Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: Holcim (U.S.) Inc.
Facility Location: 1840 N. Federal Ave., Mason City, IA 50401
Air Quality Operating Permit Number: 05-TV-007
Expiration Date: November 9, 2010

EIQ Number: 92-2518
Facility File Number: 17-01-009

<u>Responsible Official</u>
Name: Mr. Jason Morin
Title: Plant Manager
Mailing Address: 1840 North Federal Avenue, Mason City, IA 50401
Phone #: 641/421-3308

<u>Permit Contact Person for the Facility</u>
Name: Glen Rosenhamer
Title: Environmental Manager
Mailing Address: 1840 North Federal Avenue, Mason City, IA 50401
Phone #: 641/421-3313

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

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Douglas A. Campbell, Supervisor of Air Operating Permits Section Date

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Abbreviations

acfm .....actual cubic feet per minute
ACO.....Administrative Consent Order 2003-AQ-52
CFR.....Code of Federal Regulation
CKD.....cement kiln dust
COM.....Continuous Opacity Monitor
^{o}F.....degrees Fahrenheit
EIQ.....emissions inventory questionnaire
gr./dscf .....grains per dry standard cubic foot
gr./100 cf.....grains per one hundred cubic feet
IAC .....Iowa Administrative Code
IDNR.....Iowa Department of Natural Resources
MVAC .....motor vehicle air conditioner
NSPS.....new source performance standard
ng./dscm…….nanogram per dry standard cubic meter
ppmv .....parts per million by volume
lb./hr.....pounds per hour
lb./MMBtu .....pounds per million British thermal units
scfm.....standard cubic feet per minute
SIC.....Standard Industrial Classification
mcf/hr.....thousand cubic feet per hour
TPY .....tons per year
TPH.....tons per hour
USEPA.....United States Environmental Protection Agency
VMT/hr.....vehicle miles traveled per hour

<u>Pollutants</u>
PM.....particulate matter
PM_{10}.....particulate matter ten microns or less in diameter
SO_2.....sulfur dioxide
NO_x .....nitrogen oxides
VOC.....volatile organic compound
CO.....carbon monoxide
HAP .....hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Holcim(U.S.) Inc
Permit Number: 05-TV-007

Facility Description: Portland Cement Manufacturer (SIC 3241)

Equipment List

A. Fugitives Subject Only to the Fugitive Dust Rule

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
FQ-03	Q-102	Limestone Truck Loading in Quarry
FQ-05	Q-104	Primary Crusher Loading
FC-06	Q-205	Primary Screening
F-004	S-033	Truck Dump to Limestone Hopper
	S-034	211-AF1 Transfer to 211-BC5
F-005	S-035	Primary Screen Discharge to 211-BC6
	S-043	291-BC3 Transfer to 291-BC4
	S-044	Primary Screen Discharge to 291-BC2
	S-045	291-BC2 Transfer to 291-BC4 and 291-BC8
	S-192	Primary Limestone Screening
F-006	S-048	291-BC4 Transfer to 291-BC5
	S-049	291-BC5 Transfer to 291-BC6
	S-050	Limestone Storage Bin
	S-051	Limestone Storage Bin Transfer to 291-BC7
	S-052	291-BC7 Transfer to 291-BC8
	S-053	291-BC8 Transfer to 291-BC9
	S-330	291-BC2 Transfer to 291-BC8
F-007	S-036	211-BC6 Transfer to 211-BC7
	S-040	Secondary Screen Transfer to 211-BC8
	S-041	211-BC8 Transfer to 211-BC7
	S-042	Secondary Screen Discharge to 291-BC3
	S-046	291-BC1/BC3 Transfer to 291-BC9
	S-191	Secondary Limestone Screening
F-010	S-060	Clay/Sand Transfer to Hopper 221-HP-1
	S-061	251-AF1 Transfer to 251-BC1
F-011	S-063	Material Screening
	S-064	221-BC2 Transfer to 221-BC3

A. Fugitives Subject Only to the Fugitive Dust Rule (Cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-035	S-065	221-BC3 Transfer to 3EA-BC1
F-053	S-339	Bunker Storage Shed

B. Fugitives Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-013	S-001	Rail Car Unloading
	S-002	Rail Car Unloading
F-037	S-055	291-BCA Transfer to 291-BCB
	S-056	Raw Material Storage Silos
	S-057	291-BCB Transfer to 291-BCC
	S-076	Kiln Feed Silo 3EA-3S4
F-038	S-067	Transfer to Raw Mill Feed Belt 332-BC1
	S-068	332-BC1/362-AS1 Transfer to 362-BE1&2
F-039	S-072	Transfer to Raw Mill Feed Belt 333-BC1
F-070	S-083	Transfer to Kiln No. 2 CKD Hopper 432-HP1
F-025	S-103	Clinker Dome Reclaim
	S-104	Clinker Dome Reclaim
	S-105	Clinker Dome Reclaim
	S-106	Clinker Dome Reclaim
	S-107	Clinker Dome Reclaim
	S-108	Clinker Dome Reclaim
F-071	S-145	Transfer to Finish Mill No. 4 Raw Material Hopper K24-HP1
F-071A	S-014	L11-BC2 Transfer to K1A-BC1
F-028	S-151	No. 4 Cement Silos
F-031	S-161	No. 1 Truck Cement Loadout
F-033	S-162	No. 2 Truck Cement Loadout
F-032	S-163	No. 3 Truck Cement Loadout
F-034	S-164	No. 4 Truck Cement Loadout
F-045	S-230	Finish Mill No. 1 Feed Belt 531-BC1
	S-245	Finish Mill No. 2 Feed Belt 532-BC1
	S-254	Finish Mill No. 3 Feed Belt 533-BC1
	S-243	531-HP1 transfer to 531-SC1
	S-242	531-HP3 transfer to 531-SC1 and 531-SC2

B. Fugitives Subject to 40 CFR 63 Subpart LLL (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-074	S-331	6E2-BK1 and 6E2-BK2
F-079	S-346	FEL to Stacker Belt Hopper
F-080	S-347	Clinker Hopper transfer to Conveyor
F-081	S-348	Conveyor transfer to Stacker Belt

C. Haul Roads

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
M-1	M-1	Paved Material Haul Road-17th & President
M-2	M-2	Paved Material Haul Road-17th & Quincy
M-3	M-3	Unpaved Limestone Quarry Haul Road
M-4	M-4P	Paved Scraper Haul Road
M-4	M-4U	Unpaved Scraper Haul Road
M-5	M-5	Paved Material Haul Road
M-7	M-7	Unpaved Contractor Quarry Haul Road
M-8	M-8	Unpaved Quarry Haul Road

D. Storage Piles

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-008	S-167	Outdoor Clay Storage Pile
F-009	S-336	Outdoor Sand Storage pile
F-012	S-337	Outdoor Gypsum Storage Pile
F-016	S-342	Outdoor Clinker Storage Pile
F-018	S-187	Outdoor Coal Storage Pile
F-019	S-338	Outdoor Pet. Coke Storage Pile
F-051	S-334	Outdoor Gypsum Storage Pile
F-052	S-168	Outdoor Slag Storage Pile
F-054	S-343	Outdoor Clinker Storage Pile
F-078	S-341	Outdoor Iron Ore Storage Pile

E. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
P-008	S-016	Mill Storage Silo K
	S-119	49A-BC5 Transfer to 49A-BC6
	S-122	Mill Silo No. 18
	S-223	Mill Silo No. 17
	S-224	Mill Silo No. 16
P-009	S-015	K1A-BC1 Transfer to K1A-BC2
	S-018	K1A-BC2 Transfer to K1A-BC3
	S-019	Mill Storage Silo G
	S-020	Mill Storage Silo H
	S-021	Mill Storage Silo F
	S-118	49A-BC4 Transfer to 49A -BC5
	S-228	Clinker Silo No. 12
	S-229	Clinker Silo No. 11
P-011	S-066	Raw Material Silos
P-013	S-070	Raw Mill No. 2 East Separator-Grinding
	S-071	Raw Mill No. 2 East Separator-Natural Gas Combustion
P-014	S-069	Raw Mill No. 2 West Separator-Grinding
	S-071	Raw Mill No. 2 West Separator-Natural Gas Combustion
P-015	S-074	Raw Mill No. 3 Separator-East Dust Collector-Grinding and Natural Gas Combustion
P-016	S-074	Raw Mill No. 3 Separator-West Dust Collector-Grinding and Natural Gas Combustion
P-017	S-075	Raw Mill No. 3 Grinding and Natural Gas Combustion
P-018	S-077	Homogenizing Silo No. 3
	S-078	Homogenizing Silo No. 1
	S-079	Homogenizing Silo No. 2
P-019	S-080	Kiln Feed Silo No. 1
	S-081	Kiln Feed Silo No. 2
P-020	S-082	Kiln No. 2 Level Box & Feed System
P-021	S-086	Kiln No. 2 Feed Elevator 432-BE1
F-022	S-012	Kiln 2 Coal/Coke Tank
	S-91	472-CC1 Transfer to 492-PN1
	S-91b	492-PN1 Tail Pulley

E. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-024	S-173	564-BE2 Top of Elevator
	S-173A	534-BC2 Transfer to 564-BM1
	S-173B	564-BE2 Bottom of Elevator
	S-173C	564-AS2 Transfer to 564-BE2
	S-335	594-SM1 Transfer to 594-PP1
	S-335A	594-SM2 Transfer to 594-PP2
	S-335B	594-AS7 Transfer to 594-SM1
	S-335C	594-AS6 Transfer to 594-SM2
	S-335D	594-AS5 Transfer to 594-CQ1
F-026	S-102	Clinker Dome Loading
F-043	S-129	Kiln #3 Level Box and Feed Path
P-087	S-091A	Discharge Pan Conveyor 492-PN1 to Divert Chute 492-MW2 & MW1
	S-095A	Bottom Bucket Elevator 49A-BE1
	S-096	Bottom Bucket Elevator 492-BE1
P-060	S-092	Clinker Cooler No. 3 Discharge
	S-093	Discharge 493-PN1 to Bucket Elevators 493-BE1 & 49A-BE1
	S-094	Clinker Elevator Bottom 493-BE1
	S-095	Clinker Elevator Bottom 49A-BE1
P-028	S-097	Discharge 493-MW3 to 49A-BC1
	S-097A	Top of Bucket Elevator 493-BE1
	S-110	Discharge 493-MW5 to 49A -BC2
	S-114	Outside Storage Silo
P-086	S-098	Discharge 49A-MW3 to 49A-BC1
	S-098A	Top of Bucket Elevator 49A-BE1
	S-099	Discharge 49A-BC1 to 49A-BC2
	S-099A	Top of Bucket Elevator 492-BE1
	S-111	Discharge 49A-MW3 to 49A-BC2
	S-112	Discharge 492-MW5 to 49A-BC2
P-029	S-100	49A -BC1 Transfer to 49A -BC8
	S-101	Elevator 49A – BE2 Transfer to 49A -BC1
	S-109	49A-BW1 transfer to 49A-BE2
P-047	S-113	49A-BC2 Transfer to 49A-BC3
	S-116	49A -BC2 Transfer to 49A -BC3
	S-222	Dust Collector 49A –SC1 Discharge to Belt 49A-BC3

E. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
P-004	S-117	49A -BC3 Transfer to 49A -BC4
	S-117A	49A-BC4 Discharge Hood
	S-117B	49A-BC4 Back of Hood
P-010	S-120	49A -BC5 Transfer to 49A -BC7
	S-121	K1A-BC2 Transfer to 49A -BC7
	S-225	Clinker Silo No. 13
	S-226	Clinker Silo No. 14
	S-227	Clinker Silo No. 15
P-059	S-136	Waste Dust Elevator 423-BE1
	S-137	Waste Dust Silo
	S-172	Kiln No. 3 Feed Cyclone
P-031	S-139	No. 1 Finish Mill
	S-244	No. 1 Finish Mill Separator
P-032	S-139	No. 1 Finish Mill
	S-244	No. 1 Finish Mill Separator
P-033	S-141	No. 2 Finish Mill
	S-251	No. 2 Finish Mill Separator
P-034	S-143	No. 3 Finish Mill
	S-256	No. 3 Finish Mill Separator
P-058	S-146	534-BC1 Transfer to 534-BE1
	S-147	534-BE1 Transfer to 534-BC2
P-038	S-148	No. 4 Finish Mill
P-036	S-149	No. 4 Finish Mill Separator-East Exhaust
P-037	S-149	No. 4 Finish Mill Separator-West Exhaust
P-090	S-150A	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SL
P-091		
P-092	S-150B	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SK
P-093		
P-094	S-150C	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SJ
P-095		
P-039	S-152	No. 5 Cement Silos
P-045	S-153	No. 6 East Truck Silos
P-046	S-154	No. 6 West Truck Silos
P-044	S-155	No. 7 Rail Silos
P-040 – P-043	S-157-S-160	No. 1-4 Packing Machines
P-030	S-241	K1A-3B1 transfer to K21-RF1

E. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
P-075	S-259	K24-WF1 Transfer to K24-BC1
	S-260	K24-BC1 Transfer to 534-BC1
	S-261	49A-3S3 Transfer to 534-WF2
	S-262	534-WF2 Transfer to 534-BC1
	S-263	49A-3S6 Transfer to 534-WF1
	S-264	534-WF1 Transfer to 534-BC1
P-096	S-325A	61A-SCG Transfer to 61A-SCF
	S-325B	61A-SCE Transfer to 61A-SCF
P-097	S-325C	61A-SCD Transfer to 61A-SCF
	S-325D	61A-SCC Transfer to 61A-SCF
P-098	S-325E	61A-SCG Transfer to 61A-BE1
	S-325F	61A-BE1 Transfer to 61A-SY1
P-099	S-325G	Cement Screen 61A-SY1
	S-325H	Cement Bin 61A-3B1

F. Miscellaneous Sources

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
P-061	Q-101	Quarry Drill
PC-03	Q-202	Crusher Engine
PC-16	Q-215	Generator Engine
P-005	S-022	Raw Material Transfer Tower No. 3
P-056	S-038	Secondary Limestone Impactor
	S-039	Impactor Discharge to Belt 291-BC1
P-006	S-054	Transfer Tower No. 3
P-001	S-062	Raw Material Dryer
P-022	S-087	Kiln 2
P-026	S-090	Clinker Cooler No. 2
P-025	S-132	Kiln 3
P-027	S-135	Clinker Cooler No. 3
F-029	S-351	No. 4 Rail Loadout -North
F-030	S-350	No. 3 Rail Loadout -South
F-077	S-332	Limestone Silo Transfer to L80-WF1
	S-333	Limestone Rotary Feeder L80-RF1

F. Miscellaneous Sources (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
F-082	S-352	Limestone Truck Unloading
	S-353	Limestone Loading to Hopper
	S-354	Limestone Transfer to Belt Conveyor
	S-355	Limestone Transfer to Elevator

Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
S-242	531-HP3 Transfer to 531-SC1 and 531-SC2
S-243	531-HP1 Transfer to 531-SC1
T-1	Diesel Storage Tank (1,000 gal.)
T-4	Grinding Aid Tank (3,525 gal.)
T-5	Grinding Aid Tank (2,644 gal.)
T-6	HCl Storage Tank (2,000 gal.)
Q-100	Topsoil Storage Pile
Q-103	Alternate Material Loading
Q-105	Primary Crusher
Q-106	Quarry Belt Transfer
Q-107	Quarry Belt Transfer
Q-108	Quarry Limestone Pile Loading
Q-109	Crusher Storage Pile
Q-110	Belt to Truck Drop
Q-111	Quarry Temporary Pile Loading
Q-112	Temporary Storage Pile
Q-113	Temporary Storage Pile
Q-114	Quarry Temporary Pile Loading
Q-115	Raw Material Pile Loading
Q-116	Raw Material Storage Pile
Q-117	Raw Material Storage Pile
Q-118	Raw Material Pile Loading
Q-119	Reject Pile Loading
Q-120	Reject Storage Pile
Q-121	Reject Pile Loading
Q-122	Stacker Pile Drop
Q123	Stacker Storage Pile
Q-124	Stacker Pile Loading

Insignificant Emission Unit Number	Insignificant Emission Unit Description
Q-125	Rock Storage Pile
Q-126	Rock Pile Loading
Q-127	Rock Pile Loading
Q-200	Crusher Loading
Q-201	Contractor Crusher
Q-203	Sand Transfer to Hopper
Q-204	Quarry Belt to Belt Transfer
Q-206	Screen to Belt Transfer
Q-207	Quarry Belt to Belt Transfer
Q-208	Belt to Material Pile Transfer
Q-209	Rock Storage Pile
Q-210	Sand Transfer to Hopper
Q-211	Quarry Belt to Belt Transfer
Q-212	Quarry Belt to Belt Transfer
Q-213	Quarry Belt to Belt Transfer
Q-214	Quarry Belt to Sand Pile Transfer
Q-216	Sand and Gypsum Pile
S-003	Drop to Coal Pile
S-004	Drop to Coal Pile
S-005	L11-BC1 to L11-BC2 (Coal, Gypsum)
S-007	Front End Loader Transfer to Coal/Coke Hoppers
S-008	Coal/Coke Transfer to L11-BC3
S-009	L11-BC3 to L11-BC4 (Coal/Coke)
S-006	L11-BC2 to L11-BC5 (Coal/Coke)
S-010	L11-BC4 to L11-BE1 (Coal/Coke)
S-011	L11-BE1 to L11-BC5 (Coal/Coke)
S-013	Coal/Coke Storage Bin L11-3B2

II. Plant-Wide Conditions

Facility Name: Holcim (U.S.) Inc.
Permit Number: 05-TV-007

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five (5) Years
Commencing on: November 10, 2005
Ending on: November 9, 2010

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits
Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO_2): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)[1]:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.
For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

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[1] Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered *state enforceable only.*

Particulate Matter[2]:
The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.
Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

Compliance Plan
The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, Holcim (U.S.) Inc. is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Holcim (U.S.) Inc. shall comply with such requirements in a timely manner.
Authority for Requirement: 567 IAC 22.108(15)

[2] Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

<u>Operational Limits & Requirements</u>
The owner/operator of this facility shall comply with the operational limits and requirements listed below.

Terms and Conditions: The Permittee shall comply with all applicable requirements of *Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52*. The Permittee shall also comply with all applicable requirements of 40 CFR 63 Subpart LLL-*National Emission Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry*, and the applicable requirements of 40 CFR 63 Subpart A *General Provisions* as listed in Table 1 of 40 CFR 63 Subpart LLL. Per 40 CFR 63.1356 any affected source subject to the provisions of 40 CFR 63 Subpart LLL will be exempt from any otherwise applicable new source performance standard contained in 40 CFR 60 Subpart F or Subpart OOO, and the requirements of 40 CFR 63 Subpart Y do not apply to conveying system transfer points used to convey coal from the mill to the kiln that are associated with coal preparation.

Applicable Limits and Requirements From Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52

See Appendix A.

Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry

See Appendix C.

Authority for Requirement: Iowa Department of Natural Resources Administrative Consent Order 2003-AQ-52
40 CFR 63 Subpart LLL and Subpart A
567 IAC 23.1(4)"bl"

III. Emission Point-Specific Conditions

Facility Name: Holcim (US), Inc.
Permit Number: **05-TV-005**

Emission Point ID Number: See Table: Fugitives Subject Only to the Fugitive Dust Rule

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Fugitives Subject Only to the Fugitive Dust Rule

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Table: Fugitives Subject Only to the Fugitive Dust Rule

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (TPH)
FQ-03	Q-102	Limestone Truck Loading in Quarry	Limestone	2,200
FQ-05	Q-104	Primary Crusher Loading	Limestone	1,000
FC-06	Q-205	Primary Screening	Aggregate	1,000
F-004	S-033	Truck Dump to Limestone Hopper	Limestone	1,000
	S-034	211-AF1 Transfer to 211-BC5	Limestone	1,000
F-005	S-035	Primary Screen Discharge to 211-BC6	Limestone	1,000
	S-043	291-BC3 Transfer to 291-BC4	Limestone	1,000
	S-044	Primary Screen Discharge to 291-BC2	Limestone	1,000
	S-045	291-BC2 Transfer to 291-BC4 and 291-BC8	Limestone	1,000
	S-192	Primary Limestone Screening	Limestone	1,000
F-006	S-048	291-BC4 Transfer to 291-BC5	Limestone	1,000
	S-049	291-BC5 Transfer to 291-BC6	Limestone	1,000
	S-050	Limestone Storage Bin	Limestone	1,000
	S-051	Limestone Storage Bin Transfer to 291-BC7	Limestone	750
	S-052	291-BC7 Transfer to 291-BC8	Limestone	750
	S-053	291-BC8 Transfer to 291-BC9	Limestone	1,000
	S-330	291-BC2 Transfer to 291-BC8	Limestone	700
F-007	S-036	211-BC6 Transfer to 211-BC7	Limestone	750
	S-040	Secondary Screen Transfer to 211-BC8	Limestone	750
	S-041	211-BC8 Transfer to 211-BC7	Limestone	700
	S-042	Secondary Screen Discharge to 291-BC3	Limestone	750
	S-046	291-BC1/BC3 Transfer to 291-BC9	Limestone	750
	S-191	Secondary Limestone Screening	Limestone	750

Table: Fugitives Subject Only to the Fugitive Dust Rule (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (TPH)
F-010	S-060	Clay/Sand Transfer to Hopper 221-HP-1	Sand, Clay	150
	S-061	251-AF1 Transfer to 251-BC1	Sand, Clay	150
F-011	S-063	Material Screening	Raw Material[(1)]	105
	S-064	221-BC2 Transfer to 221-BC3	Raw Material[(1)]	105
F-035	S-065	221-BC3 Transfer to 3EA-BC1	Raw Material[(1)]	250
F-053	S-339	Bunker Storage Shed	Raw Material[(1)]	70

[(1)] Raw material refers to any one or a mixture of the kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as foundry sand, silica sand, and fly ash. Coal and other primary fuel sources are not included in this category.

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: See Table: Fugitives Subject to 40 CFR 63 Subpart LLL

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Fugitives Subject to 40 CFR 63 Subpart LLL

Table: Fugitives Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (tons/hr.)
F-013	S-001	Rail Car Unloading	Coal, Clinker, Sand, Gypsum	200
	S-002	Rail Car Unloading (Hopper Discharge to Belt)	Coal, Clinker, Sand, Gypsum	200
F-037	S-055	291-BCA Transfer to 291-BCB	Raw Materials[(1)]	700
	S-056	Raw Material Storage Silos	Raw Materials[(1)]	700
	S-057	291-BCB Transfer to 291-BCC	Raw Materials[(1)]	700
	S-076	Kiln Feed Silo 3EA-3S4	Raw Materials[(1)]	150
F-038	S-067	Transfer to Raw Mill Feed Belt 332-BC1	Raw Materials[(1)]	150
	S-068	332-BC1/362-AS1 Transfer to 362-BE1 and 2	Raw Materials[(1)]	300
F-039	S-072	Transfer to Raw Mill Feed Belt 333-BC1	Raw Materials[(1)]	150
F-070	S-083	Transfer to Kiln No. 2 CKD Hopper 432-HP1	Raw Materials[(1)]	5
F-025	S-103	Clinker Dome Reclaim	Clinker	200
	S-104			200
	S-105			200
	S-106			200
	S-107			200
	S-108			200
F-071	S-145	Transfer to Finish Mill No. 4 Raw Material Hopper K24-HP1	Raw Materials[(1)]	5
F-071A	S-014	L11-BC2 Transfer to K1A-BC1	Gypsum	200

[(1)] Raw materials refers to any one or a mixture of the kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as foundry sand, silica sand, and fly ash. Coal and other primary fuel sources are not included in this category.

Table: Fugitives Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (tons/hr.)
F-028	S-151	No. 4 Cement Silos	Cement	100
F-031	S-161	No. 1 Truck Cement Loadout	Cement	250
F-033	S-162	No. 2 Truck Cement Loadout	Cement	250
F-032	S-163	No. 3 Truck Cement Loadout	Cement	250
F-034	S-164	No. 4 Truck Cement Loadout	Cement	250
F-045	S-230	Finish Mill No. 1 Feed Belt 531-BC1	Limestone, Gypsum & Clinker	50
	S-245	Finish Mill No. 2 Feed Belt 532-BC1	Gypsum & Clinker	60
	S-254	Finish Mill No. 3 Feed Belt 533-BC1	Gypsum & Clinker	60
	S-243	531-HP1 transfer to 531-SC1	Sugar	50
	S-242	531-HP3 transfer to 531-SC1 and 531-SC2	Additives	50
F-074	S-331	6E2-BK1 and 6E2-BK2	Grancem	50
F-079	S-346	FEL to Stacker Belt Hopper	Clinker	50
F-080	S-347	Clinker Hopper transfer to Conveyor	Clinker	50
F-081	S-348	Conveyor transfer to Stacker Belt	Clinker	50

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 10%
Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1348

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput: See Table: Fugitives Subject to Subpart LLL-Operational Limits & Requirements

Reporting & Recordkeeping:

1. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355.

