue to maintain such compliance.[181] (Consent Decree, 19)

iv. Beginning on the first Operating Day after the Deadline[180] in Table 1 applicable to a specified Kiln, Defendant shall Continuously Operate SNCR at that Kiln. (Consent Decree, 20)

v. At each Kiln identified in Paragraph 7.q. of this Decree, except as specified in Paragraph 28.a. below, Defendant shall install and make operational no later than the applicable deadline for Commencement of Continuous Operation of SNCR pursuant to Paragraph 18, a NOX Continuous Emissions Monitoring System (CEMS) at each stack which collects emissions from such Kiln in accordance with the requirements of 40 CFR §Part 60. (Consent Decree, 28)

[180] The effective date of this Consent Decree is 11/29/2016. The applicable deadline for the Defendant, which is 730 days from the effective date of this Consent Decree, is 11/29/2018.

[181] 30 days after the applicable deadline is 12/29/2018. Therefore Defendant shall demonstrate compliance and thereafter maintain compliance with the applicable NOx 30-Day Rolling Average Emission Limits on 12/29/2018.

vi. Except during CEMS breakdowns, repairs, periodic accuracy evaluations, calibration checks, and zero span adjustments, the CEMS required pursuant to Paragraph 28 shall be operated at all times during Kiln Operation. Each such CEMS shall be used at each Kiln to demonstrate compliance with the NOx Emission Limits established in Section VI.A (NOx Emission Limits and Control Technology) of this Consent Decree. (Consent Decree, 30)

c. **SO_2**

i. The 30-Day Rolling Average Emission Limit for Louisville Kiln 1 is 0.6 lbs SO_2/ton of clinker. (Consent Decree, 33)

ii. Defendant shall demonstrate compliance and thereafter maintain compliance with the 30-Day Rolling Average Emission Limit for SO_2 for each of their specific Kilns in Table 2 on the 30th Operating Day following the date specified in Table 2, below, in this Paragraph 33.[182] (Consent Decree, 33)

iii. At each Kiln identified in Paragraph 7.q. of this Decree, except as specified in Paragraph 34.a. below, Defendant shall install and make operational no later than the deadline for commencement of each Kiln's 30-Day Rolling Average SO2 Emission Limit, as set forth in Table 2 of Paragraph 33, a SO2 CEMS at each stack which collects emissions from such Kiln in accordance with the requirements of 40 CFR §Part 60. (Consent Decree, 34)

iv. Except during CEMS breakdowns, repairs, periodic accuracy evaluations, calibration checks, and zero span adjustments, the CEMS required pursuant to Paragraph 34 shall be operated at all times during Kiln Operation. Each such CEMS shall be used at each Kiln to demonstrate compliance with the SO2 Emission Limits established in Section VII.A. (SO2 Emission Limits) of this Consent Decree. (Consent Decree, 35)

S2. **Monitoring and Record Keeping** (Regulation 2.16, sections 4.1.9.1 and 4.1.9.2)

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **General Requirements in the Consent Decree**

i. Information Collection and Retention (Consent Decree, XV)

1) Until five (5) years after the Termination of this Consent Decree, pursuant to either Paragraph 105 or 106, the applicable Defendant shall retain, and shall instruct its Contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form)

[182] Defendant shall demonstrate compliance and thereafter maintain compliance with the applicable SO_2 30-Day Rolling Average Emission Limits on 12/29/2018.

in its or its Contractors' or agents' possession or control, and that relate to that Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State Agency Settlor, the applicable Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph. (Consent Decree, 84) (See Specific Condition S4.)