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1355

2. See Table: Fugitives Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements.

Table: Fugitives Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit		Reporting & Recordkeeping[1]	Authority for Requirements
		Tons/ day	Tons/Calendar Year		
F-013	S-001	N/A	N/A	Holcim shall maintain records of the number of cars unloaded daily at the Coal Dump Shed. These records shall include the unloading dates and the load capacity (tons) of each coal car unloaded. The records shall be retained for a period of two[1] years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.	Section V(10) Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52
	S-002				
F-028	S-151	2,400	753,360	The total daily throughput and throughput rates for each source shall be entered into a daily log to show compliance with the daily throughput limits, and total daily throughput rates shall be maintained to demonstrate compliance with the total calendar year throughput rates.	Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52
F-031	S-161	6,000	328,500		
F-032	S-163	6,000	328,500		
F-033	S-162	6,000	328,500		
F-034	S-164	6,000	328,500		

[1] The records shall be kept on site for a minimum of two (2) years, and shall be available for inspection by the Department. In addition to the ACO requirement of maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

<u>Periodic Monitoring Requirements</u>
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity as described in 40 CFR 63.1350 (a)(4)(i-vii) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements)**.
Authority for Requirement - 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)(4)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐
Relevant requirements of O & M plan for this equipment: Opacity-**see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)"

Emission Point ID Numbers: See Table: Haul Roads

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Haul Roads

Table: Haul Roads

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Maximum Rate
M-1	M-1	Paved Material Haul Road-17th & President	Paved Road	N/A
M-2	M-2	Paved Material Haul Road-17th & Quincy	Paved Road	N/A
M-3	M-3	Unpaved Limestone Quarry Haul Road	Unpaved Road	N/A
M-4	M-4P	Paved Scraper Haul Road	Paved Road	N/A
M-4	M-4U	Unpaved Scraper Haul Road	Unpaved Road	N/A
M-5	M-5	Paved Material Haul Road	Paved Road	N/A
M-7	M-7	Unpaved Contractor Quarry Haul Road	Unpaved Road	N/A
M-8	M-8	Unpaved Quarry Haul Road	Unpaved Road	N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

1. Holcim shall implement speed controls designed to ensure that the average speed of the haul trucks on the M3 limestone haul road does not exceed 20 miles per hour. The speed controls shall consist of speed limit signs and stop signs along the route.

2. Unpaved Haul Road Trip Restrictions:

(i) The maximum number of round trips per day and per calendar year on the M3 limestone haul road shall be limited to the values listed below.

Truck Capacity (tons of material)	Maximum Number of Round Trips per Day	Maximum Number of Round Trips per Year
25	40	8,000
130	77	27,043

(ii) The number of round trips per day on the M3 limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. The daily logs shall be retained for a period of two years[(1)] following the date of such entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

(iii) Traffic on the unpaved portion of the M4 haul road shall be limited to scraper travel only, with the exception of dozer and compactor vehicles used to maintain the pile integrity and size limitation. The maximum number of round trips per day and per calendar year on the M4 haul road shall be limited to 200 and 70,080 trips, respectively. The scraper capacity shall be limited to 27 tons of material per trip. These maximum numbers of round trips and scraper capacity shall not be increased unless a dispersion modeling analysis, acceptable to the DNR, is submitted to demonstrate that compliance with the PM_{10} NAAQS will be maintained.

3. Control of Fugitive Emissions from Unpaved Haul Roads

(i) Fugitive emissions from the M3 limestone haul road shall be controlled by applying a chemical dust suppressant. A control efficiency of 95 percent shall be maintained on the entire length of both segments of the limestone haul road. The M3 limestone haul road is approximately 30 feet wide and approximately 2.9 miles long, giving it a total area of approximately 51,040 square yards. Thus, approximately 2,552 gallons of the selected chemical dust suppressant shall be applied no less frequently than once every other week to maintain the established ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard, or a manufacturer's equivalent application to achieve the 95 percent control efficiency. Different manufacturer's materials have different applications to achieve 95 percent control. Documentation supporting a different concentration will be maintained onsite by Holcim and submitted to the DNR, as required.

(ii) Fugitive emissions from the unpaved portion of the M4 haul road shall be controlled by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin by January 23, 2004. A control efficiency of 95 percent shall be maintained on the unpaved portion of the M4 haul road. The unpaved portion of the M4 haul road is approximately 30 feet wide and approximately 0.19 miles long, giving it a total area of approximately 3,344 square

[(1)] In addition to the ACO requirement of maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

yards. Approximately 167 gallons of the selected chemical dust suppressant shall be applied no less frequently than once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard, or a manufacturer's equivalent application to achieve the 95 percent control efficiency. Different manufacturer's materials have different applications to achieve 95 percent control. Documentation supporting a different concentration will be maintained onsite by Holcim and submitted to the DNR, as required.

(iii) If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical dust suppressant used, the application intensity (gals./sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request. This record keeping requirement shall be an on-going requirement and shall not terminate.

(iv) In the event Holcim (US) Inc. does not use (or plan to use) haul roads M3 and the unpaved portion of M4 for fourteen (14) days or more, Holcim (US) Inc. shall not be required to apply the chemical dust suppressant as provided in paragraph 3(i) and 3(ii), respectively. Prior to using such haul road again, however, an application (at the bi-weekly rate) shall be made subject to the conditions of paragraph 3(iii).

4. Paved Haul Road Trip Restrictions:
The maximum number of round trips per day and per calendar year on the M1, M2, M4, and M5 paved haul roads, for all haul trucks, combined, shall be limited to the values listed below.

Haul Road	Maximum Number of Round Trips per Day	Maximum Number of Round Trips per Year
M1	96	17,520
M2	312	43,800
M4 (paved portion)	192	70,080
M5	192	26,280

The number of round trips per day on the M1, M2, the paved portion of M4, and the M5 haul roads shall be entered into a daily log to demonstrate compliance with the maximum number of round trips per day limitation. A daily rolling count of the total number of round trips per day on M1, M2, the paved portion of M4, and M5 shall be maintained to demonstrate compliance with the maximum number of round trips per year limitation. The daily logs shall be retained for a period of two years[(1)] following the date of such entries and shall be made available to the DNR upon request.

[(1)] In addition to the ACO requirement of maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

This record keeping shall be an on-going requirement and shall not terminate.

5. Control of Fugitive Emissions from Paved Haul Roads

(i) Fugitive emissions from the paved haul roads M1, M2, M4, and M5 shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. The control efficiency of 80 percent shall be achieved by water flushing followed by sweeping haul roads M1, M2, the paved portion of M4, and M5 once per day. The following table contains the approximate size of each haul road in square yards and the approximate amount of water to be applied to each road in each application. The water quantities are based on a spray rate of approximately 0.23 gallons per square yard.

Paved Haul Road	**Road Area (sq. yards)**	**Approximate Water Application Rate (gals. of water)**
M1	5,280	1,214
M2	6,688	1,538
M4 (paved portion)	2,112	486
M5	6,336	1,457

(ii) If water flushing followed by sweeping can not be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period or the road(s) will not be used on a given day.

(iii) Records of the applications shall be maintained and shall include the dates of each application, the amount of water applied, the areas treated, and the operator's initials. If water is not applied when scheduled due to the conditions specified in 5(ii) above, the conditions which prevented such application, or made such application unnecessary, shall be documented. The records shall be retained for a period of two years[(1)] following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

Authority for Requirement: Section V (5 through 9) Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52

[(1)] In addition to the ACO requirement of maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

<u>Periodic Monitoring Requirements</u>
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: See Table: Storage Piles

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Storage Piles

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Table: Storage Piles

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Size
F-008	S-167	Outdoor Clay Storage Pile	Clay	9.0 acres
F-009	S-336	Outdoor Sand Storage pile	Sand	0.3 acres
F-012	S-337	Outdoor Gypsum Storage Pile	Gypsum	0.2 acres
F-016	S-342	Outdoor Clinker Storage Pile	Clinker[(1)]	2.1 acres
F-018	S-187	Outdoor Coal Storage Pile	Coal	2.7 acres
F-019	S-338	Outdoor Pet. Coke Storage Pile	Pet. Coke	0.6 acres
F-051	S-334	Outdoor Gypsum Storage Pile	Gypsum	0.1 acres
F-052	S-168	Outdoor Slag Storage Pile	Slag	0.4 acres
F-054	S-343	Outdoor Clinker Storage Pile	Clinker	2.1 acres
F-078	S-341	Outdoor Iron Ore Storage Pile	Iron Ore	0.2 acres

[(1)] Storage Pile F-016 has been approved to maintain clinker and aggregate material with an emission factor equal to or less than that of clinker through email correspondence with Preziosi.

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

1. Holcim shall locate the storage pile bases as designated in Exhibit "D", Appendix A, except as provided below, and shall limit the size of the storage piles to no greater than the acreages designated in Exhibit "D", Appendix A. Holcim may relocate a pile specified in Exhibit "D", Appendix A, or add a new pile not provided for in paragraphs 2. or 3.,below, or change the material type of the pile only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM_{10} NAAQS would result.
2. Notwithstanding the requirements of paragraph 1., above, Holcim may operate temporary piles of materials (not identified on Exhibit "D", Appendix A) that result from maintenance or other similar activities. No such temporary pile shall be maintained for more than one 24-hour period.
3. Notwithstanding the requirements of paragraphs 1.and 2., above, Holcim may maintain temporary piles of overflow raw materials (excluding fuel) and product not identified on Exhibit "D", Appendix A that may result from unforseen and unplanned operating conditions or problems. Holcim shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. Holcim shall take reasonable measures to remove any such pile as soon as practicable, but in no case shall any such temporary pile shall be maintained for more than three (3) months. Holcim shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date for each pile. The records shall be retained for a period of two years[(1)] following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

Authority for Requirement: Section V(4) Iowa Department of Natural Resources
Administrative Consent Order No. 2003-AQ-52

[(1)] In addition to the ACO requirement of maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: See Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Process Material	Rated Capacity
P-008	S-016	Mill Storage Silo K	49A-BFF	Baghouse	Gypsum	180 TPH
	S-119	49A-BC5 Transfer to 49A -BC6			Clinker	250 TPH
	S-122	Mill Silo No. 18			Clinker	250 TPH
	S-223	Mill Silo No. 17			Clinker	250 TPH
	S-224	Mill Silo No. 16			Clinker	250 TPH
P-009	S-015	K1A-BC1 Transfer to K1A-BC2	49A-BFD	Baghouse	Gypsum	200 TPH
	S-018	K1A-BC2 Transfer to K1A-BC3			Gypsum	200 TPH
	S-019	Mill Storage Silo G			Gypsum	200 TPH
	S-020	Mill Storage Silo H			Gypsum	200 TPH
	S-021	Mill Storage Silo F			Gypsum	200 TPH
	S-118	49A-BC4 Transfer to 49A -BC5			Clinker	250 TPH
	S-228	Clinker Silo No. 12			Clinker	250 TPH
	S-229	Clinker Silo No. 11			Clinker	250 TPH
P-011	S-066	Raw Material Silos	3EA-BF2	Baghouse	Raw Mix[(1)]	200 TPH
P-013	S-070	Raw Mill No. 2 East Separator-Grinding	362-BF1	Baghouse	Raw Mix[(1)]	150 TPH
	S-071	Raw Mill No. 2 East Separator-Natural Gas Combustion			Natural Gas	105 mcf/hr
P-014	S-069	Raw Mill No. 2-West Separator-Grinding	362-BF2	Baghouse	Raw Mix[(1)]	150 TPH
	S-071	Raw Mill No. 2 West Separator-Natural Gas Combustion			Natural Gas	105 mcf/hr

[(1)] Raw mix refers to any one or a mixture of the kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as iron ore. Coal and other primary fuel sources are not included in this category.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity
P-015	S-074	Raw Mill No 3 Separator-East Dust Collector-Grinding and Natural Gas Combustion	363-BF2	Baghouse	Raw Mix[1] and Natural Gas	450 TPH and 105 mcf/hr
P-016	S-074	Raw Mill No. 3 Separator-West Dust Collector-Grinding and Natural Gas Combustion	363-BF3	Baghouse	Raw Mix[1] and Natural Gas	450 TPH and 105 mcf/hr
P-017	S-075	Raw Mill No. 3-Grinding and Natural Gas Combustion	363-BF1	Baghouse	Raw Mix[1] and Natural Gas	150 TPH and 105 mcf/hr
P-018	S-077	Homogenizing Silo No. 3	39A-BF1	Baghouse	Raw Meal[2]	300 TPH
	S-078	Homogenizing Silo No. 1				300 TPH
	S-079	Homogenizing Silo No. 2				300 TPH
P-019	S-080	Kiln Feed Silo No. 1	41B-BF1	Baghouse	Raw Meal[2]	300 TPH
	S-081	Kiln Feed Silo No. 2				300 TPH
P-020	S-082	Kiln No. 2 Level Box & Feed System	432-BF1	Baghouse	Raw Meal[2]	150 TPH
P-021	S-086	Kiln No. 2 Feed Elevator 432-BE1	422-BF2	Baghouse	Raw Meal[2]	200 TPH
F-022	S-12	Kiln 2 Coal/Coke Tank. (not controlled by P-89)	N/A	N/A	Fuels	200 TPH
	S-91	472-CC1 Transfer to 492-PN1	P-089	Baghouse	Clinker	90 TPH
	S-91b	492-PN1 Tail Pulley			Clinker	90 TPH
F-024	S-173	564-BE2 Top of Elevator	P-035	Baghouse	Clinker	400 TPH
	S-173A	534-BC2 Transfer to 564-BM1			Clinker	110 TPH
	S-173B	564-BE2 Bottom of Elevator			Clinker	400 TPH
	S-173C	564-AS2 Transfer to 564-BE2			Clinker	400 TPH
	S-335	594-SM1 Transfer to 594-PP1	P-088	Baghouse	Cement	110 TPH
	S-335A	594-SM2 Transfer to 594-PP2			Cement	110 TPH
	S-335B	594-AS7 Transfer to 594-SM1			Cement	110 TPH
	S-335C	594-AS6 Transfer to 594-SM2			Cement	110 TPH
	S-335D	594-AS5 Transfer to 594-CQ1			Cement	110 TPH
F-026	S-102	Clinker Dome Loading	49A-BF8	Baghouse	Clinker	140 TPH
F-043	S-129	Kiln #3 Level Box and Feed Path	433-BF1	Baghouse	Raw Meal	100 TPH

[1] Raw mix refers to any one or a mixture of the kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as iron ore. Coal and other primary fuel sources are not included in this category.
[2] Raw meal refers to pulverized raw mix.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity
P-087	S-091A	Discharge Pan Conveyor 492-PN1 to Divert Chute 492-MW2 & MW1	49A-BFI	Baghouse	Clinker	90TPH
	S-095A	Bottom Bucket Elevator 49A-BE1			Clinker	145 TPH
	S-096	Bottom Bucket Elevator 492-BE1			Clinker	90 TPH
P-060	S-092	Clinker Cooler No. 3 Discharge	49A-BFG	Baghouse	Clinker	55 TPH
	S-093	Discharge 493-PN1 to Bucket Elevators 493-BE1 & 49A-BE1			Clinker	55 TPH
	S-094	Clinker Elevator Bottom 493-BE1			Clinker	110 TPH
	S-095	Clinker Elevator Bottom 49A-BE1			Clinker	145 TPH
P-028	S-097	Discharge 493-MW3 to 49A-BC1	49-A-BF9	Baghouse	Clinker	110 TPH
	S-097A	Top of Bucket Elevator 493-BE1			Clinker	110 TPH
	S-110	Discharge 493-MW5 to 49A -BC2			Clinker	110 TPH
	S-114	Outside Storage Silo			Clinker	145 TPH
P-086	S-098	Discharge 49A-MW3 to 49A-BC1	49A-BFH	Baghouse	Clinker	250 TPH
	S-098A	Top of Bucket Elevator 49A-BE1			Clinker	155 TPH
	S-099	Discharge 49A-BC1 to 49A-BC2			Clinker	250 TPH
	S-099A	Top of Bucket Elevator 492-BE1			Clinker	90 TPH
	S-111	Discharge 49A-MW3 to 49A-BC2			Clinker	155 TPH
	S-112	Discharge 492-MW5 to 49A-BC2			Clinker	250 TPH
P-029	S-100	49A –BC1 Transfer to 49A -BC8 (Clinker)	49A-BF7	Baghouse	Clinker	200 TPH
	S-101	Elevator 49A – BE2 Transfer to 49A -BC1 (Clinker)			Clinker	200 TPH
	S-109	49A-BW1 transfer to 49A-BE2			Clinker	200 TPH
P-047	S-113	49A -BC2 Transfer to 49A -BC3	49A-BFA	Baghouse	Clinker	250 TPH
	S-116	49A -BC2 Transfer to 49A -BC3			Clinker	250 TPH
	S-222	Dust Collector 49A –SC1 Discharge to Belt 49A-BC3			Clinker	250 TPH
P-004	S-117	49A -BC3 Transfer to 49A -BC4	49A-BFC	Baghouse	Clinker	250 TPH
	S-117A	49A-BC4 Discharge Hood			Clinker	250 TPH
	S-117B	49A-BC4 Back of Hood			Clinker	250 TPH
P-010	S-120	49A -BC5 Transfer to 49A -BC7	49A-BFE	Baghouse	Clinker	250 TPH
	S-121	K1A-BC2 Transfer to 49A -BC7			Clinker & Gypsum	200 TPH
	S-225	Clinker Silo No. 13			Clinker	250 TPH
	S-226	Clinker Silo No. 14			Clinker	250 TPH
	S-227	Clinker Silo No. 15			Clinker	250 TPH
P-059	S-136	Waste Dust Elevator 423-BE1	423-BF3	Baghouse	CKD	75 TPH
	S-137	Waste Dust Silo			CKD	75 TPH
	S-172	Kiln No. 3 Feed Cyclone			Raw Meal	87 TPH
P-031	S-139	No. 1 Finish Mill	561-BF1	Baghouse	Cement	30 TPH
	S-244	No. 1 Finish Mill Separator			Cement	30 TPH

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity
P-032	S-139	No. 1 Finish Mill	561-BF2	Baghouse	Cement	30 TPH
	S-244	No. 1 Finish Mill Separator			Cement	30 TPH
P-033	S-141	No. 2 Finish Mill	562-BF1	Baghouse	Cement	40 TPH
	S-251	No. 2 Finish Mill Separator			Cement	40 TPH
P-034	S-143	No. 3 Finish Mill	563-BF1	Baghouse	Cement	40 TPH
	S-256	No. 3 Finish Mill Separator			Cement	40 TPH
P-058	S-146	534-BC1 Transfer to 534-BE1	534-BF1	Baghouse	Clinker/ Gypsum	100 TPH
	S-147	534-BE1 Transfer to 534-BC2			Clinker/ Gypsum	100 TPH
P-038	S-148	No. 4 Finish Mill	564-BF3	Baghouse	Cement	100 TPH
P-036	S-149	No. 4 Finish Mill Separator-East Exhaust	564-BF2	Baghouse	Cement	100 TPH
P-037	S-149	No. 4 Finish Mill Separator-West Exhaust	564-BF1	Baghouse	Cement	100 TPH
P-090	S-150A	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SL	N/A	N/A	Cement	23.3 TPH
P-091			N/A	N/A	Cement	23.3 TPH
P-092	S-150B	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SK	N/A	N/A	Cement	23.3 TPH
P-093			N/A	N/A	Cement	23.3 TPH
P-094	S-150C	Cement Flat Storage, Finish Mills 2 and 3 Pneumatic Transfer to Flat Storage Bin 59B-3SJ	N/A	N/A	Cement	23.3 TPH
P-095			N/A	N/A	Cement	23.3 TPH
P-039	S-152	No. 5 Cement Silos	59D-BF1	Baghouse	Cement	70 TPH
P-045	S-153	No. 6 East Truck Silos	59A-BF1	Baghouse	Cement	150 TPH
P-046	S-154	No. 6 West Truck Silos	59A-BF2	Baghouse	Cement	150 TPH
P-044	S-155	No. 7 Rail Silos	59C-BF1	Baghouse	Cement	150 TPH
P-040	S-157	No. 1 Packing Machine	661-BF1	Baghouse	Cement	60 TPH
P-041	S-158	No. 2 Packing Machine	661-BF2	Baghouse	Cement	60 TPH
P-042	S-159	No. 3 Packing Machine	662-BF1	Baghouse	Cement	60 TPH
P-043	S-160	No. 4 Packing Machine	662-BF2	Baghouse	Cement	60 TPH
P-030	S-241	K1A-3B1 Transfer to K21-RF1	30-BF	Baghouse	Lime	30 TPH
P-075	S-259	K24-WF1 Transfer to K24-BC1	534-BF2	Baghouse	Gypsum	7 TPH
	S-260	K24-BC1 Transfer to 534-BC1			Gypsum	7 TPH
	S-261	49A-3S3 Transfer to 534-WF2			Clinker	110 TPH
	S-262	534-WF2 Transfer to 534-BC1			Clinker	110 TPH
	S-263	49A-3S6 Transfer to 534-WF1			Clinker	110 TPH
	S-264	534-WF1 Transfer to 534-BC1			Clinker	110 TPH
P-096	S-325A S-325B	61A-SCG Transfer to 61A-SCF 61A-SCE Transfer to 61A-SCF	61A-BF1	Baghouse	Cement	75 TPH
P-097	S-325C S-325D	61A-SCD Transfer to 61A-SCF 61A-SCC Transfer to 61A-SCF				
P-098	S-325E S-325F	61A-SCG Transfer to 61A-BE1 61A-BE1 Transfer to 61A-SY1				
P-099	S-325G S-325H	Cement Screen 61A-SY1 Cement Bin 61A-3B1				

Emission Point Characteristics

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number	Exhaust Flowrate (scfm)	Exhaust Temp. (^oF)
P-008	S-016	97-A-713-S2	3,271	112
	S-119			
	S-122			
	S-223			
	S-224			
P-009	S-015	97-A-714-S2	4,000	Ambient
	S-018			
	S-019			
	S-020			
	S-021			
	S-118			
	S-228			
	S-229			
P-011	S-066	97-A-716-S2	3,398	Ambient
P-013	S-070	00-A-448-S1	19,757	185
	S-071			
P-014	S-069	00-A-449-S1	24,100	200
	S-071			
P-015	S-074	74-A-056-S4	28,100	200
P-016	S-074	74-A-055-S4	28,100	200
P-017	S-075	74-A-054-S4	11,108	184
P-018	S-077	74-A-057-S4	9,873	156
	S-078			
	S-079			
P-019	S-080	01-A-872-S1	3,491	105
	S-081			
P-020	S-082	00-A-450-S1	2,800	110
P-021	S-086	74-A-190-S2	2,800	110
F-022	S-12	05-A-190	5,000 (P-89)	Ambient
	S-91			
	S-91b			
F-024	S-173	97-A-730-S3	2,872 (P-35)	159
	S-173a			
	S-173B			
	S-173C		4,000 (P-88)	Ambient
	S-335			
	S-335A			
	S-335B			
	S-335C			
	S-335D			

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics (cont.)

Emission Point Number	Emission Unit Number	Construction Permit Number	Exhaust Flowrate (scfm)	Exhaust Temp. (^oF)
F-026	S-102	97-A-742-S4	584	107
F-043	S-129	74-A-191-S3	3,000	111
P-087	S-091A	05-A-185	3,472	120
	S-095A			
	S-096			
P-060	S-092	74-A-048-S2	6,694	111
	S-093			
	S-094			
	S-095			
P-028	S-097	74-A-049-S3	6,500	Ambient
	S-097A			
	S-110			
	S-114			
P-086	S-098	05-A-184	8,772	120
	S-098A			
	S-099			
	S-099A			
	S-111			
	S-112			
P-029	S-100	97-A-724-S2	4,337	Ambient
	S-101			
	S-109			
P-047	S-113	97-A-739-S2	2,723	85
	S-116			
	S-222			
P-004	S-117	97-A-709-S2	3,769	115
	S-117A			
	S-117B			
P-010	S-120	97-A-715-S2	7,888	125
	S-121			
	S-225			
	S-226			
	S-227			
P-059	S-136	74-A-189-S2	2,771	152
	S-137			
	S-172			
P-031	S-139	00-A-451-S1	15,166	131
	S-244			
P-032	S-139	00-A-452-S1	19,800	130
	S-244			

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics (cont.)

Emission Point Number	Emission Unit Number	Construction Permit Number	Exhaust Flowrate (scfm)	Exhaust Temp. (^oF)
P-033	S-141	00-A-453-S1	41,700	175
	S-251			
P-034	S-143	97-A-729-S3	34,692	148
	S-256			
P-058	S-146	74-A-185-S2	1,874	Ambient
	S-147			
P-038	S-148	74-A-050-S3	13,008	201
P-036	S-149	97-A-731-S2	25,880	178
P-037	S-149	74-A-051-S3	28,500	190
P-090	S-150A	05-A-673	Natural Draft	Ambient
P-091		05-A-674	Natural Draft	Ambient
P-092	S-150B	05-A-675	Natural Draft	Ambient
P-093		05-A-676	Natural Draft	Ambient
P-094	S-150C	05-A-677	Natural Draft	Ambient
P-095		05-A-678	Natural Draft	Ambient
P-039	S-152	74-A-101-S3	5,707	99.3
P-045	S-153	00-A-458-S1	3,795	98
P-046	S-154	97-A-738-S2	4,250	136
P-044	S-155	97-A-736-S2	8,468	123
P-040	S-157	00-A-454-S1	4,000	100
P-041	S-158	00-A-455-S1	4,000	100
P-042	S-159	00-A-456-S1	2,835	90
P-043	S-160	00-A-457-S1	2,867	81
P-030	S-241	97-A-725-S2	1,280	77
P-075	S-259	05-A-189	6,500	Ambient
	S-260			
	S-261			
	S-262			
	S-263			
	S-264			
P-096	S-325A S-325B	05-A-669	Natural Draft	Ambient
P-097	S-325C S-325D	05-A-670	Natural Draft	Ambient
P-098	S-325E S-325F	05-A-671	Natural Draft	Ambient
P-099	S-325G S-325H	05-A-672	Natural Draft	Ambient

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Limits

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)[2]	PM Limit (gr/scf)	Construction Permit No.
P-008	S-016	10%[1]	0.71	0.1	97-A-713-S2
	S-119				
	S-122				
	S-223				
	S-224				
P-009	S-015	10%[1]	0.34	0.1	97-A-714-S2
	S-018				
	S-019				
	S-020				
	S-021				
	S-118				
	S-228				
	S-229				
P-011	S-066	10%[1]	0.31	0.1	97-A-716-S2
P-013	S-070	10%[1]	2.08	0.1	00-A-448-S1
	S-071				
P-014	S-069	10%[1]	2.57	0.1	00-A-449-S1
	S-071				
P-015	S-074	10%[1]	3.0	0.1	74-A-056-S4
P-016	S-074	10%[1]	3.0	0.1	74-A-055-S4
P-017	S-075	10%[1]	1.17	0.1	74-A-054-S4
P-018	S-077	10%[1]	0.98	0.1	74-A-057-S4
	S-078				
	S-079				
P-019	S-080	10%[1]	0.32	0.1	01-A-872-S1
	S-081				
P-020	S-082	10%[1]	0.26	0.1	00-A-450-S1
P-021	S-086	10%[1]	0.27	0.1	74-A-190-S2
F-022	S-12	10%[1]	0.43	0.1	05-A-190
	S-91				
	S-91b				

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Limits (cont.)

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)[2]	PM Limit (gr/scf)	Construction Permit No.
F-024	S-173	10%[1]	0.656	0.1	97-A-730-S3
	S-173A				
	S-173B				
	S-173C				
	S-335				
	S-335A				
	S-335B				
	S-335C				
	S-335D				
F-026	S-102	10%[1]	0.19	0.1	97-A-742-S4
F-043	S-129	10%[1]	0.41	0.1	74-A-191-S3
P-087	S-091A	10%	0.33	0.1	05-A-185
	S-095A				
	S-096				
P-060	S-092	10%[1]	0.74	0.1	74-A-048-S2
	S-093				
	S-094				
	S-095				
P-028	S-097	10%[1]	0.56	0.1	74-A-049-S3
	S-97A				
	S-110				
	S-114				
P-086	S-098	10%	0.82	0.1	05-A-184
	S-098A				
	S-099				
	S-099A				
	S-111				
	S-112				
P-029	S-100	10%[1]	0.35	0.1	97-A-724-S2
	S-101				
	S-109				
P-047	S-113	10%[1]	0.24	0.1	97-A-739-S2
	S-116				
	S-222				
P-004	S-117	10%[1]	0.36	0.1	97-A-709-S2
	S-117A				
	S-117B				
P-010	S-120	10%[1]	0.75	0.1	97-A-715-S2
	S-121				
	S-225				
	S-226				
	S-227				
P-059	S-136	10%[1]	0.27	0.1	74-A-189-S2
	S-137				
	S-172				
P-031	S-139	10%[1]	1.48	0.1	00-A-451-S1
	S-244				

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Limits (cont.)

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)[2]	PM Limit (gr/scf)	Construction Permit No.
P-032	S-139 S-244	10%[1]	1.89	0.1	00-A-452-S1
P-033	S-141 S-251	10%[1]	4.29	0.1	00-A-453-S1
P-034	S-143 S-256	10%[1]	3.44	0.1	97-A-729-S3
P-058	S-146 S-147	10%[1]	0.16	0.1	74-A-185-S2
P-038	S-148	10%[1]	1.42	0.1	74-A-050-S3
P-036	S-149	10%[1]	2.68	0.1	97-A-731-S2
P-037	S-149	10%[1]	3.0	0.1	74-A-051-S3
P-090	S-150A	10%[1]	0.54	0.1	05-A-673
P-091		10%[1]	0.54	0.1	05-A-674
P-092	S-150B	10%[1]	0.54	0.1	05-A-675
P-093		10%[1]	0.54	0.1	05-A-676
P-094	S-150A	10%[1]	0.54	0.1	05-A-677
P-095		10%[1]	0.54	0.1	05-A-678
P-039	S-152	10%[1]	0.53	0.1	74-A-101-S3
P-045	S-153	10%[1]	0.36	0.1	00-A-458-S1
P-046	S-154	10%[1]	0.39	0.1	97-A-738-S2
P-044	S-155	10%[1]	0.83	0.1	97-A-736-S2
P-040	S-157	10%[1]	1.36	0.1	00-A-454-S1
P-041	S-158	10%[1]	1.36	0.1	00-A-455-S1
P-042	S-159	10%[1]	1.36	0.1	00-A-456-S1
P-043	S-160	10%[1]	1.36	0.1	00-A-457-S1
P-030	S-241	10%[1]	0.11	0.1	97-A-725-S2
P-075	S-259 S-260 S-261 S-262 S-263 S-264	10%[1]	1.11	0.1	05-A-189
P-096	S-325A S-325B	10%[1]	0.03	0.1	05-A-669
P-097	S-325C S-325D	10%[1]	0.03	0.1	05-A-670
P-098	S-325E S-325F	10%[1]	0.03	0.1	05-A-671
P-099	S-325G S-325H	10%[1]	0.03	0.1	05-A-672

[1] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Opacity
Emission Limit: 10 %
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1348

Pollutant: Particulate Matter
Emission Limit: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: As specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Emission Limits

Pollutant: Sulfur Dioxide (SO_2) (For the combustion of natural gas (emission units S-071, S-074, and S-075))
Emission Limits: 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements (Iowa DNR Construction Permit)
P-013	S-070 S-071	This emission point shall not operate more than 7,008 hours per rolling twelve (12) month period.	1. For the first twelve (12) months operation, determine the cumulative hours of operation for the emission points for each month of operation. 2. After the first twelve (12) months of operation determine the annual hours of operation for the emission points on a rolling-12-month total for each month of operation	00-A-448-S1
P-014	S-069 S-071	This emission point shall not operate more than 7,008 hours per rolling twelve (12) month period.		00-A-449-S1
P-045	S-153	This emission point shall not operate more than 7,008 hours per rolling twelve (12) month period.		00-A-458-S1
P-046	S-154	This emission source shall not operate more than 7,008 hours per rolling twelve (12) month period.		97-A-738-S2
P-015	S-074	This emission point shall not operate more than 7,446 hours per rolling twelve (12) month period.		74-A-056-S4
P-016		This emission point shall not operate more than 7,446 hours per rolling twelve (12) month period.		74-A-055-S4
P-017	S-075	This emission point shall not operate more than 7,446 hours per rolling twelve (12) month period.		74-A-054-S4
P-044	S-155	This emission point shall not operate more than 7,446 hours per rolling twelve (12) month period.		97-A-736-S2
P-034	S-143 S-256	This emission point shall not operate more than 7,534 hours per rolling twelve (12) month period.		97-A-729-S3

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LL-Operational Limits & Requirements (cont.)

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements (Iowa DNR Construction Permit)
P-036	S-149	Each of these emission points shall not operate more than 7,534 hours per rolling twelve (12) month period.	1. For the first twelve (12) months operation, determine the cumulative hours of operation for the emission points for each month of operation. 2. After the first twelve (12) months of operation determine the annual hours of operation for the emission points on a rolling-12-month total for each month of operation.	97-A-731-S2
P-037				74-A-051-S3
P-038	S-148			74-A-050-S3
P-058	S-146			74-A-185-S2
	S-147			
P-039	S-152	This emission point shall not operate more than 7,534 hours per rolling twelve (12) month period.		74-A-101-S3
P-030	S-241	This emission point shall not operate more than 4,380 hours per rolling twelve (12) month period.		97-A-725-S2
P-033	S-141	This emission point shall not operate more than 7,884 hours per rolling twelve (12) month period.		00-A-453-S1
	S-251	This emission point shall not operate more than 7,884 hours per rolling twelve (12) month period.		
P-040	S-157	These emission points shall not operate more than a combined total of more than 5,256 hours per rolling twelve (12) month period.	1. For the first twelve (12) months operation, determine the cumulative hours of operation for all these emission points combined for each month of operation. 2. After the first twelve (12) months of operation determine the annual combined hours of operation for these emission points on a rolling-12-month total for each month of operation.	00-A-454-S1
P-041	S-158			00-A-455-S1
P-042	S-159			00-A-456-S1
P-043	S-160			00-A-457-S1
P-075	S-259 through S-264	This emission point shall not operate more than 7,534 hours per rolling twelve (12) month period.	1. For the first twelve (12) months operation, determine the cumulative hours of operation for the emission points for each month of operation. 2. After the first twelve (12) months of operation determine the annual hours of operation for the emission points on a rolling-12-month total for each month of operation.	05-A-189
F-024	S-173			97-A-730-S3
	S-173A			
	S-173B			
	S-173C			
	S-335			
	S-335A			
	S-335B			
	S-335C			
	S-335D			

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements (cont.)

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements (Iowa DNR Construction Permit)
P-090	S-150A	These emission sources shall not operate more than 1,752 hours per calendar year.	1. For the first twelve (12) months of operation, determine the cumulative hours of operation for each month of operation. 2. After the first twelve (12) months of operation determine the annual hours of operation on a calendar year basis	05-A-673
P-091				05-A-674
P-092	S-150B			05-A-675
P-093				05-A-676
P-094	S-150C			05-A-677
P-095				05-A-678

Additional Reporting & Record keeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1355

<u>Additional Emission Point Characteristics</u>
These emission points shall conform to the specifications listed below.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL – Additional Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number (Authority for Requirement)	Height (ft.)	Diameter (inches)	Discharge Style
P-008	S-016	97-A-713-S2	157.6	20	Horizontal
	S-119				
	S-122				
	S-223				
	S-224				

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL – Additional Emission Point Characteristics (cont.)

Emission Point Number	Emission Unit Number	Construction Permit Number (Authority for Requirement)	Height (ft.)	Diameter (inches)	Discharge Style
P-009	S-015	97-A-714-S2	158.6	12	Horizontal
	S-018				
	S-019				
	S-020				
	S-021				
	S-118				
	S-228				
	S-229				
P-011	S-066	97-A-716-S2	157.6	15	Horizontal
P-013	S-070	00-A-448-S1	102.6	38.2	Unobstructed Vertical
	S-071				
P-014	S-069	00-A-449-S1	102.6	38.2	Unobstructed Vertical
	S-071				
P-015	S-074	74-A-056-S4	102.6	40	Unobstructed Vertical
P-016	S-074	74-A-055-S4	102.6	40	Unobstructed Vertical
P-017	S-075	74-A-054-S4	102.6	30	Unobstructed Vertical
P-018	S-077	74-A-057-S4	96.7	34x18	Horizontal
	S-078				
	S-079				
P-019	S-080	01-A-872-S1	88	12	Horizontal
	S-081				
P-020	S-082	00-A-450-S1	49	20.5	Horizontal
P-021	S-086	74-A-190-S2	88	12	Downward
F-022	S-12	05-A-190	Indoor Venting	Indoor Venting	Indoor Venting
	S-91				
	S-91b				
F-024	S-173	97-A-730-S3	Indoor Venting	Indoor Venting	Indoor Venting
	S-173a				
	S-173B				
	S-173C		Indoor Venting	Indoor Venting	Indoor Venting
	S-335				
	S-335A				
	S-335B				
	S-335C				
	S-335D				
F-026	S-102	97-A-742-S4	Indoor Venting	Indoor Venting	Indoor Venting
F-043	S-129	74-A-191-S3	Indoor Venting	Indoor Venting	Indoor Venting
P-087	S-091A	05-A-185	23.76	13.3	Unobstructed Vertical
	S-095A				
	S-096				

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL – Additional Emission Point Characteristics (cont.)

Emission Point Number	Emission Unit Number	Construction Permit Number (Authority for Requirement)	Height (ft.)	Diameter (inches)	Discharge Style
P-060	S-092	74-A-048-S2	9.25	23	Horizontal
	S-093				
	S-094				
	S-095				
P-028	S-097	74-A-049-S3	78.1	12x15	Horizontal
	S-097A				
	S-110				
	S-114				
P-086	S-098	05-A-184	39	22	Unobstructed Vertical
	S-098A				
	S-099				
	S-099A				
	S-111				
	S-112				
P-029	S-100	97-A-724-S2	33.7	24x15	Horizontal
	S-101				
	S-109				
P-047	S-113	97-A-739-S2	81	24x16	Unobstructed Vertical
	S-116				
	S-222				
P-004	S-117	97-A-709-S2	93.6	12	Horizontal
	S-117A				
	S-117B				
P-010	S-120	97-A-715-S2	158.6	12	Horizontal
	S-121				
	S-225				
	S-226				
	S-227				
P-059	S-136	74-A-189-S2	106	17	Horizontal
	S-137				
	S-172				
P-031	S-139	00-A-451-S1	83.1	30	Unobstructed Vertical
	S-244				
P-032	S-139	00-A-452-S1	83.1	30	Unobstructed Vertical
	S-244				
P-033	S-141	00-A-453-S1	98.4	40	Unobstructed Vertical
	S-251				
P-034	S-143	97-A-729-S3	98.4	39	Unobstructed Vertical
	S-256				
P-058	S-146	74-A-185-S2	42	12x12	Unobstructed Vertical
	S-147				
P-038	S-148	74-A-050-S3	99.1	30	Unobstructed Vertical
P-036	S-149	97-A-731-S2	99.1	40	Unobstructed Vertical
P-037	S-149	74-A-051-S3	99.1	42	Unobstructed Vertical

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL – Additional Emission Point Characteristics (cont.)

Emission Point Number	Emission Unit Number	Construction Permit Number (Authority for Requirement)	Height (ft.)	Diameter (inches)	Discharge Style
P-039	S-152	74-A-101-S3	130	18x24	Unobstructed Vertical
P-090	S-150A	05-A-673	119	12	Obstructed Vertical
P-091		05-A-674	119	12	Obstructed Vertical
P-092	S-150B	05-A-675	119	12	Obstructed Vertical
P-093		05-A-676	119	12	Obstructed Vertical
P-094	S-150C	05-A-677	119	12	Obstructed Vertical
P-095		05-A-678	119	12	Obstructed Vertical
P-045	S-153	00-A-458-S1	175.6	12x12	Horizontal
P-046	S-154	97-A-738-S2	168	20x12	Horizontal
P-044	S-155	97-A-736-S2	178.8	18x18	Horizontal
P-040	S-157	00-A-454-S1	39.2	18x20	Downward
P-041	S-158	00-A-455-S1	39.2	18 x 20	Downward
P-042	S-159	00-A-456-S1	39.2	18x20	Downward
P-043	S-160	00-A-457-S1	39.2	18x20	Downward
P-030	S-241	97-A-725-S2	63.5	12x12	Horizontal
P-075	S-259	05-A-189	40	15	Unobstructed Vertical
	S-260				
	S-261				
	S-262				
	S-263				
	S-264				
P-096	S-325A S-325B	05-A-669	67.1	24	Obstructed Vertical
P-097	S-325C S-325D	05-A-670	67.1	24	Obstructed Vertical
P-098	S-325E S-325F	05-A-671	67.1	24	Obstructed Vertical
P-099	S-325G S-325H	05-A-672	67.1	24	Obstructed Vertical

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity as described in (a)(4)(i-vii) and (e) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements**.

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading and Packing Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics
567 IAC 23.1(4)"bl"
40 CFR 63.1350

Note: Emission points F-022, F-024, F-026, and F-043 vent internally and shall be checked for opacity in the same manner as the "Fugitives Subject to 40 CFR 63 Subpart LLL".

Stack Testing:

The following stack test requirement applies to Emission Points P-030, F-026, F-024 (P-088 and P-035), P-087, P-075, F-022 and F-043. P-030 only needs to be tested if the source is operated again.
Pollutant - Opacity

Stack Test to be Completed by (date) - within **60** days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date
Test Method – 40 CFR 60, Appendix A, Method 9
Authority for Requirement - Iowa DNR Construction Permits 97-A-725-S2 (P-030), 97-A-742-S4 (F-026), 97-A-730-S3 (F-024), 05-A-185 (P-087), 05-A-189 (P-075), 05-A-190 (F-022), and 74-A-191-S3 (F-043)

The following stack test requirement applies to Emission Points P-030, F-026, F-024 (P-088 and P-035), P-087, P-075, F-022 and F-043. P-030 only needs to be tested if the source is operated again and P-087, P-075, F-022 only need to be tested if their compliance opacity tests exceed 10% opacity.

Pollutant – PM_{10}

Stack Test to be Completed by (date) – within **60** days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Authority for Requirement – Iowa DNR Construction Permits 97-A-725-S2 (P-030), 97-A-742-S4 (F-026), 97-A-730-S3 (F-024), 05-A-185 (P-087), 05-A-189 (P-075), 05-A-190 (F-022) and 74-A-191-S3 (F-043)
[(1)]Or approved alternative.

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐
For controlled sources only
Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-
see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)

Emission Point ID Number: P-061

Associated Equipment

Associated Emission Unit ID Numbers: Q-101
Emissions Control Equipment ID Number: EP-061
Emissions Control Equipment Description: Fabric Filter

Emission Unit vented through this Emission Point: Q-101
Emission Unit Description: Quarry Drill
Raw Material/Fuel: Limestone
Rated Capacity: N/A

Emission Point Characteristics

Exhaust Flow Rate (scfm): 1,000
Exhaust Temperature (°F): Ambient

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 01-A-368-S1
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of (no visible emissions) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr./scf
Authority for Requirement: 567 IAC 23.3(2)"a"
Iowa DNR Construction Permit 01-A-368-S1

Pollutant: PM_{10}
Emission Limit(s): 0.15 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 01-A-368-S1

Additional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 10
Stack Opening, (inches, dia.): 10 x 9.5
Discharge Style: Unobstructed Vertical
Authority for Requirement: Iowa DNR Construction Permit 01-A-368-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant - Opacity
Stack Test to be Completed by (date) - Within 180 days of startup
Test Method – 40 CFR 60, Appendix A, Method 9
Authority for Requirement - Iowa DNR Construction Permit 01-A-368-S1

Pollutant – PM_{10}[(1)]
Stack Test to be Completed by (date) – Within 180 days of startup.
Test Method – 40 CFR 51, Appendix M, 201A with 202[(2)]
Authority for Requirement: Iowa DNR Construction Permit 01-A-368-S1
[(1)] PM_{10} testing for this source may be waived if no visible emissions are observed.
[(2)] Or approved alternative

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: See Table: Diesel Engines

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Diesel Engines

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Table: Diesel Engines

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (gal./hr)
PC-03	Q-202	Crusher Engine	Diesel	6
PC-16	Q-215	Generator Engine	Diesel	3

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr./scf
Authority for Requirement: 567 IAC 23.3(2)"a "

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 2.5 lb./MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:
1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:
The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

Moitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: P-005

Associated Equipment

Associated Emission Unit ID Numbers: S-022
Emissions Control Equipment ID Number: 3EA-BF1
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: S-022
Emission Unit Description: Raw Material Transfer Tower No. 3 L11-BC1 Transfer to 3EA-BC1
Raw Material/Fuel: Raw Materials
Rated Capacity: 200 TPH

Emission Point Characteristics

Exhaust Flow Rate (scfm): 4,450
Exhaust Temperature (°F): Ambient

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-710-S2
567 IAC 23.3(2)"d"

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 97-A-710-S2
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit(s): 0.39 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 97-A-710-S2

Additional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 93.6
Stack Opening, (inches, dia.): 12
Discharge Style: Horizontal
Authority for Requirement: Iowa DNR Construction Permit 97-A-710-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: P-056

Associated Equipment

Associated Emission Unit ID Numbers: S-038, S-039
Emissions Control Equipment ID Number: 291-BF1
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: S-038
Emission Unit Description: Secondary Limestone Impactor
Raw Material/Fuel: Limestone
Rated Capacity: 750 TPH

Emission Unit vented through this Emission Point: S-039
Emission Unit Description: Impactor Discharge to Belt 291-BC1
Raw Material/Fuel: Limestone
Rated Capacity: 750 TPH

Emission Point Characteristics

Stack Exhaust Flow Rate (scfm): 7,335
Stack Temperature (^{o}F): Ambient

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2
IAC 23.3(2)"d"
567 IAC 23.3(2)"d"

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2
IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: 1.05 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Hours of operation: This emission unit shall not operate more than 2,628 hours per rolling twelve (12) month period.

Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2
Administrative Consent Order 2003-AQ-52

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. For the first twelve (12) months operation, determine the cumulative hours of operation for the emission point for each month of operation.
2. After the first twelve (12) months of operation determine the annual hours of operation for the emission point on a rolling-12-month total for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2

Aditional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 45
Stack Diameter (inches): 13.4
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 97-A-743-S2

The temperature and flow rate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: P-006

Associated Equipment

Associated Emission Unit ID Numbers: S-054
Emissions Control Equipment ID Number: 291-BF4
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: S-054
Emission Unit Description: Transfer Tower No. 3
Raw Material/Fuel: Raw Material
Rated Capacity: 700 TPH

Emission Point Characteristics

Stack Exhaust Flow Rate (scfm): 4,450
Stack Temperature (^{o}F): Ambient

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-711-S2
567 IAC 23.3(2)"d"

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 97-A-711-S2
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: 0.39 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 97-A-711-S2

Additional Emission Point Characteristics
This emission point shall conform to the specifications listed below.

Stack Height (feet): 93.6
Stack Diameter (inches): 12
Discharge Style: Horizontal
Authority for Requirement: Iowa DNR Construction Permit 97-A-711-S2

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: P-001

Associated Equipment

Associated Emission Unit ID Number: S-062
Emissions Control Equipment ID Number: 221-EP1
Emissions Control Equipment Description: Electrostatic Precipitator

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Emission Unit vented through this Emission Point: S-062
Emission Unit Description: Raw Material Dryer
Raw Material/Fuel: Natural Gas, Clay, Sand
Rated Capacity: 105 MCf/hr.(Natural Gas), 75 TPH (Clay) and 90 TPH (Sand)

Emission Point Characteristics

Stack Exhaust Flow Rate (scfm): 40,500
Stack Temperature (^{o}F): 160

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 10 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1348

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: 16.46lb./hr
Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 500 ppmv
Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1
567 IAC 23.3(3)"e"

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Hours of operation:
1. This emission unit shall not operate more than 3,504 hours per rolling twelve (12) month period.

Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1

Process throughput: The dryer shall operate on natural gas only.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355.

2. For the first twelve (12) months operation, determine the cumulative hours of operation for the emission point for each month of operation.
3. After the first twelve (12) months of operation determine the annual hours of operation for the emission point on a rolling-12-month total for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1

Additional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 58.9
Stack Diameter (inches): 96.84
Discharge Style: Vertical, Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

<u>Periodic Monitoring Requirements</u>
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity as described in (a)(4)(i-vii) and (e) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements**.

Authority for Requirement: Iowa DNR Construction Permit 00-A-446-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1350

Stack Testing:

Pollutant – PM_{10}
Stack Test to be Completed by (date) – November 9, 2007
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Authority for Requirement - 567 IAC 22.108(3)
[(1)]Or approved alternative.

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐
Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-
see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: P-022

Associated Equipment

Associated Emission Unit ID Numbers: S-087
Emissions Control Equipment ID Number: 422-BF1
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: 2025208-K2 (Multi –Compound CEM) and 422-3K1 (COM)

Emission Unit vented through this Emission Point: S-087
Emission Unit Description: Kiln 2
Raw Material/Fuel: Raw Meal and Fuel[(1)]
Rated Capacity: 140 short tons Raw Meal/hr.

[(1)] Raw meal refers to any one or a mixture of the ground kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as iron ore, foundry sand, silica sand and fly ash. Fuel includes coal, coke, natural gas, and tire derived fuel (TDF).

Emission Point Characteristics

Stack Exhaust Flow Rate (scfm): 153,818
Stack Temperature (^{o}F): 440

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 20%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(2)

[(1)]If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit(s): 0.3 lb./ton of feed (dry basis)
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(1)

Pollutant: PM_{10}
Emission Limit(s): 86.51 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 2,960.4 lb./hr, 23.39 tons/day, and 21,170 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 5lb./MMBtu
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3
567 IAC 23.3(3)"a"

Pollutant: Dioxins and Furans (D/F)
Emission Limit(s): 0.4 ng./dscm (TEQ) [(2)]
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(3)

[(2)] 0.4 ng/dscm = 1.7 x 10^{-10} grains/dscf. Limit is corrected to 7% O_2 and when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 ^{o}C (400 ^{o}F) or less. If the average of the performance test run average temperatures at the inlet to the particulate matter control device is greater than 204 ^{o}C (400 ^{o}F) then the D/F standard is 0.2 ng/dscm (8.7 x 10^{-11} grains/dscf) (TEQ) corrected to 7% O_2.

<u>Operational Limits & Requirements</u>
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:
1. The kiln is limited to firing on natural gas, coke, coal, and tire derived fuel (TDF).
2. The kiln shall be operated such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, meets the requirements of 40 CFR §63.1344 (Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).
3. In accordance with 40 CFR §63.1349(c), PM performance tests shall be repeated every 5 years.
4. In accordance with 40 CFR §63.1349(d), D/F performance tests shall be repeated every 30 months.
5. In accordance with 40 CFR §63.1349(e)(1) through (e)(3), PM and/or D/F performance tests shall be completed within 360 hours after a planned operational change that has been determined to have the the ability to impact the plants ability to affect compliance with the applicable PM and/or D/F standards.
6. In accordance with 40 CFR §63.1350(i), the facility shall conduct an inspection of the components of the combustion system of each kiln or in-line raw mill at least once per year.