b. **NOx**

i. In accordance with Paragraph 7.b., Defendant shall calculate a new 30-Day Rolling Average Emission Rate for each new Operating Day and shall maintain a record of each daily calculation of the rate for no less than five years.(Consent Decree, 19)

ii. On or before the date that use of a NOx CEMS is required pursuant to Paragraph 28, for each Kiln, Defendant shall comply with the requirements of 40 CFR §63.1350(d)[183] to determine hourly clinker production rates at the Facilities. (Consent Decree, 29)

iii. Each NOx CEMS required pursuant to Paragraph 28 shall monitor and record the applicable NOx Emission Rate from each Kiln stack in units of lbs. of NOx per Ton of clinker produced at such Kiln and shall be installed, certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 CFR §Part 60. (Consent Decree, 31)

iv. For purposes of this Consent Decree, all emissions of NOx from Kilns shall be measured by CEMS. During any time when a CEMS is inoperable or otherwise not measuring emissions of NOx from any Kiln, Defendant shall apply the missing data substitution procedures in 40 CFR §Part 75, Subpart D. (Consent Decree, 32)

c. **SO_2**

i. In accordance with Paragraph 7.b., Defendant shall calculate a new 30-Day Rolling Average Emission Rate for each new Operating Day and shall maintain a record of each daily calculation of the rate for no less than five years. (Consent Decree, 33)

ii. Each SO2 CEMS required pursuant to Paragraph 34 shall monitor and record the applicable SO2 Emission Rate from each Kiln stack in units of pounds (lbs.) of SO2 per Ton of clinker produced at such Kiln and shall be installed, certified, calibrated, maintained, and operated in accordance

[183] 40 CFR 63, Subpart LLL, section 1350(d) establishes clinker production monitoring requirements for Portland Cement Manufacturing Industry.

with the applicable requirements of 40 CFR §Part 60. (Consent Decree, 36)

iii. For purposes of this Consent Decree, all emissions of SO2 from Kilns shall be measured by CEMS. During any time when a CEMS is inoperable or otherwise not measuring emissions of SO2 from any Kiln, Defendant shall apply the missing data substitution procedures in 40 CFR §Part 75, Subpart D. (Consent Decree, 37)

S3. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall submit compliance reports as required in the Consent Decree. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11.

- "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete".
- Signature and title of the responsible official of the company.

a. **General Requirements in the Consent Decree**

i. Environmental Mitigation (Consent Decree, V)

1) Beginning twelve (12) months after the Effective Date of this Consent Decree, and continuing until completion of the Project, Defendant Shall provide U.S. EPA with updates concerning the progress of the Project in the semi-annual reports required in Section XI (Reporting Requirements) of this Consent Decree. This shall include providing EPA with the results of the Energy Audits in Appendix A, upon completion. (Consent Decree, 15)

2) Within ninety (90) Days following the completion of the Project, Defendant shall submit to U.S. EPA a report that documents the date the Project was completed, and the following: (Consent Decree, 16)

(a) The anticipated annual emission reductions or other environmental benefits achieved (including the emission reductions achieved for NOX); and, (Consent Decree, 16.a)

(b) The Project Dollars incurred by Defendant in implementing the Project. (Consent Decree, 16.b)

ii. Defendant shall submit the following reports: By July 31st and January 31st of each year after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XXII, Defendant shall submit by electronic mail and U.S. Mail a semiannual report to U.S. EPA and the applicable State Agency Settlors for the preceding six months ending on June 30 and December 31, respectively. The first such report, however, will cover the period between the Effective Date and 30 Days prior to the due date (July 31st or January 31st). These semi-annual reports

shall be complete and accurate in providing the following information: (Consent Decree, 52)

1) Identify any and all dates on which Defendant has installed, or describe the progress of, as applicable, installation, modification, optimization or operational changes to SNCR for each Kiln under Section VI.A. (NO_x Emission Limits and Control Technology), and describe any problems encountered or anticipated, together with implemented or proposed solutions; (Consent Decree, 52.a)

2) Identify any and all dates on which Defendant has completed installation of, or describe the progress of installation or modification of, each CEMS required under Section VI.B (NO_x Continuous Emission Monitoring Systems) and Section VII.B. (SO_2 Continuous Emission Monitoring Systems), and describe any problems encountered or anticipated, together with implemented or proposed solutions; (Consent Decree, 52.b)