7. Within 6 months of the issuance of this permit the facility (plant number 17-01-009) shall submit facility-wide NO_X dispersion modeling that demonstrates no exceedences of the National Ambient Air Quality Standards (NAAQS).[(3)]

[(3)] The requested modeling has been completed and submitted to the IDNR.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. The sulfur content (in lb/MMBTU) of all individual fuels and the total sulfur (in lb/MMBTU) of any combination of fuels that are fired in the kiln. The fuel analysis sent with the fuel shipment can be an adequate demonstration for this record.
2. Determine the total SO_2 emissions for each operating day. An operating day is defined as a 24-hour period between 12:00 midnight and the following midnight during which any clinker is produced at any time in the kiln. It is not necessary for clinker to be produced continuously by the kiln for the entire 24-hour period.
3. For the first twelve (12) months of operation after the issuance of the construction permit, calculate the cumulative SO_2 emissions for each month of operation.
4. After the first twelve (12) months of operation after the issuance of the construction permit, calculate the total SO_2 emissions on a rolling-12-month total for each month of operation.
5. Copies of the excess emissions reports required per NESHAP Subpart LLL.
6. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1350.
7. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1355.

Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3

<u>Aditional Emission Point Characteristics</u>

The emission point shall conform to the specifications listed below.

Stack Height (feet): 158.3
Stack Diameter (inches): 156
Discharge Style: Unobstructed Vertical
Authority for Requirement: Iowa DNR Construction Permit 92-A-631-S3

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – Particulate Matter (PM)
Stack Test to be Completed by (date) – September 29, 2009
Test Method – 40 CFR 60, Appendix A, Method 5
Authority for Requirement – 40 CFR 63.1348
567 IAC 23.1(4)"bl"

Pollutant – PM_{10}
Stack Test to be Completed between (dates) – May 9, 2008 and May 9, 2009
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Test run time to be 3 hours.
Authority for Requirement: 567 IAC 22.108(3)
[(1)]Or approved alternative
.
Pollutant – Dioxins/Furans (D/F)
Stack Test to be Completed by (date) – March 29, 2007
Test Method – 40 CFR 60, Appendix A, Method 23[(2)]
Authority for Requirement - Iowa DNR Construction Permit 92-A-631-S3
40 CFR 63.1349(b)(3)
567 IAC 23.1(4)"bl"

[(2)] Test shall be done in order to meet compliance as outlined in NESHAP Subpart LLL (See 40 CFR §63.1349).

Continuous Emissions Monitoring:

In accordance with NESHAP Subpart LLL, the facility (plant number 17-01-009) shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1).

In accordance with NESHAP Subpart LLL [40 CFR §63.1350(f)], the facility (plant number 17-01-005) shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln at the inlet to or upstream of the kiln particulate matter control device. Per 40 CFR §63.1350(f), the following shall be done:

- The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR §63.1349(b)(3)(iv).
- The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
- The three-hour average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

- Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

Compliance with the sulfur dioxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a continuous emission monitoring system (CEMS). Therefore, the facility (plant number 17-01-009) shall install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.
The CEMS required by this permit shall be operated and data recorded during all periods of operation of the kiln except for CEM breakdowns and repairs. Data must be recorded during calibration checks, and zero and span adjustments.

The 1-hour average sulfur dioxide emission rate measured by the CEMS required by this permit shall be used to calculate compliance with the emission standard of this permit. At least 2 data points must be used to calculate each 1-hour average.

For each hour of missing sulfur dioxide emission data, the owner or operator shall substitute data by:

A. If the monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
   i) For the missing data period less than or equal to 24 hours, substitute the average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.
   ii) For a missing data period greater than 24 hours, substitute the greater of:
      (a) The 90th percentile hourly SO_2 concentration recorded by an SO_2 pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
      (b) The average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.

B. If the monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
   i) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.
   ii) For the missing data period of more than 8 hours, substitute the greater of:

(a) The 95th percentile hourly SO_2 pollutant concentration recorded by an SO_2 pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or

(b) The average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.

C. If the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

Authority for Requirement - Iowa DNR Construction Permit 92-A-631-S3

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity

see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"
40 CFR 63.1350(a)
567 IAC 23.1(4)"bl"

Emission Point ID Number: P-026

Associated Equipment

Associated Emission Unit ID Numbers: S-090
Emissions Control Equipment ID Number: 472-BF1
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: 472- 3K1 (COM)

Emission Unit vented through this Emission Point: S-090
Emission Unit Description: Clinker Cooler No. 2
Raw Material/Fuel: Clinker
Rated Capacity: 87 short tons/hr

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Exhaust Flow Rate (scfm): 58,696
Stack Temperature (^{o}F): 187
Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 10 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1345(a)(2)

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 lb./ton kiln feed (dry basis)
Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1345(a)(1)

Pollutant: PM_{10}
Emission Limit: 6.49 lb./hr[(2)]
Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1

[(2)] Standard is expressed as the average of three runs.

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.

2. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1350.

3. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1355.

Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1355

4. For the first twelve (12) months operation, determine the cumulative raw kiln feed throughput and clinker production for each month of operation.

5. After the first twelve (12) months of operation determine the annual raw kiln feed throughput and clinker production on a rolling-12-month total for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1

Additional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 101.9
Stack Diameter (inches): 90
Discharge Style: Unobstructed Vertical
Authority for Requirement: Iowa DNR Construction Permit 99-A-342-S1

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – PM_{10}

Stack Test to be Completed by (date) – November 9, 2007
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Authority for Requirement - 567 IAC 22.108(3)
[(1)]Or approved alternative.

Continuous Emissions Monitoring:

Pollutant - Opacity

Operational Specifications – 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Date of Initial System Calibration and Quality Assurance – November 1, 2003
Ongoing System Calibration/Quality Assurance - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Reporting & Record keeping - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Authority for Requirement – Iowa DNR Construction Permit 99-A-342-S1
567 IAC 23.1(3)"bl"
40 CFR 63.1350(d)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity- **see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)

Emission Point ID Number: P-025

Associated Equipment

Associated Emission Unit ID Numbers: S-132
Emissions Control Equipment ID Number: 423-BF1
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: 2025208-K3, 423-3K1 (Multi-Compound CEM, COM)

Emission Unit vented through this Emission Point: S-132
Emission Unit Description: Kiln 3
Raw Material/Fuel: Raw Meal and Fuel[(1)]
Rated Capacity: 87 short tons Raw Meal/hr.

[(1)] Raw meal refers to any one or a mixture of the ground kiln-stock materials used to produce cement, which are primarily limestone, clay, or alternative raw materials such as iron ore, foundry sand, silica sand and fly ash. Fuel includes coal, coke, natural gas, and tire derived fuel (TDF).

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Exhaust Flow Rate (scfm): 123,500
Stack Temperature (^{o}F): 397
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 20%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(2)

[(1)]If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit(s): 0.3 lb./ton of feed (dry basis)
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(1)

Pollutant: PM_{10}
Emission Limit(s):66.75 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 1,531.8 lb./hr, 13.18 tons/day, and 7,543.6 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4

Pollutant: Dioxins and Furans (D/F)
Emission Limit(s): 0.4 ng./dscm (TEQ) [(2)]
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S44
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(3)

[(2)] 0.4 ng/dscm = 1.7 x 10^{-10} grains/dscf. Limit is corrected to 7% O_2 and when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 ^{o}C (400 ^{o}F) or less. If the average of the performance test run average temperatures at the inlet to the particulate matter control device is greater than 204 ^{o}C (400 ^{o}F) then the D/F standard is 0.2 ng/dscm (8.7 x 10^{-11} grains/dscf) (TEQ) corrected to 7% O_2.

<u>Operational Limits & Requirements</u>
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:
1. The kiln is limited to firing on natural gas, coke, coal, and tire derived fuel (TDF).
2. In accordance with Subpart F (Standards of Performance for Portland Cement Plants), the facility (plant number 17-01-009) shall record its daily production rates and kiln feed rates.
3. The kiln shall be operated such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, meets the requirements of 40 CFR §63.1344 (Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).
4. In accordance with 40 CFR §63.1349(c), PM performance tests shall be repeated every 5 years.
5. In accordance with 40 CFR §63.1349(d), D/F performance tests shall be repeated every 30 months.
6. In accordance with 40 CFR §63.1349(e)(1) through (e)(3), PM and/or D/F performance tests shall be completed within 360 hours after a planned operational change that has been determined to have the the ability to impact the plants ability to affect compliance with the applicable PM and/or D/F standards.
7. In accordance with 40 CFR §63.1350(i), the facility shall conduct an inspection of the components of the combustion system of each kiln or in-line raw mill at least once per year.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. The sulfur content (in lb/MMBTU) of all individual fuels and the total sulfur (in lb/MMBTU) of any combination of fuels that are fired in the kiln. The fuel analysis sent with the fuel shipment can be an adequate demonstration for this record.
2. Determine the total SO_2 emissions for each operating day. An operating day is defined as a 24-hour period between 12:00 midnight and the following midnight during which any clinker is produced at any time in the kiln. It is not necessary for clinker to be produced continuously by the kiln for the entire 24-hour period.
3. For the first twelve (12) months of operation after the issuance of the construction permit, calculate the cumulative SO_2 emissions for each month of operation.
4. After the first twelve (12) months of operation after the issuance of the construction permit, calculate the total SO_2 emissions on a rolling-12-month total for each month of operation.
5. The daily production rates and kiln feed rates.
6. Copies of the excess emissions reports required per NESHAP Subpart LLL.
7. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1350.
8. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1355.

Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4

Additional Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 149
Stack Diameter (inches): 96
Discharge Style: Unobstructed Vertical
Authority for Requirement: Iowa DNR Construction Permit 74-A-188-S4

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – Particulate Matter (PM)
Stack Test to be Completed by (date) – September 29, 2009
Test Method – 40 CFR 60, Appendix A, Method 5
Authority for Requirement – 40 CFR 63.1348
567 IAC 23.1(4)"bl"

Pollutant – PM_{10}
Stack Test to be Completed between (dates) – May 9, 2008 and May 9, 2009
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Test run time to be 3 hours.
Authority for Requirement: 567 IAC 22.108(3)
[(1)]Or approved alternative

Pollutant – Dioxins/Furans (D/F)
Stack Tests to be Completed by (date) – March 29, 2007
Test Method – 40 CFR 60, Appendix A, Method 23[(1)]
Authority for Requirement - Iowa DNR Construction Permit 74-A-188-S4
40 CFR 63.1349(b)(3)
567 IAC 23.1(4)"bl"

[(1)] Test shall be done in order to meet compliance as outlined in NESHAP Subpart LLL (See 40 CFR §63.1349).

Continuous Emissions Monitoring:

In accordance with NESHAP Subpart LLL, the facility (plant number 17-01-009) shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1).

In accordance with NESHAP Subpart LLL [40 CFR §63.1350(f)], the facility (plant number 17-01-005) shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln at the inlet to or upstream of the kiln particulate matter control device. Per 40 CFR §63.1350(f), the following shall be done:

- The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR §63.1349(b)(3)(iv).
- The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
- The three-hour average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
- Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

Compliance with the sulfur dioxide emission limit of this permit shall be continuously demonstrated by the owner/operator through the use of a continuous emission monitoring system (CEMS). Therefore, the facility (plant number 17-01-009) shall install, calibrate, maintain, and operate a CEMS for kiln 3 for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification

2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

The CEMS required by this permit shall be operated and data recorded during all periods of operation of the kiln except for CEM breakdowns and repairs. Data must be recorded during calibration checks, and zero and span adjustments.

The 1-hour average sulfur dioxide emission rate measured by the CEMS required by this permit shall be used to calculate compliance with the emission standard of this permit. At least 2 data points must be used to calculate each 1-hour average.

For each hour of missing sulfur dioxide emission data, the owner or operator shall substitute data by:

A. If the monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
   i) For the missing data period less than or equal to 24 hours, substitute the average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.
   ii) For a missing data period greater than 24 hours, substitute the greater of:
      (a) The 90th percentile hourly SO_2 concentration recorded by an SO_2 pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
      (b) The average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.

B. If the monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
   i) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.
   ii) For the missing data period of more than 8 hours, substitute the greater of:
      (a) The 95th percentile hourly SO_2 pollutant concentration recorded by an SO_2 pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
      (b) The average of the hourly SO_2 concentrations recorded by an SO_2 pollutant concentration monitor for the hour before and the hour after the missing data period.

C. If the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

Authority for Requirement - Iowa DNR Construction Permit 74-A-188-S4

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous

emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity **see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"
40 CFR 63.1350(a)
567 IAC 23.1(4)"bl"

Emission Point ID Number: P-027

Associated Equipment

Associated Emission Unit ID Numbers: S-135
Emissions Control Equipment ID Number: 473-BF1
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: 473-3K1 (COM)

Emission Unit vented through this Emission Point: S-135
Emission Unit Description: Clinker Cooler No. 3
Raw Material/Fuel: Clinker
Rated Capacity: 54 short tons of clinker/hr

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Exhaust Flow Rate (scfm): 49,150
Stack Temperature (^{o}F): 243
Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 10 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2
40 CFR 63.1345(a)(2)
567 IAC 23.1(4)"bl"

[(1)] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 lb./ton kiln feed (dry basis)
Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2
40 CFR 63.1345(a)(1)
567 IAC 23.1(4)"bl"

Pollutant: PM_{10}
Emission Limit: 5.81 lb./hr[(2)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2

[(2)] Standard is expressed as the average of three runs.

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
2. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1350.
3. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-009) shall be done per 40 CFR §63.1355.

Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2
567 IAC 23.1(4)"bl"
40 CFR 63.1355

4. For the first twelve (12) months operation, determine the cumulative raw kiln feed throughput and clinker production for each month of operation.
5. After the first twelve (12) months of operation determine the annual raw kiln feed throughput and clinker production on a rolling-12-month total for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2

Additional Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 103.7
Stack Diameter (inches): 78
Discharge Style: Unobstructed Vertical
Authority for Requirement: Iowa DNR Construction Permit 97-A-723-S2

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – PM_{10}

Stack Test to be Completed by (date) – November 9, 2007
Test Method – 40 CFR 51, Appendix M, 201A with 202[(1)]
Authority for Requirement - 567 IAC 22.108(3)
[(1)]Or approved alternative.

Continuous Emissions Monitoring:

Pollutant - Opacity

Operational Specifications – 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Date of Initial System Calibration and Quality Assurance –August 1, 2003
Ongoing System Calibration/Quality Assurance - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Reporting & Record keeping - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Authority for Requirement – Iowa DNR Construction Permit 97-A-723-S1
567 IAC 23.1(3)"bl"
40 CFR 63.1350(d)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐
Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity
see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"
40 CFR 63.1350(a)
567 IAC 23.1(4)"bl"

Emission Point ID Number: See Table: Rail Loadout

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Rail Loadout
Emissions Control Equipment ID Numbers: See Table: Rail Loadout
Emissions Control Equipment Descriptions: See Table: Rail Loadout

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Table: Rail Loadout

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (tons/hr)
F-029	S-351	#4 Rail Loadout (Cement)-North	632-BF2	Baghouse	Cement	200
F-030	S-350	#3 Rail Loadout (Cement)-South	631-BF2	Baghouse	Cement	200

Emission Point Characteristics
These emission points shall conform to the specifications listed below.

Stack Exhaust Flow Rate (scfm): 1,500
Stack Temperature (^{o}F): Ambient

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified in Table: Rail Loadout-Emission Limits

Table: Rail Loadout -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)[2]	PM Limit (gr/scf)	Construction Permit No.
F-029	S-351	10%[1]	0.2	0.1	05-A-186
F-030	S-350	10%[1]	0.2	0.1	05-A-187

[1] If opacity greater than that observed in the initial performance test is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Opacity
Emission Limit: 10 %
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Rail Loadout-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1348

Pollutant: Particulate Matter
Emission Limit: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Rail Loadout-Emission Limits
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: 0.2 lb./hr
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Rail Loadout-Emission Limits

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Rail Loadout-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit		Reporting & Recordkeeping[1]	Authority for Requirements
		Tons/day	Tons/Calendar Year		
F-029	S-351	4,800	1,752,000	The total daily throughput and throughput rates for each source shall be entered into a daily log to show compliance with the daily throughput limits, and total daily throughput rates shall be maintained to demonstrate compliance with the total calendar year throughput rates.	Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52 Iowa DNR Construction Permit 05-A-186
F-030	S-350	4,800	1,752,000		Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 2003-AQ-52 Iowa DNR Construction Permit 05-A-187

[1] The records shall be kept on site for a minimum of two (2) years, and shall be available for inspection by the Department. In addition to the ACO and construction permit requirement of

maintaining records for at least two (2) years, 567 IAC 22.108(4)"b" requires that records shall be kept for at least five (5) years.

Additional Reporting & Record keeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Rail Loadout-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1355

Additional Emission Point Characteristics
These emission points shall conform to the specifications listed below.

Stack Height (feet): Indoor venting
Stack Diameter (inches): Indoor venting
Discharge Style: Indoor venting
Authority for Requirement: Iowa DNR Construction Permits 05-A-186 (F-029) and 05-A-187 (F-030)

The temperature and flowrate is intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity as described in 40 CFR 63.1350 (a)(4)(i-vii) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements)**.
Authority for Requirement - 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)(4)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐
Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-
see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"

Emission Point ID Number: See Table: Insufflation Conveyor and Hopper

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Insufflation Conveyor and Hopper

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Table: Insufflation Conveyor and Hopper

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity (tons/hr)
F-077	S-332	Limestone Silo Transfer to L80-WF1	Limestone	5
	S-333	Limestone Rotary Feeder L80-RF1		5
F-082	S-352	Limestone Truck Unloading	Limestone	200
	S-353	Limestone Loading to Hopper		40
	S-354	Limestone Transfer to Belt Conveyor		5
	S-355	Limestone Transfer to Elevator		5

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 10 %
Authority for Requirement: Iowa DNR Construction Permits 05-A-134 (F-077) and 05-A-133 (F-082)
567 IAC 23.1(4)"bl"
40 CFR 63.1348

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:
1. The amount of material processed in these units shall not exceed 35,000 tons per 12-month rolling period.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.

Authority for Requirement: Iowa DNR Construction Permits 05-A-133 and 05-A-134

2. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1355

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity as described in 40 CFR 63.1350 (a)(4)(i-vii) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements)**.

Authority for Requirement - 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)(4)

Stack Testing:

Pollutant - Opacity

Stack Test to be Completed by (date) - within **60** days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date

Test Method – 40 CFR 60, Appendix A, Method 9

Authority for Requirement - Iowa DNR Construction Permits 05-A-133 and 05-A-134

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status

of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
a. Form 1.0 "Facility Identification";
b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
c. Form 5.0 "Title V annual emissions summary/fee"; and
d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
a. Form 1.0 "Facility Identification";
b. Form 5.0 "Title V annual emissions summary/fee";
c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:
1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
a. The date, place and time of sampling or measurements
b. The date the analyses were performed.
c. The company or entity that performed the analyses.
d. The analytical techniques or methods used.
e. The results of such analyses; and
f. The operating conditions as existing at the time of sampling or measurement.
g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
a. Comply with all terms and conditions of this permit specific to each alternative scenario.
b. Maintain a log at the permitted facility of the scenario under which it is operating.

c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;

b. Compliance test methods specified in 567 Chapter 25; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

a. Any monitoring or testing methods provided in these rules; or

b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. 567 IAC 21.5(1)-567 IAC 21.5(2)

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In

the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and expected duration of the excess emission.

iv. The cause of the excess emission.

v. The steps being taken to remedy the excess emission.

vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and duration of the excess emission.

iv. The cause of the excess emission.

v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency ” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The facility at the time was being properly operated;

c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
d. The changes are not subject to any requirement under Title IV of the Act.
e. The changes comply with all applicable requirements.
f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
i. A brief description of the change within the permitted facility,
ii. The date on which the change will occur,
iii. Any change in emission as a result of that change,
iv. The pollutants emitted subject to the emissions trade
v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
vi . A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit;

and
vii. Any permit term or condition no longer applicable as a result of the change.
567 IAC 22.110(1)
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. 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 this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.
a. An administrative permit amendment is a permit revision that is required to do any of the following:
i. Correct typographical errors
ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
iii. Require more frequent monitoring or reporting by the permittee; or
iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.
2. Minor Permit Modification.
a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
i. Do not violate any applicable requirements
ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;

v. Are not modifications under any provision of Title I of the Act; and
vi. Are not required to be processed as significant modification.
b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
ii. The permittee's suggested draft permit
iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 <u>except</u> 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.

b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.

c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

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

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

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

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

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

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

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

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional

testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.
Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.
567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. *567 IAC 26.1(1)*

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:
Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5 th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1
909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2
P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5
401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6
1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Public Works Dept.
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.
Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

Appendix A. Administrative Consent Order No. 2003-AQ-52

Iowa DNR Administrative Consent Order 2003-AQ-52 has not been approved into Iowa's State Implementation Plan (SIP), therefore it is state enforceable only. Pending incorporation of Administrative Consent Order 2003-AQ-52 into Iowa's SIP, Administrative Consent Order 1999-AQ-31 is hereby incorporated by reference, except as modified pursuant to Consent Order 2003-AQ-52 included in Appendix A, and is available upon request from the DNR-Air Quality Bureau's Records Center. The Records Center can be reached by contacting the Iowa DNR Air Quality Bureau at (515)242-5276.

IOWA DEPARTMENT OF NATURAL RESOURCES
Administrative Consent Order
ISSUED TO: Holcim (US), Inc.

IN THE MATTER OF:	ADMINISTRATIVE CONSENT ORDER
HOLCIM (US), INC.	NO. 2003-AQ-

TO: HOLCIM (US), INC.
C/o Jason Morin, Plant Manager
1840 North Federal Avenue
Mason City, Iowa 50401

HOLCIM (US), INC.
C/o CT Corporation System, Registered Agent
2222 Grand Avenue
Des Moines, Iowa 50312

I. SUMMARY

This Administrative Consent Order is entered into between the Iowa Department of Natural Resources (DNR) and Holcim (US), Inc., (Holcim) for the purpose of addressing alleged monitored violations of the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM-10) in Mason City, Iowa. This Administrative Consent Order supersedes Administrative Order 1999-AQ-31 and the associated Consent Order Amendments.

The parties designate the following representatives for purposes of communications regarding and notices required by this Administrative Consent Order:

FOR Iowa DNR:
Lori Hanson
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Des Moines, Iowa 50322
Ph: 515/281-8911
FAX: 515/242-5094

FOR Holcim, Inc.:
Steven P. Van Ootegham, Env. Manager
Holcim (US), Inc.
1840 North Federal Avenue
Mason City, Iowa 50401
Ph: 641/421-3313
FAX: 641/421-3284

Either party may change its designated representative at any time by providing written notice to the other party.

Procedural questions regarding this order should be directed to:

Anne Preziosi
Iowa Department of Natural Resources
Air Quality Bureau
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322
515-281-6243

II. NO ADMISSION

While Holcim agrees to comply with the requirements contained herein, it makes no admission as to the Statement of Facts and Conclusions of Law and hereby denies the same.

III. STATEMENT OF FACTS

DNR finds as follows:

1. The 24-hour average PM-10 NAAQS is 150 micrograms per cubic meter (ug/m^3). DNR monitored six exceedences of this standard at a previous DNR monitoring site located at the intersection of 17th and Quincy in Mason City, Iowa. On May 10, May 12, and December 29, 1993, this monitoring site recorded 24-hour average PM-10 concentrations of 174, 172, and 178 ug/m^3, respectively. On February 22, 1994, the same monitoring site recorded a 24-hour average PM-10 concentration of 160 ug/m^3. On December 18, 1995, and March 5, 1996, the same monitoring site recorded 24-hour average PM-10 concentrations of 239 and 286 ug/m^3, respectively.

2. Holcim is a cement manufacturer located at 1840 North Federal Avenue in Mason City, Iowa, which is north of the previous PM-10 monitoring site at 17th and Quincy. Air dispersion modeling of this Holcim facility has been conducted. This modeling predicts that Holcim is a contributor to the PM-10 levels monitored.

3. Holcim is not the sole contributor of PM-10 levels in Mason City and other contributors also are being asked to address this concern as well.

4. DNR and Holcim and other contributors have cooperated in an effort to address the levels of PM-10 in Mason City. For that purpose, DNR and Holcim have agreed to enter into this Administrative Consent Order.

IV. CONCLUSIONS OF LAW

DNR concludes as follows:

1. This Administrative Consent Order is issued pursuant to the provisions of Iowa Code sections 455B.134(9) and 455B.138(1), which authorize the Director to issue any administrative orders necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II, and the rules promulgated and permits issued pursuant thereto, and to prevent, abate, and control air pollution.

2. The PM-10 emission sources located at Holcim in Mason City, Iowa, include "air contaminant sources" as defined by Iowa Code section 455B.131(2), and "stationary sources" and "fugitive dust" sources as defined by 567 Iowa Administrative Code (I.A.C.) 20.2.

3. According to 567 I.A.C. 28.1, the ambient air quality standards for the State of Iowa shall be the National Primary and Secondary Ambient Air Quality Standards (NAAQS) located at 40 C.F.R. Part 50, as amended through July 18, 1997.

4. According to the provisions of 40 C.F.R. 50.6(a), the primary and secondary 24-hour ambient air quality standard for PM-10 is 150 ug/m^3, 24-hour average concentration. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 ug/m^3, as determined in accordance with 40 C.F.R. Part 50, Appendix K, is equal to or less than one. In this case, the observed number of days per calendar year with a 24-hour average concentration above 150 ug/m^3, during the period 1993 through 1995, is greater than one, which constitutes a violation of this standard.

5. An exceedence of the NAAQS for PM-10 constitutes "air pollution" as defined by Iowa Code section 455B.131(3).

6. In accordance with the provisions of Iowa Code section 455B.134(9), the Director shall issue orders consistent with the rules to cause the abatement or control of air pollution.

7. According to the provisions of 567 I.A.C. 22.1(1) and 567 I.A.C. 22.1(3), the owner or operator of a stationary source shall obtain a permit to install or alter equipment or control equipment unless otherwise exempt. Any modifications occurring as a result of this consent order and subject to the provisions of 567 I.A.C. chapter 22 shall require a construction permit or shall meet the requirements of a construction permit exemption contained in the provisions of 567 I.A.C. 22.1(2).

8. The provisions of 567 I.A.C. 23.3(2)"c"(1), provide, in relevant part, that all persons, with certain exceptions, shall take reasonable precautions to prevent the

discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. "Reasonable precautions" are defined in this rule.

V. ORDER

THEREFORE, DNR orders and HOLCIM agrees to the following:

1. A fenceline, of a type designed to preclude public access to the facility property, shall be maintained as depicted in Exhibit "A", which is attached to this Administrative Consent Order and by this reference made a part hereof. "No Trespassing" signs shall be maintained at both ends of the gap in the fence coverage along the western facility boundary, as identified in Exhibit "A". Twenty-four hour security surveillance shall be maintained of the facility boundaries to further restrict public access. DNR acknowledges that as of the date of this Administrative Consent Order, the facility maintains a fenceline and has installed "No Trespassing" signs meeting the requirements of this paragraph.

2. Within 60 days of the effective date of this Administrative Consent Order, Holcim shall submit to DNR air quality construction permit applications which include the emission rates and hours of operation listed in Exhibit "B." By this reference, Exhibit "B" is made a part hereof. Any required modifications to the sources shall be completed within 60 days of the issuance of the permits (unless specifically stated otherwise in the permit).

3. The emission sources listed in Exhibit "C" shall be limited to the daily and calendar year throughputs listed in Exhibit "C." By this reference, Exhibit "C" is made a part hereof. The total daily throughput, and daily throughput rates for each of the sources listed in Exhibit "C" shall be entered in a daily log to demonstrate compliance with the daily throughput limits. Rolling total daily throughput rates shall be maintained to demonstrate compliance with the total calendar year throughput rates listed in Exhibit "C". The daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

4. Storage Piles:

(i). Within 60 days of the effective date of this Administrative Consent Order, Holcim shall locate the storage pile bases as designated in Exhibit "D", except as provided below, and shall limit the size of the storage piles to no greater than the acreages designated in Exhibit "D." Exhibit "D" shall by this reference become a part hereof. Holcim may relocate a pile specified in Exhibit "D", or add a new pile not provided for in paragraphs 4(ii) or 4(iii), or change the material type of the pile, only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM-10 NAAQS would result.

(ii). Notwithstanding the requirements of paragraph 4(i), Holcim may operate temporary piles of materials (not identified on Exhibit "D") that result from maintenance and other similar activities. No such temporary pile shall be maintained for more than one 24-hr period.

(iii). Notwithstanding the requirements of paragraph 4(i) and 4(ii), Holcim may maintain temporary piles of overflow raw materials (excluding fuel) and product, not identified on Exhibit "D", that may result from unforeseen and unplanned operating conditions or problems. Holcim shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. Holcim shall take reasonable measures to remove any such pile as soon as practicable, but in no case shall any such temporary pile be maintained for more than three (3) months. Holcim shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date, for each pile. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

5. Holcim shall implement speed controls designed to ensure that the average speed of the haul trucks on the M3 limestone haul road does not exceed 20 miles per hour. The speed controls shall consist of speed limit signs and stop signs along the route.

6. Unpaved Haul Road Trip Restrictions:

(i). The maximum number or round trips per day and per calendar year on the M3 limestone haul road shall be limited to the values listed below.

Truck Capacity (tons of material)	**Maximum Number of Round Trips per Day**	**Maximum Number of Round Trips per Year**
25	40	8,000
130	77	27,043

(ii). The number of round trips per day on the M3 limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. The daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

(iii). Traffic on the unpaved portion of the M4 haul road shall be limited to scraper travel only, with the exception of dozer and compactor vehicles used to maintain the pile integrity and size limitation. The maximum number of round trips per day and per calendar year on the M4 haul road shall be limited to 200 and 70,080 trips, respectively. The scraper capacity shall be limited to 27 tons of material per trip. These maximum numbers of round trips and the scraper capacity shall not be increased unless a dispersion modeling analysis, acceptable to the DNR, is submitted to demonstrate that compliance with the PM-10 NAAQS will be maintained.

7. Control of Fugitive Emissions from Unpaved Haul Roads:

(i). Fugitive emissions from the M3 limestone haul road shall be controlled by applying a chemical dust suppressant. A control efficiency of 95 percent shall be maintained on the entire length of both segments of the limestone haul road. The M3 limestone haul road is approximately 30 feet wide and approximately 2.9 miles long, giving it a total area of approximately 51,040 square yards. Thus, approximately 2,552 gallons of the selected chemical dust suppressant shall be applied no less frequently than once every other week to maintain the established ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard, or a manufacturer's equivalent application to achieve the 95 percent control efficiency. Different manufacturer's materials have different applications to achieve 95 percent control. Documentation supporting a different concentration will be maintained onsite by Holcim and submitted to the DNR, as required.

(ii). Fugitive emissions from the unpaved portion of the M4 haul road shall be controlled by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. A control efficiency of 95 percent shall be maintained on the unpaved portion of the M4 haul road. The unpaved portion of the M4 haul road is approximately 30 feet wide and approximately 0.19 miles long, giving it a total area of approximately 3,344 square yards. Approximately 167 gallons of the selected chemical dust suppressant shall be applied no less frequently than once every other week to maintain the established ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard, or a manufacturer's equivalent application to achieve the 95 percent control efficiency. Different manufacturer's materials have different applications to achieve 95 percent control. Documentation supporting a different concentration will be maintained onsite by Holcim and submitted to the DNR, as required.

(iii). If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant**,** could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical dust suppressant used, the application intensity (gals./sq.yd.), dilution ratio, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

(iv). In the event Holcim does not use (or plan to use) haul road M3 and the unpaved portion of haul road M4 for fourteen (14) days or more, Holcim shall not be required to apply the chemical dust suppressant as provided in paragraph 7(i) and 7(ii),

respectively. Prior to using such haul road again, however, an application (at the bi-weekly rate) shall be made subject to the conditions of paragraph 7(iii).

8. Paved Haul Road Trip Restrictions:
The maximum number of round trips per day and per calendar year on the M1, M2, M4, and M5 paved haul roads, for all haul trucks, combined, shall be limited to the values listed below.

Haul Road	**Maximum Number of Round Trips per Day**	**Maximum Number of Round Trips per Year**
M1	96	17,520
M2	312	43,800
M4 (paved portion)	192	70,080
M5	192	26,280

The number of round trips per day on the M1, M2, the paved portion of M4, and the M5 haul roads shall be entered into a daily log to demonstrate compliance with the maximum number of round trips per day limitation. A daily rolling count of the total number of round trips per day on M1, M2, the paved portion of M4, and M5 shall be maintained to demonstrate compliance with the maximum number of round trips per year limitation. The daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

9. Control of Fugitive Emissions from Paved Haul Roads:
(i). Fugitive emissions of the paved haul roads M1, M2, M4, and M5 shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. The control efficiency of 80 percent shall be achieved by water flushing followed by sweeping haul roads M1, M2, the paved portion of M4, and M5 once per day. The following table contains the approximate size of each haul road in square yards and the approximate amount of water to be applied to each road in each application. The water quantities are based on a spray rate of approximately 0.23 gallons per square yard.

Paved Haul Road	**Road Area (sq. yards)**	**Approximate Water Application Rate (gals. of water)**
M1	5,280	1214
M2	6,688	1538
M4 (paved portion)	2,112	486
M5	6,336	1,457

(ii). If water flushing followed by sweeping can not be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water

flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gage located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period or the paved road(s) will not be used on a given day.

(iii). Records of the applications shall be maintained and shall include the dates of each application, the amount of water applied, the areas treated, and the operator's initials. If water is not applied when scheduled due to the conditions specified in Paragraph 9(ii) above, the conditions which prevented such application, or made such application unnecessary, shall be documented. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

10. Holcim shall maintain records of the number coal cars unloaded daily at the Coal Dump Shed. These records shall include the unloading dates and the load capacity (tons) of each coal car unloaded. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

11. Holcim shall submit to the Mason City DNR Field Office #2 written quarterly reports detailing progress toward obtaining and updating the permits required by Section V.2 of this Administrative Consent Order. The quarterly reports shall be due no later than 30 days following the close of each quarter. The first report shall be due 30 days following the end of the quarter in which the Administrative Consent Order is effective. Quarterly reporting may be terminated following submittal of a final report and written request to the DNR, and a written response from the DNR stating that all such described requirements of this Administrative Consent Order have been satisfactorily completed. **Record keeping required by this Administrative Consent Order shall be an on-going requirement and shall not terminate**.

VI. WAIVER OF APPEAL RIGHTS

This Administrative Consent Order is entered into knowingly and with the consent of Holcim. For that reason, Holcim waives its right to appeal this Administrative Consent Order or any part thereof.

VII. NONCOMPLIANCE

Failure to comply with this Administrative Consent Order may result in the imposition of administrative penalties or referral to the Attorney General's office to

obtain injunctive relief and civil penalties pursuant to the provisions of Iowa Code section 455B.146.

VIII. FORCE MAJEURE

Subject to the requirements of this Article, if Holcim fails to comply with any of the provisions in this Consent Order and that failure is caused solely by a cause beyond Holcim's reasonable control, Holcim's failure to comply is not a violation of this Consent order. If Holcim is claiming a force majeure event, then Holcim shall give the DNR verbal notice within 24 hours and written notice within three (3) working days specifying the failure to meet the provisions, the cause of the failure, its possible duration, Holcim's efforts to remedy the situation, and the expected effect of the failure on Holcim's ability to comply with this Consent Order. It shall be Holcim's responsibility to show that the cause of the failure was beyond Holcim's control and that Holcim was not reasonably able to anticipate the failure to comply.

IX. TERMINATION OF THIS ADMINISTRATIVE CONSENT ORDER

This Administrative Consent Order shall terminate upon a showing by Holcim, acceptable to DNR and responded to in writing by the DNR, that it has complied with the obligations contained herein or as may otherwise be agreed upon by the parties.

JEFFERY R. VONK, DIRECTOR
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 24 day of December, 2003.

JASON P. MORIN, PLANT MANAGER
for HOLCIM (US), INC.

Dated this 1ST day of DECEMBER, 2003.

for HOLCIM (US), INC.

Dated this 2 day of December, 2003

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EXHIBIT "B", Page 1 of 3
Point Source PM-10 Emission Rates, Holcim (US), Inc.

Source ID	Source Location	Source Description	Emission Rate (lb/hr)*
P1	Clay Dry Building	Clay Kiln	2.90
P4	Transfer Tower 3	Belt to Belt Drop (clinker)	0.36
P5	Transfer Tower 3	Belt to Belt Drop	0.39
P6	Transfer Tower 3	Belt to Belt Drop (limestone)	0.39
P8	Mill Silo 16, 17, 18/ Top of Mill Silos/ Mill Bin K	Belt to Belt Drop, Belt to Silo Drop, Belt to Mill Bin Drop	0.71
P9	Mill Silo 11, 12/ Top of Mill Silos, Mill Bin F, G, H	Belt to Belt Drop, Belt to Silo Drop, Belt to Mill Bin Drop	0.34
P10	Mill Silo 13, 14, 15	Belt to Silo Drop	0.75
P11	Mill Building	Raw Mill Silos	0.31
P13	Mill Building	RM #2 and East Separator	2.08
P14	Mill Building	RM #2 and West Separator	2.57
P15	Mill Building	RM #3 and East Separator	3.00
P16	Mill Building	RM #3 West Separator	3.00
P17	Mill Building	RM #3	1.17
P18	Homogen Silos 1, 2, 3	Airslide to Silo Drop	0.98
P19	Kiln Feed Silos 1, 2	Airslide/bucket Elevator to Silo Drop	0.32
P20	Kiln 2 Feed Path	Feed Silo 2 to Belt Drop	0.26
P21	Kiln 2 Feed Building	Belt to Bucket Elevator Drop	0.27
P22	Kiln 2 Feed Building	Kiln 2	86.51
P25	Kiln 3 Feed Building	Kiln 3	66.75
P26	Kiln 2 Burner Building	Clinker Cooler 2, Spill Drag to Belt Drop	6.49
P27	Kiln 3 Burner Building	Clinker Cooler 3	5.81
P28	Transfer Tower 1	Belt to Belt Drop, Belt to Bucket Elevator Drop, Bucket Elevator to Belt Drop	0.54
P29	Transfer Tower 4	Belt to Belt Drop, Belt to Bucket elevator Drop, Bucket Elevator to Belt Drop	0.35
P30	Lime Storage Bin	Airslide to Silo Drop	0.11
P31	Mill Building	FM #1 and West Separator	1.48
P32	Mill Building	FM #1 and East Separator	1.89
P33	Mill Building	FM #2 and Separator	4.29
P34	Mill Building	FM #3 and Separator	3.44
P36	Mill Building	FM #4 East Separator	2.68
P37	Mill Building	FM #4 West Separator	3.00
P38	Mill Building	FM #4	1.42
P39	Packhouse Silos 25-35	#5 Cement Storage	0.53
P40**	Packhouse	SE Packer #1	1.36
P41**	Packhouse	NE Packer #2	1.36
P42**	Packhouse	SW Packer #3	1.36
P43**	Packhouse	NW Packer #4	1.36
P44	North Rail Silos 1-4	Airslide to Rail Silos Drop	0.83
P45	East Truck Silos 37-42	Airslide to Silo Drop	0.36

EXHIBIT "B", Page 2 of 3
Point Source PM-10 Emission Rates, Holcim, Inc.

P46	West Truck Silos 59-64	Airslide to Silo Drop	0.39
P47	Transfer Tower 2	Belt to Belt Drop (clinker)	0.24
P56	Crushing Station	Secondary Crushing Impactor	1.05
P58	Outside	Belt to Bucket Elev. Drop, Bucket Elev. to Feed Belt Drop	0.16
P59	Kiln 3 Feed Building	Kiln 3 Alleviator, Waste Dump Equipment and Feeder	0.27
P60	Kiln 3 Burner Building	Cooler Drag Conveyor to Belt Drop	0.63
P86	Kiln 3 Burner Building	Elevator discharge to belt, clinker belt to belt transfer	0.83
P87	Kiln 3 Burner Building	Clinker cooler 2 discharge, clinker elevator bottom	0.33
P90	Cement Flat Storage Building	Cement flat storage	0.54
P91	Cement Flat Storage Building	Cement flat storage	0.54
P92	Cement Flat Storage Building	Cement flat storage	0.54
P93	Cement Flat Storage Building	Cement flat storage	0.54
P94	Cement Flat Storage Building	Cement flat storage	0.54
P95	Cement Flat Storage Building	Cement flat storage	0.54
P96	Old Packhouse 1	Cement screening	0.03
P97	Old Packhouse 1	Cement screening	0.03
P98	Old Packhouse 1	Cement screening	0.03
P99	Old Packhouse 1	Cement screening	0.03
***Hourly limits are based on the average results of three valid test runs using EPA Reference Methods**			
****Only one packer can operate at a time**			

EXHIBIT “B”

Point Source Calendar Year Limitations
Holcim (US), Inc.

Source ID	Source Description	Maximum Calendar Year Hours of Operation (hours/year)
P1	Clay Kiln	3504
P13	Raw Mill 2 and Separator	7008
P17	Raw Mill 3	7446
P30	Lime Bin air slide to bin drop	4380
P33	Finish Mill 2 and Separator	7884
P34	Finish Mill 3 and Separator	7534
P38	Finish Mill 4	7534
P39	Packing silos air slide to silo drop	7534
P40 through P43	Packhouses 1, 2, 3, 4	5256 (combined max)
P44	N Rail Silos 1-4 drop	7446
P45	E Truck Silos 37-42 drop	7008
P46	W Truck Silos 59-64 drop	7008
P56	Secondary Crushing Impactor	2628
P90	Cement Flat Storage	1752
P91	Cement Flat Storage	1752
P92	Cement Flat Storage	1752
P93	Cement Flat Storage	1752
P94	Cement Flat Storage	1752
P95	Cement Flat Storage	1752

EXHIBIT "C"

Maximum Throughput Rates for Non Point Sources
Holcim (US), Inc.

Point ID	Source Description	Maximum Daily Throughput- (tons/day)	Total Calendar Year Throughput- (tons/year)
F-28	Cement Silos 13-24 Air slide to silo drop	2,400	753,360
F-29	N. Rail Load Dock pour spout to rail drop	4,800	1,752,000
F-30*	S. Rail Load Dock pour spot to rail drop	4,800	1,752,000
F-31	E. Truck Load Dock pour spout to truck drop	6,000	328,500
F-32	E. Truck Load Dock pour spout to truck drop	6,000	328,500
F-33**	W. Truck Load Dock pour spout to truck drp	6,000	328,500
F-34***	W. Truck Load Dock pour spout to truck drp	6,000	328,500

*For modeling purposes, emissions from F-30 are accounted for in F-29.
** For modeling purposes, emissions from F-33 are accounted for in F-31.
*** For modeling purposes, emissions from F-34 are accounted for in F-32.

EXHIBIT "D"

Holcim (US), Inc. Storage Pile Data

Storage Pile ID/(Material)	Maximum Pile Size (acres)
A-8 (clay)	9.0
A-9 (sand)	0.3
A-12 (gypsum)	0.2
A-16 (clinker)	2.1
A-18 (coal)	2.7
A-19 (pet coke)	0.6
A-51 (gypsum)	0.1
A-52 (slag)	0.4
A-54 (clinker)	2.1
A-78 (iron ore-kiln)	0.2

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Appendix B: Operation & Maintenance Plans

OPERATION AND MAINTENANCE PLAN

MASON CITY CEMENT PLANT

Mason City, Iowa

August, 2005

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

This O&M Plan is prepared in accordance with the requirements of the:

- National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (PC MACT, 40 CFR Part 63, Subpart LLL).

This O&M Plan defines the procedures to maintain and monitor compliance with the PC MACT Standards. Specifically this Plan addresses:

- Procedures for proper operation and maintenance of each affected source and air pollution control device. (63.1350(a))
- Corrective action required for each raw mill and finish mill and associated air pollution control device. (63.1350(b)). A program of corrective action for all malfunctioning processes and air pollution control devices 63.6(e)(3)(i)
- Procedures to be used during an annual inspection of the kiln combustion system. (63.1350(c))
- Procedures to periodically monitor affected sources subject to opacity standards under 63.1346 and 63.1348. (63.1350(d))

The format of this document is as follows:

Section 2. Affected sources – How they are defined and plant nomenclature

Section 3. Maintenance System - Overview of the plant preventative maintenance program and tracking systems

Section 4. O&M plans by plant system (grouping of equipment) including:

- Process Description for the particular system
- Listing of affected sources within the system
- Operating procedures for the system
- Monitoring requirements for the affected sources within the system
- Corrective action program for affected sources within the system

AFFECTED SOURCES – Definitions and nomenclature

Overview of the portland cement production process

The production of cement is a five-step process: 1) raw meal preparation system, 2) clinker manufacture system, 3) clinker cooler system, 4) cement manufacture system, 5) packing, dispatch, distribution and blending. Mining or quarrying obtains the majority of raw materials used in cement production. The raw materials are ground and proportioned so that the mixture or "kiln feed" has the desired fineness and chemical composition for delivery to the pyroprocessing system.

The pyroprocessing takes place in the kiln where complex chemical reactions transform the kiln feed into clinker. From the kiln, the clinker is cooled from approximately 1,600 to 2,000 °F to about 200 to 450 °F in the clinker cooler. The clinker is then ground with additives to produce cement. The cement, which can be blended, is then distributed out of the plant by bag, bulk truck, or bulk rail.

Equipment nomenclature and grouping

For production tracking purposes, the cement manufacturing process is divided into functional locations. Each main task of the plant has its own functional location (e.g., raw meal preparation). The equipment number system is also based on functional locations.

Each piece of equipment is assigned an individual six-digit number (called a Holcim Asset Code number (HAC#)). The first three numbers locate the piece of equipment in the process. The first digit is the main cost center; the second number is the group number; and the third is the sequential number by process line. The last three digits of the HAC# describe exactly what piece of equipment it is.

The affected sources regulated by this O&M Plan are organized by functional locations as well. The affected source groupings and associated HAC# are listed in Table 2-1. Also included in Table 2-1 are the affected source types included in each affected source system.

TABLE 2-1
MASON CITY PLANT'S AFFECTED SOURCE SYSTEMS

Affected Source System	HAC# Range	Affected Source Types Included
Raw Material Dryer **Raw Meal Preparation system** **(Raw Mills 2 & 3)**	**22X-XXX to 41X-XXX**	**Raw Material Dryer** **Raw Mills** **Conveying System** **Transfer Points** **Storage Bins** **APCDs**
Clinker Manufacture system **(Kilns 2 & 3)**	**42X-XXX to 46X-XXX and L10-XXX to L11-XXX**	**Kiln** **Conveying System** **Transfer Points** **APCDs**
Clinker Cooler system	**47X-XXX to 49X-XXX**	**Clinker Cooler** **Conveying System** **Transfer Points** **Storage Bins** **APCDs**
Cement Manufacture system **(Finish Mills 1, 2, 3 & 4)**	**52X-XXX to 59X-XXX K1X-XXX to K2X-XXX AND L10-BCX**	**Finish Mill** **Conveying System** **Transfer Points** **Storage Bins** **APCDs**
Packing, Dispatch, Distribution system, Grancem Receiving (Loading and Shipping)	**61X-XXX to 6EX-XXX**	**Bulk Loading/Unloading** **Bag Loading** **Conveying System** **Transfer Points** **Storage Bins** **APCDs**

Guidelines for Naming Affected Sources

Naming of affected sources in a consistent fashion is aided by the development of naming guidelines. Equipment identified in 40 CFR 63.1340(b) were named according to the following guidelines:

1. The transfer from one conveying system to another conveying system is an affected source
2. The transfer from a piece of process equipment to a conveying system is an affected source
3. The transfer from a storage bin or hopper is considered an affected source
4. Valves (tipping and some rotary) and gates (diverter, slide, knife) within a transfer are considered part of the affected source
5. Weigh feeders and volumetric (e.g., vibrating) feeders are separate conveying systems and, therefore, transfers to and from the feeder would be considered an affected source
6. Rotary valves that are used to meter material are considered feeders and are treated identical to weigh and volumetric feeders
7. Bag filters are identified as pollution control devices by their HAC#.
8. Valves (rotary, flap, slide gates) on the material discharge hopper of a bag filter or cyclone are considered to be part of the bag filter or cyclone; therefore, the bag filter or cyclone will be the originating point in describing the transfer point for material collected in the bag filter or cyclone to a subsequent conveyor or material storage bin.
9. Major pieces of process equipment, e.g., the raw mill, that are called out as affected sources by the regulation are identified as affected sources by its HAC#.
10. Direct (enclosed) transfer points are identified by the HAC# of the upstream (discharging) conveyor or equipment in the process flow.
11. Direct (open) conveyor-to-conveyor transfer points are identified with the upstream conveyor.
12. Transfer points that have a transfer chute are identified by the HAC# of the transfer chute.
13. Transfer points from bins to feeders or conveyors are identified by the feeder or conveyor HAC# unless there is a transfer chute between the bin and feeder, in which case, the transfer point is identified by the transfer chute HAC#.
14. The transfer from one conveying system or piece of process equipment to two subsequent pieces of equipment through the use of a diverter gate creates two affected sources. These sources are identified by the chute immediately preceding the destination of the transfer.
15. A material storage bin is identified as an affected source by its HAC#.
16. Transfer points to waste, storage piles or transport vehicles are identified by the last piece of equipment in the process flow to which an HAC# has been assigned, e.g., the loading chute for cement trucks.
17. Ducts that serve to transfer relatively large quantities of in-process materials, i.e., ground coal and raw mix, are considered to be enclosed conveying systems. For identification purposes, the conveyor transfer points in these systems are identified by the duct HAC#.

Conveying System Transfer Points – Additional Clarification

All conveyor system transfer points (CSTPs) are affected sources according to PC MACT and are included in the affected source systems. Further, CSTPs have their own specific monitoring requirements according to their placement and control. As a result, transfer points are generally grouped into the following three categories:

Group 1: Totally enclosed conveying system transfer points – These transfers are enclosed on all sides, top, and bottom. Method 22 visible emissions monitoring does not apply to any totally enclosed CSTP (40 CFR 63.1350(a)(4)(v)).