3) Provide, in electronic format able to be manipulated with Microsoft Excel, all CEMS data collected for each Kiln, reduced to 1 hour averages, in accordance with 40 C.F.R. Part 60.13(h)(2), including an explanation of any periods of CEMS downtime together with any missing data for which Defendant applied missing data substitution procedures, under Section VI.B (NO_x Continuous Emission Monitoring Systems) and Section VII.B (SO_2 Continuous Emission Monitoring Systems); (Consent Decree, 52.c)

4) Demonstrate compliance with all applicable 30-Day Rolling Average Emission Limits of this Consent Decree; (Consent Decree, 52.d)

5) Describe the progress of Defendant in implementing the Environmental Mitigation Project required by Section V, including a summary of actions and expenditures (cumulative and in current reporting period) made pursuant to Section V to implement the Environmental Mitigation Project; (Consent Decree, 52.e)

6) Describe the status of permit applications and any proposed SIP revisions made to implement the requirements of this Consent Decree, including a table that identifies each CD limit applicable to each Kiln, the date the permit application was submitted to incorporate that limit, and the date a permit that included the limit was issued; (Consent Decree, 52.f)

7) Describe the status of any operation and maintenance work relating to activities required under this Consent Decree; and, (Consent Decree, 52.g)

8) Describe any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. (Consent Decree, 52.h)

iii. If Defendant violates, or has reason to believe that it may have violated, any requirement of this Consent Decree, Defendant shall notify the United States and the applicable State Agency Settlor of such violation and its likely duration, in writing, within ten (10) Business Days of the Day Defendant first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section XIII (Force Majeure). (Consent Decree, 53)

iv. Whenever any violation of this Consent Decree, or of any applicable permits required under this Consent Decree, or any other event affecting Defendant's performance under this Decree, or the performance of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the applicable State Agency Settlor orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph. (Consent Decree, 54)

v. All reports shall be submitted to the persons designated in Section XVIII (Notices), as the following: (Consent Decree, 55)

Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows: (Consent Decree, 97)

<u>As to the United States by email:</u>

eescdcopy.enrd@usdoj.gov
Re: DJ # 90-5-2-1-09716

<u>As to the United States by mail:</u>

EES Case Management Unit
Environment and Natural Resources Division

U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-5-2-1-09716

As to US EPA by mail:

Director, Air Enforcement Division
U.S. Environmental Protection Agency
MC 2242A
1200 Pennsylvania Ave. NW
Washington DC 20460
Attn: Shaun Burke
Senior Environmental Engineer
Air Enforcement Division, OCE, EPA
202-564-1039

For all submissions referring to the Louisville Facilities:

Director, Air, Pesticides and Toxics Management Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Valerie Nowell
Senior Attorney for Air Enforcement
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

As to State Agency Plaintiffs:

For all submissions referring to the Louisville Facility, to Jefferson County:

Keith H. Talley, Sr.
Executive Director
701 W. Ormsby Avenue, Suite 303
Louisville, KY 40203
(502) 574-6000

As to Defendants:

General Counsel
CEMEX, Inc.

929 Gessner Road
Suite 1900
Houston, TX 77024

With copies to:

CEMEX, Inc.
Attention: Legal Department
1501 Belvedere Road
West Palm Beach, Florida 33406

vi. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification: (Consent Decree, 56)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

vii. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical. (Consent Decree, 57)

viii. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement. (Consent Decree, 58)

ix. Any information provided pursuant to this Consent Decree may be used by the United States or any State Agency Settlor in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law. (Consent Decree, 59)

b. **NOx**

i. The owner or operator shall report the following in the compliance demonstration required by Consent Decree, 52.d:

1) Emission unit ID number and emission point ID number;

2) The 30-Day Rolling Average NOx Emission Rate, standard, and the daily average pound per ton of feed for each exceedance in the reporting period; and

3) The owner or operator shall submit excess emission reports for any excess emissions that occurred during the reporting

period. This report shall include the magnitude of the excess emissions in pounds per ton of clinker produced and the date and time of the commencement and completion of each period of excess emissions as well as the nature and cause of each period of excess emissions and any corrective actions taken or preventive measures adopted.