Group 2: Partially enclosed or unenclosed conveying system transfer points – These transfers have at least one side, top, or bottom that is open. A monthly Method 22 visible emissions monitoring test must be conducted for a partially enclosed or unenclosed CSTP (40 CFR 63.1350(a)(4)(i)). As an alternative, if these affected sources are located within a building, the building itself can be tested (40 CFR 63.1350(a)(4)(vi)).

Group 3: Partially enclosed or totally enclosed CSTPs with an APCD – These CSTPs are ducted to an APCD. Consequently, a monthly Method 22 test will be conducted at the APCD only.

Group 4: Facility sources not subject to PC MACT, 40 CFR Part 63, Subpart LLL that are required to be maintained in a Facility Operation and Maintenance Plan for Title V Purposes.

Transfer points associated with materials that are dust free, such as tires or coal, are not considered in the listing of CSTPs.

Maintenance System

Following is an overview of the plant preventative maintenance program and associated tracking system.

Holcim uses historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) as guidelines for prioritizing maintenance and preventing failures of general types of process equipment at the plant.

Historical records may include information such as the performance of the equipment. Vendor manuals for equipment may also provide suggested preventative maintenance tasks and associated frequencies. The FMEA system lists the various possible ways the equipment might fail (referred to as functional failures), identifies causes of the failures (referred to as failure modes), and recommends actions that could be taken to resolve the specific failures. The FMEA was developed for an idealized, generic cement plant with the goal of preventing downtime or malfunctions. Therefore, the FMEA is a useful aid to prioritize PM tasks and to suggest options for repairs; however, the PM interval recommendations contained in the FMEA are only guidelines.

Preventive maintenance and inspections at the facility are often managed using a plant data management system that generates preventive maintenance routines (PMRs) at predetermined intervals. A PMR is an example of a PM inspection tour that could be assigned to plant staff. In addition, maintenance work orders can be generated when non-routine preventive maintenance issues are identified during periodic inspections by staff.

Maintenance staff is responsible for ensuring that each affected source at the plant is inspected on a reasonable basis. Unless required on a more frequent basis, a PMR will typically occur on at least an annual basis.

O&M plans by plant system (grouping of equipment)

Following are the specific O&M Plans for each of the plant's systems.

Raw Meal Preparation System (Raw Mills and Dryer)

PROCESS DESCRIPTION

The raw meal preparation system combines the drying, blending and grinding of the raw materials to form the kiln feed. Raw material is taken from the on-site quarry and transported to the mill feed system. Corrective materials used to obtain quality standards are received by truck or rail and sometimes dried depending on the moisture content and transported to the mill feed system. Within the mill feed system, the raw materials are heated and dried, as they are being ground in the ball mill. After the ball mill, the raw meal product is homogenized and transported to the clinker manufacture system. The dust generated in the raw milling process is removed by baghouse PMCDs.

The reverse-air baghouses remove the dust in the air stream. The dust is captured by the bags. The bags are divided up into compartments, so that each compartment can be taken off line individually. At specified intervals, a compartment of bags is cleaned by forcing air in from the other direction to remove material from the bags. The collected dust is returned to the process, sold as by-product, or removed for disposal.

The pulse jet baghouses remove the dust in the air stream. The dust is captured by the bags. The dust does not penetrate the bags; rather it remains as a deposit on the bags' outside surface. At specified intervals, as needed, a cleaning cycle is initiated in which the bags are automatically and sequentially cleaned. To facilitate this action, a pulse valve delivers a burst of compressed air through the bags in reverse direction to remove material from the bags. The collected material is returned to the process, sold as by-product, or removed for disposal.

The electro static precipitator (ESP) removes the dust in the air stream. The air stream passes through the ESP where the particles become electrically charged. These particles collect on negatively-charged hanging plates. Accumulated particulate is removed by rapping the collecting plates. The collected material is returned to the process, sold as by-product, or removed for disposal.

The HAC code numbers for the raw meal preparation system range from 332-BC1 to 41B-AS1. This includes the following affected source types: the ball mills, conveying system transfer points, storage bins, and baghouse PMCDs.

Table 4.1-1 provides a list of the affected sources in the system.

TABLE 4.1-1
RAW MEAL PREPARATION SYSTEM – AFFECTED SOURCES

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
4	211-HC1	Secondary Crusher	Crusher	CSTP
3	221-BC1	CLAY DISCHARGE BELT CONVEYOR-24" EHRSAM	BELT-CLAY	CSTP
3	221-BC2	CLAY BELT CONV A-123-20”-JEFFERY	BELT-CLAY	CSTP
3	221-BC3	CLAY BETL CONV B-124-20”-JEFFERY	BETL-CLAY	CSTP
3	221-BE1	CLAY DISCHARGE ELEVATOR-CHAIN BELT	ELEVATORS	CSTP
3	221-BF3	CLAY TRANSFER BLDG-DUST COLLECTOR	DUST COL	APCD
3	221-CH1	CLAY DRYER CHUTE FEEDER	DRYER	CSTP
3	221-DR1	CLAY DRYER-11 X 100-A-C MFG.CO	DRYER	DRYER
3	221-EP1	CLAY ELECTROSTATIC PRECIPITATOR-WHEELABRATOR-FRYE INC.	PRECIPITATOR	APCD
1	221-FV2	FLAP VALVE BELOW 221-BF3 DUST COLLECTOR	VALVE-FLOW	CSTP
1	221-FV3	FLAP VALVE BELOW 221-BF4 DUST COLLECTOR	VALVE-FLOW	CSTP
1	221-HP1	CLAY DRYER HOPPER	DRYER	CSTP
3	221-MC1	CLAY MULTICLONE DUST COLLECTOR	DUST COL-CLAY	APCD
3	221-MC2	SCREEN MULTICONE DUST COLLECTOR-CLAY	DUST COL-CLAY	APCD
1	221-RF1	ROTARY FEEDER FOR 32-1-231 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	221-RF2	ROTARY FEEDER FOR 32-1-232 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	221-RF3	ROTARY FEEDER FOR 32-1-233 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	221-RF4	ROTARY FEEDER BELOW 221-SC4 SCREW CONVEYOR ON CLAY DRYER MULTICLONE	SCREW-CLAY	CSTP
1	2EA-SG1	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3S1 SILO	GATE	CSTP
1	2EA-SG2	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3B2 SILO	GATE	CSTP
1	2EA-SG3	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3S3 SILO	GATE	CSTP
1	2EA-SG4	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3B4 SILO	GATE	CSTP
3	2EA-DB1	DISTRIBUTION BOX TO SILO 2E1-3S1, 2E1-3S2, 2E1-3S3, 2E1-3S4 & 2E1-3B5	GATE	CSTP
3	2EA-BF2	CLAY SILOS TOP OF MILL DUST COLLECTOR – MIKROPUL – CFM 4,000	DUST COL-CLAY	APCD
3	2EA-BC1	CLAY BETL CONV B-124-20”-JEFFERY	BETL-CLAY	CSTP
3	221-SC1	CLAY HOPPER DUST SCREW CONV 9" SOUTH	SCREW-CLAY	CSTP
3	221-SC2	CLAY HOPPER DUST SCREW CONV CENTER	SCREW-CLAY	CSTP
3	221-SC3	CLAY HOPPER SCREW CONV 9" NORTH	SCREW-CLAY	CSTP
3	221-SC4	CLAY MULTICLONE SCREW CONV	SCREW-CLAY	CSTP
3	221-SC5	CLAY GATHERING SCREW 12" CONV	SCREW-CLAY	CSTP
3	221-SC6	CLAY RETURN DUST SCREW	SCREW-CLAY	CSTP
3	221-VS1	CLAY SCREEN-TYLER F-600 SER.#7088	SCREEN	CSTP
3	251-AF1	CLAY APRON FEEDER-CHAIN BELT	APRON	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	251-BC1	CLAY BELT-DRYER FEED CONVEYOR-24"-EHRSAM	BELT-CLAY	CSTP
4	291-BC1	Limestone Conveyor Belt	Belt – Rock	CSTP
4	291-BF1	Secondary and Limestone Belt Dust Collector	Dust Col	APCD
4	291-BF4	Dust Collector – Rock Belt System	Dust Col	APCD
3	332-BC1	#2 RAW MILL FEED BELT - 24" - JEFFERY-EHRSAM	BELTS-RAW	CSTP
3	332-BF1	2 RAW MILL FEED DUST COLLECTOR-MIKROPUL-CFM 4,500	DUST COL-RAW	APCD
3	332-DG1	DISTRIBUTION GATE TO 362-BE1 OR 362-BE2 BUCKET ELEVATOR #2 RAW MILL	GATE	CSTP
2	332-RF2	#2R ASH ROTARY FEEDER	ROTARY FEEDER	CSTP
2	332-SC1	#2 RAW FEED DUST COL SCREW	SCREW-RAW	CSTP
2	332-SC2	#2R ASH DISCHARGE SCREW TO MAIN FEED BELT	SCREW-RAW	CSTP
2	332-WF1	#2 RAW MILL LIMESTONE BELT SILO #4 - 36"	BELTS-RAW	CSTP
2	332-WF2	#2 RAW MILL SAND BELT SILO #5 - 24"	BELTS-RAW	CSTP
2	332-WF3	#2 RAW MILL KAOLIN BELT SILO #6 - 24" RAMSEY ENGINEERING	BELTS-RAW	CSTP
2	332-WF4	#2 RAW MILL IRON ORE BELT-24"	BELTS-RAW	CSTP
2	332-WF5	#2 RAW ASH WEIGH FEEDER	BELTS-RAW	CSTP
3	333-BC1	#3 RAW FEED BELT CONV-24" JEFFERY MFG.	BELTS-RAW	CSTP
3	333-BF1	#3 RAW FEED BELT DC-MIKROPUL-CFM 4,500	DUST COL-RAW	APCD
3	333-FV1	FLAP VALVE BELOW 333-BF1 DUST COLLECTOR	VALVE-FLOW	CSTP
2	333-RF1	#3 RAW MILL CLAY SILO 3 ROTARY FEEDER	ROTARY FEEDER	CSTP
2	333-RF2	#3 RAW MILL ASH ROTARY FEEDER	ROTARY FEEDER	CSTP
3	333-SC1	#3 RAW FEED BELT DUST COL SCREW CONVEYOR	SCREW-RAW	CSTP
2	333-SC2	ASH DISCHARGE SCREW CONVEYOR TO MAIN FEED BELT #3 RAW MILL	SCREW-RAW	CSTP
2	333-WF1	#3 RAW MILL LIMESTONE FEEDER-30"-RAMSEY ENG.	BELTS-RAW	CSTP
2	333-WF2	#3 RAW MILL SAND FEEDER SILO 2-24"-RAMSEY ENG. SER.#336	BELTS-RAW	CSTP
2	333-WF3	#3 RAW MILL KAOLIN FEEDER SILO 3-24"-RAMSEY ENG. SER.#335	BELTS-RAW	CSTP
2	333-WF4	#3 RAW IRON ORE WEIGH FEEDER 55'8"	BELTS-RAW	CSTP
2	333-WF5	#3 RAW MILL ASH WEIGH FEEDER	BELTS-RAW	CSTP
3	362-BF1	#2 RAW MILL EAST DUST COLLECTOR-NORBLO-CFM 35,000/ CONVERTED BY BHA TO Reverse air	DUST COL-RAW	APCD
3	362-BF1	.01 #2 RAW MILL EAST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	362-BF1	.02 #2 RAW MILL EAST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	362-BF1	.03 #2 RAW MILL EAST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	362-BF1	.04 #2 RAW MILL EAST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	362-BF1	.05 #2 RAW MILL EAST DUST COLLECTOR #5 COMP	DUST COL-RAW	APCD
3	362-BF1	.06 #2 RAW MILL EAST DUST COLLECTOR #6 COMP	DUST COL-RAW	APCD
3	362-BF1	.07 #2 RAW MILL EAST DUST COLLECTOR #7 COMP	DUST COL-RAW	APCD
3	362-BF1	.08 #2 RAW MILL EAST DUST COLLECTOR #8 COMP	DUST COL-RAW	APCD
3	362-BF1	.09 #2 RAW MILL EAST DUST COLLECTOR #9 COMP	DUST COL-RAW	APCD
3	362-BF1	.0A #2 RAW MILL EAST DUST COLLECTOR #A COMP	DUST COL-RAW	APCD
3	362-BF1	.0B #2 RAW MILL EAST DUST COLLECTOR #B COMP	DUST COL-RAW	APCD
3	362-BF1	.0C #2 RAW MILL EAST DUST COLLECTOR #C COMP	DUST COL-RAW	APCD
3	362-BF2	#2 RAW MILL WEST DUST COLLECTOR-NORBLO-CFM 35,000/ CONVERTED BY BHA TO	DUST COL-RAW	APCD
3	362-BF2	.01 #2 RAW MILL WEST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	362-BF2	.02 #2 RAW MILL WEST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	362-BF2	.03 #2 RAW MILL WEST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	362-BF2	.04 #2 RAW MILL WEST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	362-BF2	.05 #2 RAW MILL WEST DUST COLLECTOR #5 COMP	DUST COL-RAW	APCD
3	362-BF2	.06 #2 RAW MILL WEST DUST COLLECTOR #6 COMP	DUST COL-RAW	APCD
3	362-BF2	.07 #2 RAW MILL WEST DUST COLLECTOR #7 COMP	DUST COL-RAW	APCD
3	362-BF2	.08 #2 RAW MILL WEST DUST COLLECTOR #8 COMP	DUST COL-RAW	APCD
3	362-BF2	.09 #2 RAW MILL WEST DUST COLLECTOR #9 COMP	DUST COL-RAW	APCD
3	362-BF2	.0A #2 RAW MILL WEST DUST COLLECTOR #A COMP	DUST COL-RAW	APCD
3	362-BF2	.0B #2 RAW MILL WEST DUST COLLECTOR #B COMP	DUST COL-RAW	APCD
3	362-BF2	.0C #2 RAW MILL WEST DUST COLLECTOR #C COMP	DUST COL-RAW	APCD
3	362-BM1	RAW MILL #2	RAW MILL	RAW MILL
1	362-FV1	FLAP VALVE #1 EAST SEPARATOR #2 RAW MILL TO MILL	VALVE-FLOW	CSTP
1	362-FV2	FLAP VALVE #2 WEST SEPARATOR #2 RAW MILL TO MILL	VALVE-FLOW	CSTP
3	363-BF1	#3 RAW MILL (MILL) DUST COLLECTOR-MIKROPUL-CFM 15,000	DUST COL-RAW	APCD

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	363-BF1	.01 #3 RAW MILL (MILL) DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	363-BF2	#3 RAW MILL EAST SEPARATOR DUST COLLECTOR CENTER-MIKROPUL-CFM 30,000	DUST COL-RAW	APCD
3	363-BF2	.01 #3 RAW MILL EAST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	363-BF2	.02 #3 RAW MILL EAST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	363-BF2	.03 #3 RAW MILL EAST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	363-BF2	.04 #3 RAW MILL EAST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	363-BF3	#3 RAW MILL WEST SEPARATOR DUST COLLECTOR MIKROPUL-CFM 30,000	DUST COL-RAW	APCD
3	363-BF3	.01 #3 RAW MILL WEST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	363-BF3	.02 #3 RAW MILL WEST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	363-BF3	.03 #3 RAW MILL WEST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	363-BF3	.04 #3 RAW MILL WEST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	363-BM1	RAW MILL #3	RAW MILL	RAW MILL
3	380-BF1	DUST COLLECTOR, HOMO SILOS DUST COLLECTOR TOP OF #3 EAST HOMO	DUST COL-KILNS	APCD
3	380-FD1	FLY ASH ROTARY AIRLOCK	AIRLOCK	CSTP
3	380-SC1	SCREW, HOMO SILOS D.C. EXHAUST SCREW CONVEYOR (380-SC1)	SCREW-KILNS	CSTP
3	380-SG5	DIVERTOR GATE FROM FLY ASH SILO TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
3	380-SG6	DIVERTOR GATE FROM #2 KILN BAGHOUSE WASTE DUST TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
3	382-BL1	#2 RAW MILL BLOWER FOR AIRFLOAT 31-2-216,218	BLOWER	CSTP
3	382-BL2	#2 RAW MILL BLOWER FOR AIR FLOAT 31-2-217,218	BLOWER	CSTP
3	390-BE1	KILN FEED BIN ELEVATOR-HOMOG.	ELEVATORS	CSTP
3	390-BF1	FEED BIN DUST COLLECTOR-NORBLO-CFM 6,000	DUST COL-KILNS	APCD
1	390-VV1	GATE ON AIR SLIDE 390-AS1 TO KILN FEED TANKS 1 OR 2	GATE	CSTP
1	391-SG1	SLIDE GATE NORTH HOMOGENIZING SILO	GATE	CSTP
1	391-TV1	VALVE, HOMO DISCHARGE FLOW CONTROL N SILO	VALVE-FLOW	CSTP
1	391-VM1	NORTH HOMOGENIZING SILO VALVE #1	VALVE-FLOW	CSTP
1	391-VM2	NORTH HOMOGENIZING SILO VALVE #2	VALVE-FLOW	CSTP
1	391-VM3	NORTH HOMOGENIZING SILO VALVE #3	VALVE-FLOW	CSTP
1	391-VM4	NORTH HOMOGENIZING SILO VALVE #4	VALVE-FLOw	CSTP
1	392-FV1	FLAP VALVE #1 EAST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB2	VALVE-FLOW	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	392-FV2	FLAP VALVE #2 EAST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB2	VALVE-FLOW	CSTP
1	392-FV3	FLAP VALVE #3 WEST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB1	VALVE-FLOW	CSTP
1	392-FV4	FLAP VALVE #4 WEST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB1	VALVE-FLOW	CSTP
1	392-SG1	FIGURE 8 VALVE BETWEEN 382-PU1 AND NORTH HOMOGENIZING SILO	VALVE-FLOW	CSTP
1	392-TV1	VALVE, HOMO DISCHARGE FLOW CONTROL S SILBLO-CFM 6,000	VALVE-FLOW	CSTP
1	393-FV1	FLAP VALVE BETWEEN 393-SC1 SCREW CONVEYOR AND 383-AS1 AIRSLIDE	VALVE-FLOW	CSTP
1	393-FV2	FLAP VALVE BELOW EAST SEPARATOR D.C. SCREW CONVEYOR	MILL-RAW-MISC	CSTP
1	393-FV3	FLAP VALVE BELOW WEST SEPARATOR D.C. SCREW CONVEYOR	MILL-RAW-MISC	CSTP
1	393-FV4	FLAP VALVE BETWEEN 363-SR1 SEPARATOR AND 383-AS3 AIRSLIDE	VALVE-FLOW	CSTP
1	393-FV5	FLAP VALVE BETWEEN 363-SR1 SEPARATOR AND 383-AS1 AIRSLIDE	VALVE-FLOW	CSTP
1	39A-FV1	FLAP VALVE BETWEEN 380-CN1 CYCLONE AND 380-AS1 AIRSLIDE	VALVE-FLOW	CSTP
2	39A-SG1	SLIDE GATE BETWEEN ASH SILO AND ROTARY FEEDER 380-FD1	GATE	CSTP
1	39A-SG3	DIVERTOR GATE FROM FLY ASH SILO TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
1	39A-SG4	DIVERTOR GATE FROM ASH SILO TO #1 NORTH HOMOGENIZING SILO	GATE	CSTP
3	3EA-3S1	ASH SILO	FLY ASH	SILO
3	3EA-3S2	ASH SILO (C) FOR #2 RAW MILL	SILO	SILO
3	3EA-3S3	ASH SILO (A) FOR #3 RAW MILL	SILO	SILO
3	3EA-3S4	ASH SILO #8	SILO	SILO
1	41A-3S1	KILN FEED SILO #1 NORTH	SILO	SILO
1	41A-3S2	KILN FEED SILO #2 SOUTH	SILO	SILO
1	41B-AS1	AIRSLIDE AND LEVEL BOX AT HOMO SILOS-FULLER	AIRSLIDE	CSTP

OPERATION PROCEDURES FOR THE RAW MEAL PREPARATION SYSTEM

The operation of the raw meal preparation system is conducted in accordance with the equipment vendor and/or in-house guidelines. The detailed procedures for raw meal preparation system operation are contained in the Standard Operating Procedures (SOP) SOP-RM2 and SOP-RM3.

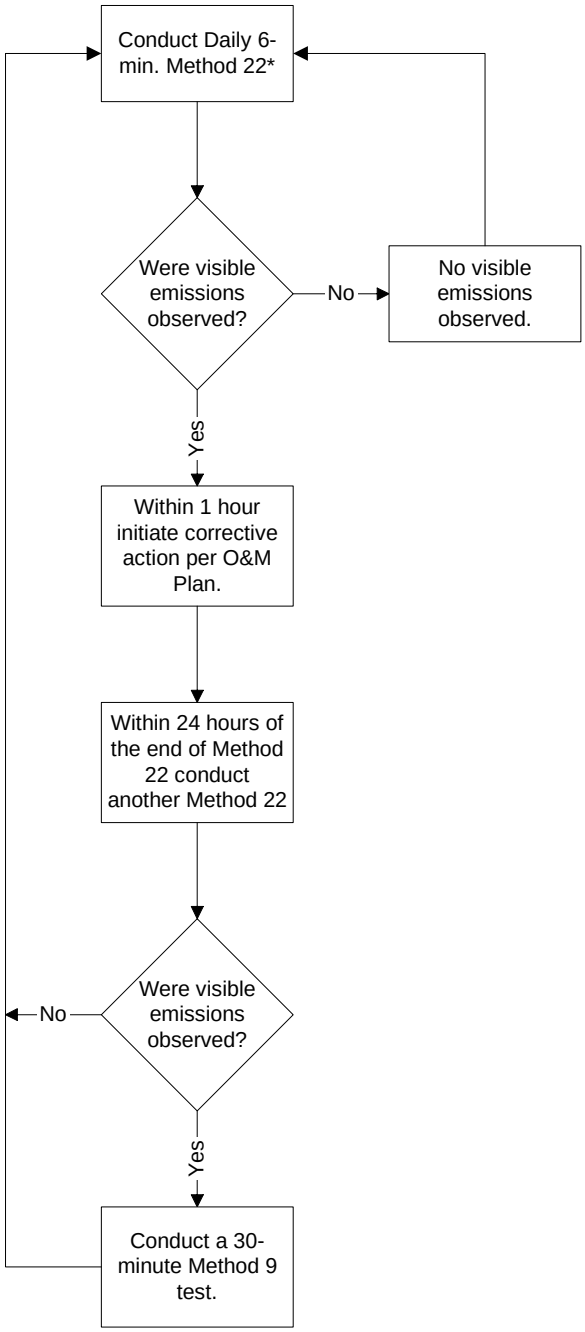
MONITORING REQUIREMENTS FOR THE RAW MEAL PREPARATION SYSTEM

Table 4.1-2 contains the monitoring requirements for the various affected source types included in the raw meal preparation system. Figures 4-1 through 4-3 are flow charts describing the monitoring requirement procedures for each affected source type.

TABLE 4.1-2
EMISSION LIMITS AND OPERATING PARAMETERS
FOR THE RAW MEAL PREPARATION SYSTEM

Affected Source Type	Parameter	Limit	Monitoring Requirement
Raw Mill	**Opacity**	**10 %**	**Daily Method 22 Tests. See Figure 4-1.**
Group 1 Transfer Points	**Opacity**	**10 %**	**None**
Group 2 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of CSTP or building. See Figure 4-2 for testing of the source or Figure 4-3 for testing the building/structure.**
Group 3 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of PMCD. See Figure 4-2.**
Storage Bins	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests. See Figure 4-2.**

FIGURE 4-1
MONITORING REQUIREMENTS
RAW AND FINISH MILLS



*Only one Method 22 with a result of “no visible emissions” is necessary per day.

FIGURE 4-2. MONITORING REQUIREMENTS – "PARTIAL/UNENCLOSED" CONVEYING SYSTEM TRANSFER POINTS, STORAGE BINS, BULK LOADING/UNLOADING

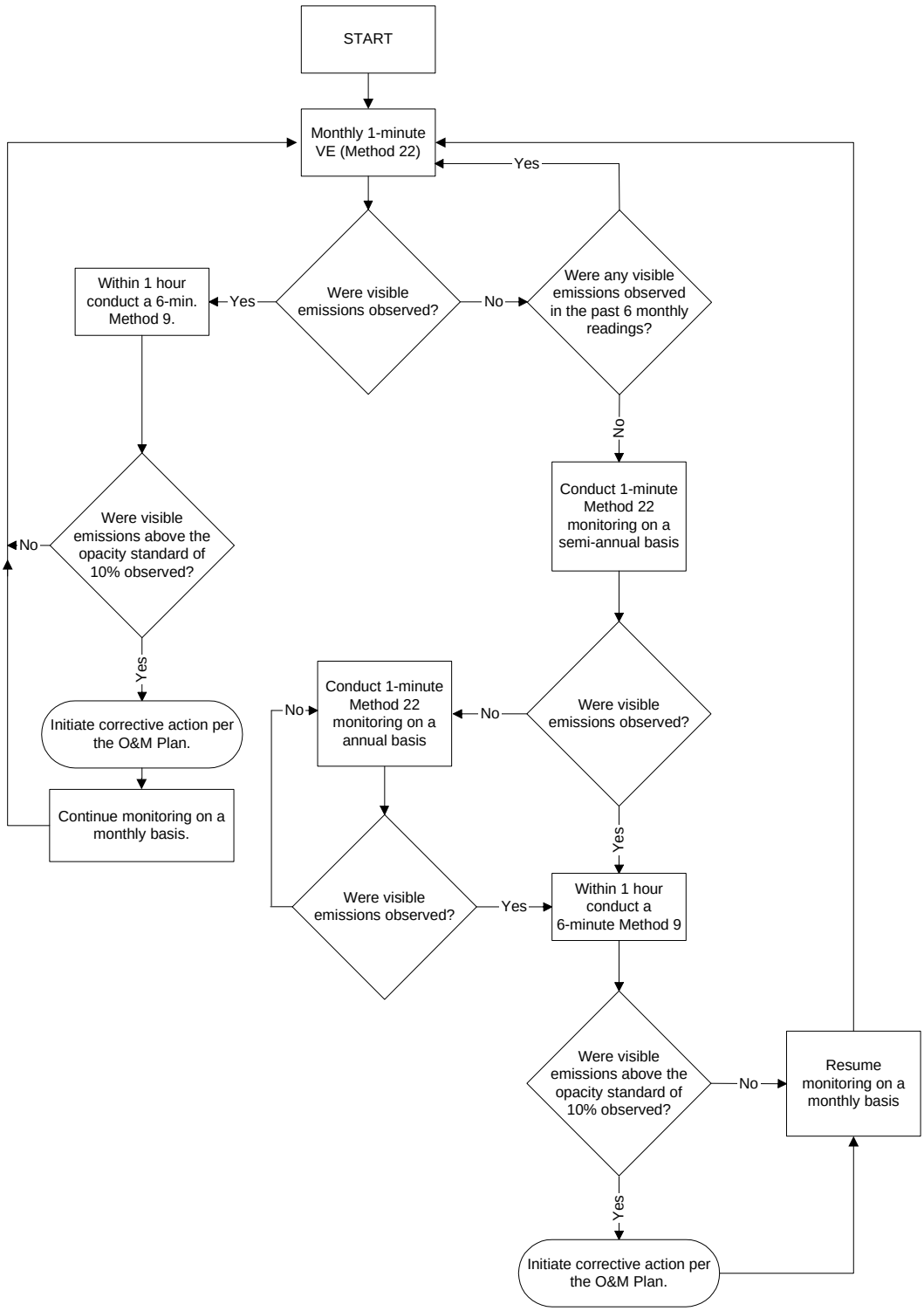
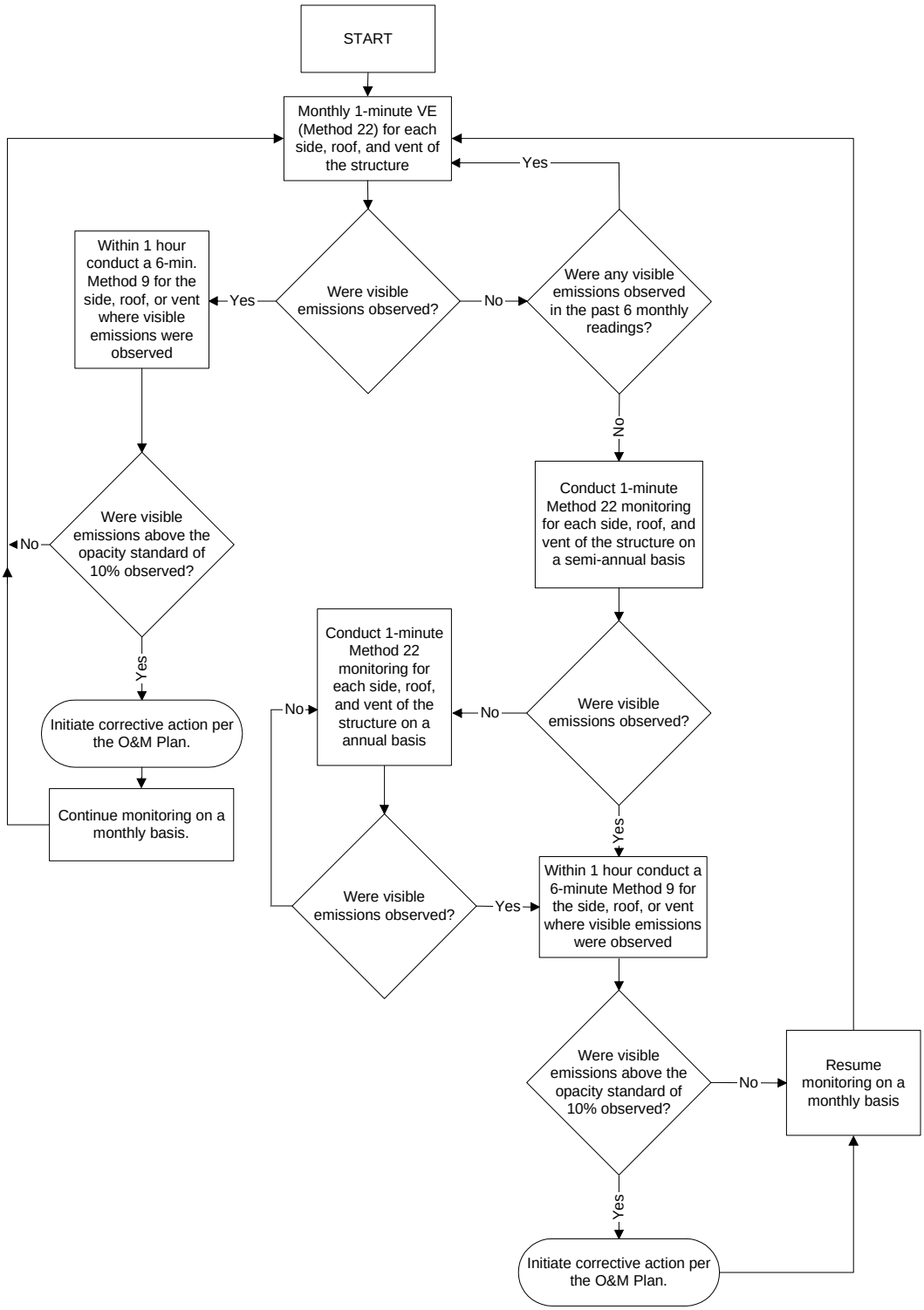


FIGURE 4-3. MONITORING REQUIREMENTS FOR "STRUCTURES" - **CONVEYING SYSTEM TRANSFER POINTS, STORAGE BINS,** BULK LOADING/UNLOADING SYSTEMS



MAINTENANCE PROCEDURES FOR THE RAW MEAL PREPARATION SYSTEM

Preventive maintenance (PM) at the facility is conducted in accordance with Historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) which serves as a guideline for prioritizing maintenance and preventing failures of general types of process equipment at the plant. Refer to Section 3.0 for details.

CORRECTIVE ACTION PROGRAM

A corrective action program has been developed and implemented to diagnose, repair, and document equipment malfunctions. Corrective action will be initiated as soon as practicable after a malfunction is identified and will be completed within a reasonable time after its initiation. The corrective action program includes performing the following steps to implement any corrective action.

1) Identification that a malfunction is occurring, or has occurred, that may have caused, or is causing, excess emissions.
2) A maintenance notification/malfunction form is initiated
3) A work order is generated, if necessary
4) The repair or necessary process adjustment is completed
5) If the equipment was stopped in order to complete the repair, it is brought back into operation. The operation is observed to ensure that it starts and continues to operate as expected.
6) The work order/maintenance notification/malfunction form is closed out by inputting the following information:
   a. The symptom of the malfunction
   b. The cause of the malfunction
   c. The start and end time for the malfunction, and
   d. The description of the repair completed

CLINKER MANUFACTURE System (KILN)

PROCESS DESCRIPTION

Kilns are rotating steel tubes lined with refractory material in which the raw meal is transformed into clinker. The kiln is inclined and rotates with hot combustion gases flowing countercurrent to the material flow. Heat is transferred from the flame and hot gases to heat the material to approximately 2,700°F to 3,000°F (1,400 °C to 1,600 °C), which drives the complex chemical reactions of clinker production. The dust generated in the clinker manufacture system is removed by baghouse PMCDs.

Tubular bags filter the dust laden kiln exhaust gas. The reverse-air baghouses remove the dust in the gas air stream. The reverse-air baghouses are compartmentalized to allow for isolation during cleaning. The gas enters through the bottom of the collector and is directed to the filter bags. The dust is collected on the inside of the vertically hanging bags, while the clean air exits through the outside of the bag. During the cleaning cycle, the flow of dirty air is stopped in a compartment. The compartment is then pressurized with a low-pressure flow of clean air. Dust is removed by allowing the bags to collapse, which causes the dustcake to break and fall into the hopper. The collected dust is returned to the process, sold as by-product, or removed for disposal.

The HAC code numbers for the clinker manufacture system range from 4XX-XXX to LXX-XXX. This includes the following affected source types: the kiln system, numerous conveying system transfer points, and a few storage bins. In addition, the clinker manufacture system includes several baghouse PMCDs.

Table 4.2-1 provides a list of the affected sources in the system.

TABLE 4.2-1
CLINKER MANUFACTURE SYSTEM - AFFECTED SOURCES

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	422-BF1	#2 KILN BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 300,000	DUST COL-KILNS	APCD
3	422-BF1	.05 #2 KILN BAG HOUSE #1 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.06 #2 KILN BAG HOUSE #2 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.07 #2 KILN BAG HOUSE #3 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.08 #2 KILN BAG HOUSE #4 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.09 #2 KILN BAG HOUSE #5 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0A #2 KILN BAG HOUSE #6 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0B #2 KILN BAG HOUSE #7 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0C #2 KILN BAG HOUSE #8 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0D #2 KILN BAG HOUSE #9 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0E #2 KILN BAG HOUSE #10 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0F #2 KILN BAG HOUSE #11 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0G #2 KILN BAG HOUSE #12 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0H #2 KILN BAG HOUSE #13 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0I #2 KILN BAG HOUSE #14 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0J #2 KILN BAG HOUSE #15 COMPT.	SCREW-KILNS	CSTP
3	422-BF1	.0K #2 KILN BAG HOUSE #16 COMPT.	SCREW-KILNS	CSTP
1	422-MW1	#2 KILN DISTRIBUTION GATE BETWEEN SOUTH RETURN DUST SCREW AND INCLINE DUST SCREW	GATE	CSTP
2	422-RF1	#2 KILN WASTE DUST ROTARY FEEDER	AIRLOCK	CSTP
3	422-SC1	#2 KILN BREECHING DUST SCREW CONV	SCREW-KILNS	CSTP
1	422-SC2	#2 KILN NORTH RETURN DUST SCREW CONV	SCREW-KILNS	CSTP
1	422-SC3	#2 KILN SOUTH RETURN DUST SCREW CONV	SCREW-KILNS	CSTP
1	422-SC4	#2 KILN INCLINE DUST SCREW CONV	SCREW-KILNS	CSTP
3	422-SC5	#2 KILN DUST SCREW #1 COMPT. (NW)	SCREW-KILNS	CSTP
3	422-SC6	#2 KILN DUST SCREW #2 COMPT. (SW)	SCREW-KILNS	CSTP
3	422-SC7	#2 KILN DUST SCREW #3 COMPT.	SCREW-KILNS	CSTP
3	422-SC8	#2 KILN DUST SCREW #4 COMPT.	SCREW-KILNS	CSTP
3	422-SC9	#2 KILN DUST SCREW #5 COMPT.	SCREW-KILNS	CSTP
3	422-SCA	#2 KILN DUST SCREW #6 COMPT.	SCREW-KILNS	CSTP
3	422-SCB	#2 KILN DUST SCREW #7 COMPT.	SCREW-KILNS	CSTP
3	422-SCC	#2 KILN DUST SCREW #8 COMPT.	SCREW-KILNS	CSTP
3	422-SCD	#2 KILN DUST SCREW #9 COMPT.	SCREW-KILNS	CSTP
3	422-SCE	#2 KILN DUST SCREW #10 COMPT.	SCREW-KILNS	CSTP
3	422-SCF	#2 KILN DUST SCREW #11 COMPT.	SCREW-KILNS	CSTP
3	422-SCG	#2 KILN DUST SCREW #12 COMPT.	SCREW-KILNS	CSTP
3	422-SCH	#2 KILN DUST SCREW #13 COMPT.	SCREW-KILNS	CSTP
3	422-SCI	#2 KILN DUST SCREW #14 COMPT.	SCREW-KILNS	CSTP
3	422-SCJ	#2 KILN DUST SCREW #15 COMPT.	SCREW-KILNS	CSTP
3	422-SCK	#2 KILN DUST SCREW #16 COMPT.	SCREW-KILNS	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	422-SK1	# 2 KILN FEED END STACK	STACK	Stack
3	422-WF1	#2 KILN DUST RETURN WEIGH SCREW	SCREW-KILNS	CSTP
1	423-BE1	#3 KILN DUST RETURN ELEVATOR; CHAIN IS #1251 WITH G117 ATTACHMENTS, STOCK	ELEVATORS	CSTP
3	423-BF1	#3 KILN BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 175,000	DUST COL-KILNS	APCD
3	423-BF1	.07 #3 KILN BAG HOUSE #1 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.08 #3 KILN BAG HOUSE #3 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.09 #3 KILN BAG HOUSE #5 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0A #3 KILN BAG HOUSE #7 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0B #3 KILN BAG HOUSE #9 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0C #3 KILN BAG HOUSE #2 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0D #3 KILN BAG HOUSE #4 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0E #3 KILN BAG HOUSE #6 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0F #3 KILN BAG HOUSE #8 COMP.	DUST COL-KILNS	APCD
3	423-BF1	.0G #3 KILN BAG HOUSE #10 COMP.	DUST COL-KILNS	APCD
3	423-BF3	#3 KILN FEED DUST COLLECTOR-MIKROPUL-CFM 5,800	DUST COL-KILNS	APCD
3	423-BI2	#3 KILN WASTE DUST BIN 2	HOMOGENIZING	CSTP
1	423-CN1	#3 KILN FEED MULTICYCLONE	DUST COL-KILNS	APCD
3	423-DG1	#3 KILN DIVERTOR GATE (DISCHARGE OF 33-1-319 ELEVATOR)	GATE	CSTP
3	423-DG2	#3 KILN WASTE DUST DUST COLLECTOR DISCHARGE DIVERTING GATE	GATE	CSTP
1	423-PU1	#3 KILN WASTE DUST PUMP 8" H2	PUMP-FK	CSTP
1	423-SC1	#3 KILN NORTH BREECHING SCREW CONV	SCREW-KILNS	CSTP
1	423-SC2	#3 KILN SOUTH BREECHING SCREW CONV	SCREW-KILNS	CSTP
1	423-SC3	#3 KILN BREECHING GATHERING SCREW CONV	SCREW-KILNS	CSTP
1	423-SC4	#3 KILN MULTICONE DUST SCREW CONV	SCREW-KILNS	CSTP
1	423-SC5	#3 KILN INCLINE DUST SCREW CONV TO THE WEIGH SCREW.	SCREW-KILNS	CSTP
1	423-SC6	#3 KILN BAGHOUSE GATHERING SCREW CONV	SCREW-KILNS	CSTP
1	423-SC7	#3 KILN DUST SCREW #1 COMPT	SCREW-KILNS	CSTP
3	423-SC8	#3 KILN DUST SCREW #3 COMPT	SCREW-KILNS	CSTP
3	423-SC9	#3 KILN DUST SCREW #5 COMPT	SCREW-KILNS	CSTP
3	423-SCA	#3 KILN DUST SCREW #7 COMPT	SCREW-KILNS	CSTP
3	423-SCB	#3 KILN DUST SCREW #9 COMPT	SCREW-KILNS	CSTP
3	423-SCC	#3 KILN DUST SCREW #2 COMPT	SCREW-KILNS	CSTP
3	423-SCD	#3 KILN DUST SCREW #4 COMPT	SCREW-KILNS	CSTP
3	423-SCE	#3 KILN DUST SCREW #6 COMPT	SCREW-KILNS	CSTP
3	423-SCF	#3 KILN DUST SCREW #8 COMPT	SCREW-KILNS	CSTP
3	423-SCG	#3 KILN DUST SCREW #10 COMPT	SCREW-KILNS	CSTP
1	423-SG1	ROTARY GATE ON WASTE DUST BIN #2	HOMOGENIZING	CSTP
1	423-SG1	SLIDE GATE ON WASTE DUST BIN TO EMERGENCY DUMP	GATE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	423-WF1	WASTE DUST WEIGH SCREW - DUMPS INTO ELEVATOR 33-1-319	SCREW-KILNS	CSTP
3	432-BC2	SPILLAGE RETURN BELT TO 204 BELT	BELTS-KILN	CSTP
3	432-BF1	#2 KILN FEED DUST COLLECTOR-MIKROPUL-3,000 CFM	DUST COL-KILNS	APCD
3	432-BF2	#2 KILN FEED ELEV DUST COLLECTOR-MIKROPUL	DUST COL-KILNS	APCD
3	432-BW1	#2 KILN #2 FEED BELT WITH SCALE -30"	BELTS-KILN	CSTP
3	432-FV1	FLAP VALVE ON DUST COLLECTOR 211 (422-BF2)	VALVE-FLOW	CSTP
3	432-FV1	FLAP VALVE ON DUCT COLLECTOR 209 (432-BF1)	VALVE-FLOW	CSTP
2	432-HP1	HOPPER FOR SPILLAGE RETURN BELT TO 204 BELT	BIN/HOPPER	CSTP
1	432-RF1	#2 KILN ROTARY AUXILIARY KILN FEEDER UNDER #2 FEED TANK	BELTS-KILN	CSTP
1	432-TV1	MV-39 BALL VALVE, BETWEEN #2 FEED TANK AND LEVEL BOX.	V-BALL VALVE	CSTP
1	432-TV2	MV-40 BALL VALVE, BETWEEN LEVEL BOX AND 203 FEED BELT.	V-BALL VALVE	CSTP
1	432-VX1	#2 KILN FEED BIN #2 VALVE FOR THROTTLE GATE (432-PG1)	VALVE-FLOW	CSTP
1	432-VX2	#2 KILN FEED VALVE FOR THROTTLE GATE (433-PG2) ON AIRSLIDE 203	VALVE-FLOW	CSTP
3	433-3B1	KILN FEED LEVEL BOX	KILNS	CSTP
3	433-BF1	#3 KILN FEED DUST COLLECTOR-PUMP ROOM-MIKROPUL-CFM 3,000	DUST COL-KILNS	APCD
3	433-FV1	FLAP VALVE ON DUST COLLECTOR 328 (433-BF1)	VALVE-FLOW	CSTP
1	433-FV2	#3 KILN FEED FLAP VALVE ON CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
3	433-PU1	#3 KILN FEED PUMP #1 WEST 9 1/2 Z	PUMP-FK	CSTP
3	433-PU2	#3 KILN FEED PUMP #2 EAST 9 1/2 Z	PUMP-FK	CSTP
1	433-SG1	#3 KILN FEED BIN #1 THROTTLE GATE	GATE	CSTP
1	433-SG1	#3 KILN FEED SLIDE GATE BETWEEN AIRSLIDE (433-AS4) AND FEED PUMP 308 (433-PP1)	GATE	CSTP
1	433-SG2	#3 KILN FEED BIN #2 THROTTLE GATE	GATE	CSTP
1	433-SG2	#3 KILN FEED SLIDE GATE BETWEEN AIRSLIDE (433-AS4) AND FEED PUMP 309 (433-pp2)	GATE	CSTP
3	433-SX1	#3 KILN FEED SCREW CONVEYOR BELOW 307 (433-WF1) BELT TO AIRSLIDE 433-AS4	SCREW-KILNS	CSTP
1	433-TV1	8" BALL VALVE OUT OF NORTH SILO #1 AND AFTER #33-1-303 AIRSLIDE.	V-BALL VALVE	CSTP
1	433-TV2	8" BALL VALVE OUT OF SOUTH #2 TANK AND AFTER #33-1-304 AIRSLIDE.	V-BALL VALVE	CSTP
1	433-TV3	#3 KILN FEED THROTTLE GATE ON AIRSLIDE (433-AS3) TO WEIGHT BELT 307 (433-WF1)	GATE	CSTP
1	433-VA1	#3 KILN FEED BIN #1 VALVE FOR THROTTLE	VALVE-FLOW	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
		GATE (433-PG1)		
1	433-VA3	#3 KILN FEED BIN #2 VALVE FOR THROTTLE GATE (433-PG3)	VALVE-FLOW	CSTP
1	433-VA6	#3 KILN FEED AIR VALVE FEED PUMP 309 (433-PP2) TO CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
1	433-VV1	#3 KILN FEED AIR VALVE FEED PUMP 308 (433-PP1) TO CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
1	433-VX1	#3 KILN FEED VALVE FOR THROTTLE GATE (433-PG2) ON AIRSLIDE 303	VALVE-FLOW	CSTP
1	433-VX2	#3 KILN FEED VALVE FOR THROTTLE GATE (433-PG4) ON AIRSLIDE 304	VALVE-FLOW	CSTP
1	433-VX3	#3 KILN FEED VALVE FOR THROTTLE GATE 433-PG5	VALVE-FLOW	CSTP
3	433-WF1	#3 KILN LEVEL BOX WEIGH FEEDER-30"	BELTS-KILN	CSTP
3	462-KL1	#2 KILN	KILNS	KILN
3	463-AL1	#3 KILN CYCLONE DUST COLLECTOR	DUST COL-KILNS	APCD
3	463-KL1	#3 KILN	KILNS	KILN
2	L10-B12	#2 KILN COAL TANK	KILNS	CSTP
2	L10-B13	#3 KILN COAL TANK	COAL-GYPCOKE	CSTP
2	L10-BC1	CG2 COAL BELT CONV A-24"-JEFFERY MFG.	BELT-COAL-GYP	CSTP
2	L10-BC2	COAL BELT CONV B-EAST/WEST CG3- 24"-JEFFERY	BELT-COAL-GYP	CSTP
2	L10-BC3	COAL RECLAIM FEEDER BELT	BELT-COAL-GYP	CSTP
2	L10-BC5	COAL RECLAIM CONVEYOR. 24"- CARRIER-CONVEYOR	BELT-COAL-GYP	CSTP
2	L10-BC6	COAL BELT CONV-CG 4-24"-NOTT CO.	BELT-COAL-GYP	CSTP
2	L10-BF1	DUST COLLECTOR-COAL TRANS BLDG-TRANSFER TOWER DC	DUST COL-COAL	APCD
2	L10-BP1	BELT PLOW ON CG2 FIRST PLOW FROM COAL/GYPSUM HOPPER	COAL-GYP-COKE	CSTP
2	L10-BP2	BELT PLOW ON CG2 SECOND PLOW FROM COAL/GYPSUM HOPPER	COAL-GYP-COKE	CSTP
2	L10-BP5	BELT PLOW ON BELT 121 TO GO ON TO BELT 1	COAL-GYP-COKE	CSTP
2	L10-BP6	BELT PLOW ON BELT 121 TO GO TO CLINKER SILOS OR GYPSUM SILO #K	COAL-GYP-COKE	CSTP
2	L10-VF1	RAIL CAR UNLOADING FEEDER	COAL-GYP-COKE	CSTP
2	L11-HP1	COAL/GYPSUM SHAKER HOPPER	COAL-GYP-COKE	CSTP
2	432-HP2	LIMESTONE INSUFFLATION – LIMESTONE DROP FROM FRONT-END LOADER TO HOPPER	LIMESTONE INSUFFLATION	CSTP
2	432-BC2	LIMESTONE INSUFFLATION – MATERIAL TRANSFER FROM HOPPER TO CONVEYOR	LIMESTONE INSUFFLATION	CSTP
2	V11-BE1	LIMESTONE INSUFFLATION – CONVEYOR DROP POINT	LIMESTONE INSUFFLATION	CSTP
2	V91-WF1	LIMESTONE INSUFFLATION – UNLOADING HOPPER	LIMESTONE INSUFFLATION	CSTP
2	V91-RF1	LIMESTONE INSUFFLATION – ROTARY FEEDER	ROTARY FEEDER	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type

OPERATION PROCEDURES FOR THE CLINKER MANUFACTURE SYSTEM

The operation of the clinker manufacture system is conducted in accordance with the equipment vendor and/or in-house guidelines. The detailed procedures for clinker manufacture system operation and the annual combustion system inspections are contained in Standard Operating Procedure (SOP) SOP-KL2 SOP-KL3 and SOP-KLA. During clinker manufacture system operation, key process parameters are monitored and recorded using data loggers. The detailed procedures for continuous monitoring system operation associated with the clinker manufacture system are contained in the Continuous Monitoring System Standard Operating Procedures (CMS SOP) CMSP-001.

MONITORING REQUIREMENTS FOR THE CLINKER MANUFACTURE SYSTEM

Table 4.2-2 contains the operating and monitoring requirements for the various affected source types included in the clinker manufacture system. A continuous monitoring system requirement flow chart for COMS and Thermocouples is provided as Figure 4-4. The monitoring requirement procedure flow charts for CSTPs and storage bins, either independently or in a structure, are provided as Figures 4-2 and 4-3, respectively.

ALTERNATIVE MONITORING PROCEDURE

If the required continuous monitoring system (i.e., main stack COMs and PMCD inlet thermocouple) for the clinker manufacturing system is malfunctioning or data is not being recorded for an extended period of time while the system continues to operate, in addition to initiating corrective action to repair the monitor, alternative monitoring will be initiated in order to demonstrate that the source remained in compliance during the period where data is not available. For example, when the main kiln stack COMs is malfunctioning for more than 24 hours, a 30-minute Method 9 visual emissions test will be performed each day that COMs data is invalid or unavailable while the kiln is operating.