4) If no deviations occur during a quarterly reporting period, the report shall contain a negative declaration.

c. **SO_2**

i. The compliance demonstration shall include the following:

1) Emission unit ID number and emission point ID number;

2) The 30-Day Rolling Average SO_2 Emission Rate, standard, and the daily average pound per ton of feed for each exceedance in the reporting period; and

3) The owner or operator shall submit excess emission reports for any excess emissions that occurred during the reporting period. This report shall include the magnitude of the excess emissions in pounds per ton of clinker produced and the date and time of the commencement and completion of each period of excess emissions as well as the nature and cause of each period of excess emissions and any corrective actions taken or preventive measures adopted.

4) If no deviations occur during a quarterly reporting period, the report shall contain a negative declaration.

S4. **Force Majeure** (Consent Decree, XIII)

i. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of a Defendant, of any entity controlled by Defendant, or of Defendant's Contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercises "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree. (Consent Decree, 69)

ii. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice orally or by electronic or facsimile transmission to the representatives of U.S. EPA and the applicable State Agency Settlor designated to receive notice pursuant to

Section XVIII (Notices), within five (5) Business Days of when Defendant first knew that the event might cause a delay of such performance. Within ten (10) Business Days thereafter, Defendant shall provide in writing to EPA and the applicable State Agency Settlor: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendants shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's Contractors whose duties include performance of work required to comply with any provision of this Consent Decree, knew or reasonably should have known. (Consent Decree, 70)

iii. If EPA, after a reasonable opportunity for review and comment by the applicable State Agency Settlor, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, after a reasonable opportunity for review and comment by the State Agency Settlor, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event. (Consent Decree, 71)

iv. If EPA, after a reasonable opportunity for review and comment by the applicable State Agency Settlor, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision. (Consent Decree, 72)

v. If Defendant elects to invoke the dispute resolution procedures set forth in Section XIV (Dispute Resolution), it shall do so no later than thirty (30) days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts

were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 69 and 70. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court. (Consent Decree, 73)

S5. **Termination** (Consent Decree, XXII)

i. Termination as to an individual Facility. After Defendant has satisfied the Decree requirements of Sections IV (Civil Penalty)[184] and V (Environmental Mitigation), and the applicable Defendant has, with respect to a Facility, maintained satisfactory compliance with the requirements of this Consent Decree, including but not limited to the requirements of Sections VI (NO_x Control Technology, NO_x Emission Limits, and Monitoring Requirements), VII (SO_2 Emission Limits and Monitoring Requirements) and IX (Permits), has maintained operation of all control technology for that Facility required by this Consent Decree for a period of two years, and has paid any accrued stipulated penalties concerning that Facility as required by this Consent Decree, the applicable Defendant may serve upon the United States and the applicable State Agency Settlor (if any) a Request for Termination of this Decree with respect to that Facility stating that the foregoing requirements have been satisfied, together with all necessary supporting documentation. If the United States and the applicable State Agency Settlor agree that the Consent Decree as it relates to the individual Facility may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating those provisions of the Consent Decree. (Consent Decree, 105)

ii. Complete Termination. After Defendant has satisfied the Decree requirements of Sections IV (Civil Penalty) and V (Environmental Mitigation), has maintained satisfactory compliance with the requirements of this Consent Decree, including but not limited to Sections VI (NOx Control Technology, Emission Limits, and Monitoring Requirements), VII (SO2 Emission Limits and Monitoring Requirements) and IX (Permits), has maintained operation of all Control Technology required by this Consent Decree for a period of two years, and has paid any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the State Agency Settlors a Request for Termination of this Consent Decree stating that the foregoing requirements have been satisfied, together with all necessary supporting documentation. If the United States and the State Agency Settlors agree that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree. (Consent Decree, 106) [**End of Document**]

[184] This section is no longer applicable since the due day of the civil penalty was 12/29/2016.