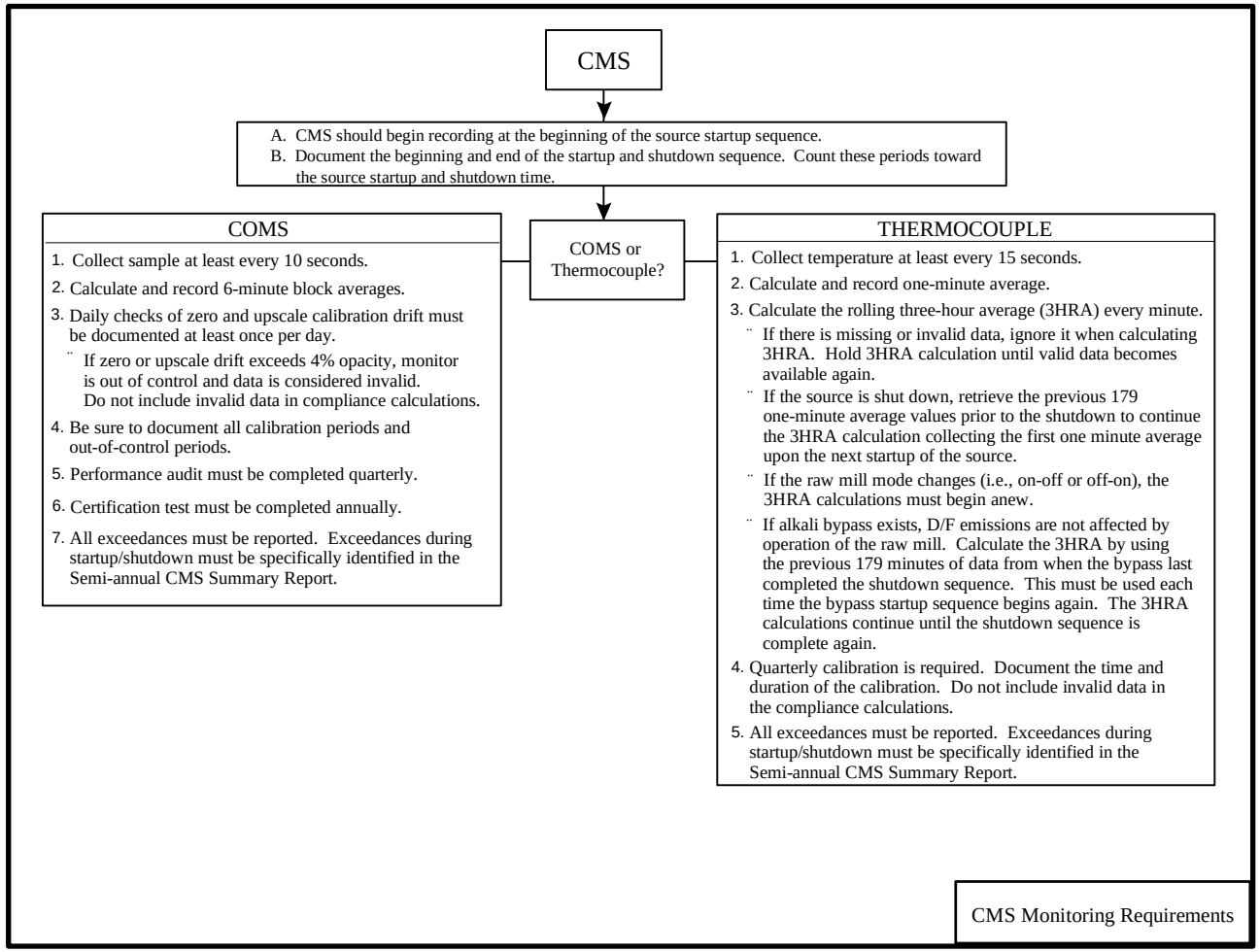
In the case of a temperature monitor at the inlet of the main air pollution control device, if the temperature sensor is malfunctioning or data is not being recorded for more than 24 hours, alternate indicators of temperature control at the particulate matter control device will be monitored and documented in order to demonstrate compliance.

TABLE 4.2-2
EMISSION LIMITS AND OPERATING PARAMETERS
FOR THE CLINKER MANUFACTURE SYSTEM

Affected Source Type	Parameter	Limit	Monitoring Requirement
Kiln	Particulate Matter	**0.15 kg/Mg (0.3 lb/ton) dry kiln feed**	**Deferred**
	Opacity	**20%**	**Continuous Opacity Monitor (COM) at each point where emissions are vented. COM to be installed, calibrated, maintained, and operated in accordance with 40 CFR 60, Appendix B, Performance Specification 1. See COM CMS Plan CMSP-001 for further details.**
	Dioxin / Furan	0.2 ng/dscm (TEQ), 7% O_2 **0.4 ng/dscm (TEQ), ≤ 400 °F, 7% O_2**	**Continuous temperature monitor. Continuously record one-minute average PMCD inlet temperatures from responses obtained at least once during each consecutive 15-second period and monitor three-hour rolling averages. The continuous temperature monitoring will be calibrated at least quarterly. See thermocouple CMS Plan CMSP-002.**
		PMCD Inlet Temperature	
	Combustion System		**Conduct annual inspection of component of combustion system. See SOP-KLA.**
Group 1 Transfer Points	**Opacity**	**10 %**	**None**
Group 2 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of CSTP or building. See Figure 4-2 for testing of the source or Figure 4-3 for testing the building/structure.**
Group 3 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of PMCD. See Figure 4-2.**
Storage Bins	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests.**

			See Figure 4-2.

FIGURE 4-4. CMS MONITORING REQUIREMENTS FLOW CHART



MAINTENANCE PROCEDURES FOR THE CLINKER MANUFACTURE SYSTEM

Preventive maintenance (PM) at the facility is conducted in accordance with
Historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) which serves as a guideline for prioritizing maintenance and preventing failures of general types of process equipment at the plant. Refer to Section 3.0 for details.

Annual Combustion System Inspection

The annual combustion system inspection is included as apart of the PMR program in the SAP system. The detailed procedures are contained in SOP-KLA.

CORRECTIVE ACTION PROGRAM

A corrective action program has been developed and implemented to diagnose, repair, and document equipment malfunctions. Corrective action will be initiated as soon as practicable after a malfunction is identified and will be completed within a reasonable time after its initiation.
The corrective action program includes performing the following steps to implement any corrective action.

1) Identification that a malfunction is occurring, or has occurred, that may have caused, or is causing, excess emissions.
2) A maintenance notification/malfunction form is initiated
3) A work order is generated, if necessary
4) The repair or necessary process adjustment is completed
5) If the equipment was stopped in order to complete the repair, it is brought back into operation. The operation is observed to ensure that it starts and continues to operate as expected.
6) The work order/maintenance notification/malfunction form is closed out by inputting the following information:
    a. The symptom of the malfunction
    b. The cause of the malfunction
    c. The start and end time for the malfunction, and
    d. The description of the repair completed

CLINKER COOLER SYSTEM

PROCESS DESCRIPTION

The function of the clinker cooler system is to cool the clinker to make it possible to handle with conventional conveying equipment. The clinker is cooled from approximately 1,600 to 2,200 °F (870 to 1,200 °C) to about 250 to 450 °F (120 to 230 °C). The dust from the clinker coolers is removed by baghouse PMCDs.

The cooler exhaust fan pulls the air into the baghouses, where the gas is filtered by tubular bags. The dust in the gas does not penetrate the bags; rather it remains as a deposit on the bags' outside surface. At specified intervals, as needed, a cleaning cycle is initiated in which the bags are automatically and sequentially cleaned. To facilitate this action, a pulse valve delivers a burst of compressed air through the bags in reverse direction to remove material from the bags. The collected material is returned to the process, sold as by-product, or removed for disposal.

The HAC numbers for the clinker cooler systems include 47X-XXX and 49X-XXX. This includes the following affected source types: the clinker cooler, conveying system transfer points, storage bins, and baghouse PMCDs.

Table 4.3-1 provides a list of the affected sources in the system.

TABLE 4.3-1
CLINKER COOLER SYSTEM – AFFECTED SOURCES

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	472-BF1	#2 KILN COOLER BAGHOUSE	DUST COL-KILNS	APCD
3	472-BF1	.01 #2 KILN COOLER BAGHOUSE EAST COMP. #1	DUST COL-KILNS	APCD
3	472-BF1	.02 #2 KILN COOLER BAGHOUSE WEST COMP. #2	DUST COL-KILNS	APCD
3	472-BF1	.03 #2 KILN COOLER BAGHOUSE EAST COMP. #3	DUST COL-KILNS	APCD
3	472-BF1	.04 #2 KILN COOLER BAGHOUSE WEST COMP. #4	DUST COL-KILNS	APCD
3	472-BF1	.05 #2 KILN COOLER BAGHOUSE EAST COMP. #5	DUST COL-KILNS	APCD
3	472-BF1	.06 #2 KILN COOLER BAGHOUSE WEST COMP. #6	DUST COL-KILNS	APCD
3	472-CC1	#2 KILN CLINKER COOLER-FULLER	COOLER-CLINKER	COOLER
3	472-CHA	#2 KILN COOLER TIPPING VALVE (A) NORTH COMP. #1	COOLER-CLINKER	CSTP
3	472-CHB	#2 KILN COOLER TIPPING VALVE (B) SOUTH COMP. #1	COOLER-CLINKER	CSTP
3	472-CHC	#2 KILN COOLER TIPPING VALVE (C) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	472-CHD	#2 KILN COOLER TIPPING VALVE (D) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	472-CHE	#2 KILN COOLER TIPPING VALVE (E) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	472-CHF	#2 KILN COOLER TIPPING VALVE (F) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	472-CHG	#2 KILN COOLER TIPPING VALVE (G) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	472-CHH	#2 KILN COOLER TIPPING VALVE (H) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	472-CHI	#2 KILN COOLER TIPPING VALVE (I) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	472-CHJ	#2 KILN COOLER TIPPING VALVE (J) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	472-CHK	#2 KILN COOLER TIPPING VALVE (K) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	472-CHL	#2 KILN COOLER TIPPING VALVE (L) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	472-CHM	#2 KILN COOLER TIPPING VALVE (M) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	472-CHN	#2 KILN COOLER TIPPING VALVE (N) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	472-CHO	#2 KILN COOLER TIPPING VALVE (O) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	472-CHP	#2 KILN COOLER TIPPING VALVE (P) SOUTH COMP. #5	COOLER-CLINKER	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	472-CHQ	#2 KILN COOLER TIPPING VALVE (Q) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	472-CHR	#2 KILN COOLER TIPPING VALVE (R) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	472-CHS	#2 KILN COOLER TIPPING VALVE (S) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	472-CHT	#2 KILN COOLER TIPPING VALVE (T) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	472-CHU	#2 KILN COOLER TIPPING VALVE (U) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	472-CHV	#2 KILN COOLER TIPPING VALVE (V) SOUTH COMP. #6	COOLER-CLINKER	CSTP
3	472-CHW	#2 KILN COOLER TIPPING VALVE (W) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	472-CHX	#2 KILN COOLER TIPPING VALVE (X) SOUTH COMP. #6	COOLER-CLINKER	CSTP
3	472-CHY	#2 KILN COOLER TIPPING VALVE (Y) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	472-CHZ	#2 KILN COOLER TIPPING VALVE (Z) SOUTH COMP. #6	COOLER-CLINKER	CSTP
2	472-DC1	#2 KILN COOLER DRAG CONV-NORTH	DRAGS	CSTP
2	472-DC2	#2 KILN COOLER DRAG CONV-SOUTH	DRAGS	CSTP
3	472-DP1	OLD #2 KILN COOLER MULTICLONE DUST COLLECTOR NOW USED AS A DROP BOX	DUST COL-KILNS	APCD
3	472-FV1	TIPPING VALVE #2 KILN COOLER BELOW HEAT EXCHANGER SCREW CONVEYOR 492-SC9	VALVE-FLOW	CSTP
3	472-FV2	TIPPING VALVE #2 KILN COOLER BAGHOUSE EAST GATHERING SCREW 492-SC7	VALVE-FLOW	CSTP
3	472-FV3	TIPPING VALVE #2 KILN COOLER BAGHOUSE WEST GATHERING SCREW CONVEYOR 492-SC8	VALVE-FLOW	CSTP
3	472-SC1	#2 KILN COOLER BAGHOUSE EAST COMP. #1 SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC2	#2 KILN COOLER BAGHOUSE WEST COMP. #2 SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC3	#2 KILN COOLER BAGHOUSE EAST COMP. #3 SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC4	#2 KILN COOLER BAGHOUSE WEST COMP. #4 SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC5	#2 KILN COOLER BAGHOUSE EAST COMP. #5 SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC6	#2 KILN COOLER BAGHOUSE WEST COMP. #6 SCREW CONV.	SCREW-KILNS	CSTP
1	472-SC7	#2K BH EAST COLL. GATHERING SCREW CONV.	SCREW-KILNS	CSTP
1	472-SC8	#2K BH WEST COLL. GATHERING SCREW CONV.	SCREW-KILNS	CSTP
3	472-SC9	#2 KILN HEAT EXCHANGER HOPPER SCREW CONV.	SCREW-KILNS	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	472-SCA	#2K HEAT EXCH. WEST COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	472-SCB	#2K HEAT EXCH. CENTER COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	472-SCC	#2K HEAT EXCH. EAST COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	473-BF1	#3 KILN COOLER BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 83,800	DUST COL-KILNS	APCD
3	473-BF1	.01 #3 KILN COOLER BAGHOUSE EAST COMP. #1	DUST COL-KILNS	APCD
3	473-BF1	.02 #3 KILN COOLER BAGHOUSE WEST COMP. #2	DUST COL-KILNS	APCD
3	473-BF1	.03 #3 KILN COOLER BAGHOUSE EAST COMP. #3	DUST COL-KILNS	APCD
3	473-BF1	.04 #3 KILN COOLER BAGHOUSE WEST COMP. #4	DUST COL-KILNS	APCD
3	473-BF1	.05 #3 KILN COOLER BAGHOUSE EAST COMP. #5	DUST COL-KILNS	APCD
3	473-BF1	.06 #3 KILN COOLER BAGHOUSE WEST COMP. #6	DUST COL-KILNS	APCD
3	473-CC1	#3 KILN CLINKER COOLER-FULLER	COOLER-CLINKER	COOLER
3	473-CHA	#3 KILN COOLER TIPPING VALVE (A) NORTH COMP. #1	COOLER-CLINKER	CSTP
3	473-CHB	#3 KILN COOLER TIPPING VALVE (B) SOUTH COMP. #1	COOLER-CLINKER	CSTP
3	473-CHC	#3 KILN COOLER TIPPING VALVE (C) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	473-CHD	#3 KILN COOLER TIPPING VALVE (D) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	473-CHE	#3 KILN COOLER TIPPING VALVE (E) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	473-CHF	#3 KILN COOLER TIPPING VALVE (F) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	473-CHG	#3 KILN COOLER TIPPING VALVE (G) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	473-CHH	#3 KILN COOLER TIPPING VALVE (H) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	473-CHI	#3 KILN COOLER TIPPING VALVE (I) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	473-CHJ	#3 KILN COOLER TIPPING VALVE (J) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	473-CHK	#3 KILN COOLER TIPPING VALVE (K) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	473-CHL	#3 KILN COOLER TIPPING VALVE (L) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	473-CHM	#3 KILN COOLER TIPPING VALVE (M) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	473-CHN	#3 KILN COOLER TIPPING VALVE (N) SOUTH COMP. #4	COOLER-CLINKER	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	473-CHO	#3 KILN COOLER TIPPING VALVE (O) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	473-CHP	#3 KILN COOLER TIPPING VALVE (P) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	473-CHQ	#3 KILN COOLER TIPPING VALVE (Q) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	473-CHR	#3 KILN COOLER TIPPING VALVE (R) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	473-CR1	#3 KILN CLINKER BREAKER-FULLER	MILL-HAMMER	CSTP
2	473-DC1	#3 KILN NORTH COOLER DRAG CONVEYOR-FULLER	DRAGS	CSTP
2	473-DC2	#3 KILN SOUTH COOLER DRAG CONVEYOR-FULLER	DRAGS	CSTP
3	473-DP1	#3 KILN COOLER BREECHING HOPPER	COOLER-CLINKER	CSTP
3	473-SC1	#3 KILN BREECHING SCREW CONVEYOR	SCREW-KILNS	CSTP
3	473-SC2	#3 KILN INLET MANIFOLD SCREW CONVEYOR	SCREW-KILNS	CSTP
3	473-SC3	#3 KILN NORTH HOPPER SCREW CONV	SCREW-KILNS	CSTP
3	473-SC4	#3 KILN SOUTH HOPPER SCREW CONV	SCREW-KILNS	CSTP
1	473-SC5	#3 KILN GATHERING SCREW CONV #1	SCREW-KILNS	CSTP
1	473-SC6	#3 KILN GATHERING SCREW CONV #2	SCREW-KILNS	CSTP
3	482-CN1	#2 KILN CLINKER COOLER CYCLONE FROM COOLER TO COAL MILL	DUST COL-COAL	APCD
3	482-FV1	#2 KILN CLINKER COOLER FLAP/TIPPING VALVE BOTTOM OF CYCLONE	VALVE-FLOW	CSTP
3	482-FV2	#2 KILN FLAP/TIPPING VALVE BELOW DROP OUT BOX FROM COOLER TO CYCLONE	VALVE-FLOW	CSTP
1	482-RF1	#2 KILN COAL MILL CHARGER - RAYMOND 67#	CHARGER	CSTP
1	482-SG1	#2 KILN SLIDE GATE BELOW COAL TANK AND WEIGH FEEDER	GATE	CSTP
2	482-WF1	#2 KILN COAL FEEDER & SCALE-24"	BELTS-KILN	CSTP
3	483-CN1	#3 KILN CLINKER COOLER CYCLONE FROM COOLER TO COAL MILL	DUST COL-COAL	APCD
3	483-FV1	#3 KILN CLINKER COOLER FLAP/TIPPING VALVE BOTTOM OF CYCLONE	VALVE-FLOW	CSTP
3	483-FV2	#3 KILN FLAP/TIPPING VALVE BELOW DROP OUT BOX FROM COOLER TO CYCLONE	VALVE-FLOW	CSTP
2	483-WF1	#3 KILN COAL WEIGH FEEDER-24"	BELTS-KILN	CSTP
3	490-BC1	CLINKER DOME REVERSIBLE BELT ABOVE 33-3-339	BELTS-KILN	CSTP
3	490-BC2	#3 KILN CLINKER BELT-24"	BELTS-KILN	CSTP
3	490-BC3	#3 KILN 343 CLINKER BELT-24"	BELTS-KILN	CSTP
3	490-BC4	33-3-117 KILN CLK BELT CONV #2 TO SILO 11,12-24"	BELTS-KILN	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	490-BC5	TOP 7TH TRIPPER BELT CONV-24"	BELTS-KILN	CSTP
3	490-BC6	TOP 7TH,CLK BELT TO SILO 16-24"	BELTS-KILN	CSTP
3	490-BC7	33-3-131 TOP 7TH CLK BELT #5 TO SILO 13-24"	BELTS-KILN	CSTP
3	490-BC8	CLINKER DOME BELT CONV TO TOP DOME 24"-GEN.CONV.	BELTS-KILN	CSTP
3	490-BC9	CLINKER DOME RECLAIM BELT CONVEYOR 30" GEN. CONV.	BELTS-KILN	CSTP
3	490-BF1	CLINKER DOME DUST COL FOR FEEDER 313-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF2	CLINKER DOME DUST COL FOR FEEDER 312-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF3	CLINKER DOME DUST COL FOR FEEDER 311-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF4	CLINKER DOME DUST COL FOR FEEDER 310-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF5	CLINKER DOME DUST COL FOR FEEDER 309-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF6	CLINKER DOME DUST COL FOR FEEDER 308 NORTH-FLUIDFLO	DUST COL-KILNS	APCD
3	490-BF7	CLINKER DOME DUST COLLECTOR-TOWER 4-MIKROPUL MODEL 64-5-8-20	DUST COL-KILNS	APCD
3	490-BF8	DUST COLLECTOR-TOP OF DOME	DUST COL-DOME	APCD
3	490-BF9	CLINKER TRANSFER DUST COLLECTOR-TRIPLE ELEVATORS-MIKROPUL-CFM 5,000	DUST COL-KILNS	APCD
3	490-BFA	CLINKER DUST COLL. AT DISCHARGE END OF 339 BELT. MIKROPUL-CFM 8,600	DUST COL-KILNS	APCD
3	490-BFB	SEC CRUSHER DUST COL TFR TOWER-BHA CONVERSION OF NORBLO-CFM 2,000	DUST COL-ROCK	APCD
3	490-BFC	CLINKER TRANSFER TOWER DC (117/343)NORBLO-CFM 2,000	DUST COL-COAL	APCD
3	490-BFD	#1 FINISH MILL TOP CLK SILO DUST COLLECTOR-NORBLO-CFM-4,000	DUST COL-FIN	APCD
3	490-BFE	#2 FINISH MILL DUST COL ON 7TH-MIKROPUL	DUST COL-FIN	APCD
3	490-BFF	#3 FINISH MILL DUST COL-TOP CLK SILO-NORBLO-CFM 3,400	DUST COL-FIN	APCD
3	490-BFG	#3 KILN CLINKER VIB CONV DUST COL-MIKROPUL-CFM 8,600	DUST COL-KILNS	APCD
3	490-SC1	DUST COL SCREW CONV FOR 33-3-360 DUST COLL. AT 339 DISCHARGE END.	SCREW-KILNS	CSTP
3	490-TR1	TOP 7TH-TRIPPER	BELTS-KILN	CSTP
3	490-VF1	VIBRATING FEEDER (CLINKER RECLAIM SOUTH)	VIBRATE FEEDER	CSTP
3	490-VF2	VIRATING FEEDER (CLINKER RECLAIM TUNNEL)	VIBRATE FEEDER	CSTP
3	490-VF3	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL)	VIBRATE FEEDER	CSTP
3	490-VF4	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL	VIBRATE FEEDER	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	490-VF5	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL	VIBRATE FEEDER	CSTP
3	490-VF6	VIBRATING FEEDER (CLINKER RECLAIM NORTH	VIBRATE FEEDER	CSTP
3	492-AC1	#2 KILN PAN CONVEYOR	PAN CONVEYOR	CSTP
3	492-BE1	CLINKER BUCKET ELEVATOR	ELEVATOR	CSTP
3	492-BF1	# 2 KILN PAN CONVEYOR BAGFILTER	DUST COL-KILNS	APCD
3	492-FV4	.01 TIPPING VALVE #1, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	492-FV4	.02 TIPPING VALVE #2, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	492-FV4	.03 TIPPING VALVE #3, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	492-FV4	.04 TIPPING VALVE #4, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	492-FV5	.01 TIPPING VALVE #1, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3	492-FV5	.02 TIPPING VALVE #2, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3	492-FV5	.03 TIPPING VALVE #3, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3		CONVEYOR 492-SCA		
3	492-FV5	.04 TIPPING VALVE #4, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW CONVEYOR 492-SCA	CSTP
3	493-AC1	#3 KILN PAN CONVEYOR	PAN CONVEYOR	CSTP
3	493-BE1	CLINKER BUCKET ELEVATOR	ELEVATOR	CSTP
3	493-FV1	#3 KILN COOLER TIPPING VALVE BELOW BREECHING SCREW CONVEYOR	VALVE-FLOW	CSTP
3	493-FV2	#3 KILN COOLER TIPPING VALVE BELOW INLET MANIFOLD SCREW CONVEYOR	VALVE-FLOW	CSTP
3	493-FV3	#3 KILN COOLDER TIPPING VALVE BELOW NORTH BAGHOUSE SCREW CONVEYOR	VALVE-FLOW	CSTP
3	493-FV4	#3 KILN COOLER TIPPING VALVE BELOW SOUTH BAGHOUSE SCREW CONVEYOR	VALVE-FLOW	CSTP
3	493-SG1	#3 KILN COOLER BAGHOUSE EAST COMP. #1 SILDE GATE	SCREW-KILNS	CSTP
3	493-SG2	#3 KILN COOLER BAGHOUSE WEST COMP. #2 SLIDE GATE	SCREW-KILNS	CSTP
3	493-SG3	#3 KILN COOLER BAGHOUSE EAST COMP. #3 SLIDE GATE	SCREW-KILNS	CSTP
3	493-SG4	#3 KILN COOLER BAGHOUSE WEST COMP. #4 SLIDE GATE	SCREW-KILNS	CSTP
3	493-SG5	#3 KILN COOLER BAGHOUSE EAST COMP. #5 SLIDE GATE	SCREW-KILNS	CSTP
3	493-SG6	#3 KILN COOLER BAGHOUSE WEST COMP. #6 SLIDE GATE	SCREW-KILNS	CSTP
3	49A-BE1	CLINKER BUCKET ELEVATOR	ELEVATOR	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	49A-BFH	CLINKER ELEVATOR DISCHARGE BAGHOUSE	DUST COL-KILNS	APCD
3	49A-BFI	CLINKER COOLER # 3 DISCHARGE BAGHOUSE	DUST COL-KILNS	APCD
3		OUTSIDE STORAGE SILO	SILO	SILO

OPERATION PROCEDURES FOR THE CLINKER COOLER SYSTEM

The operation of the clinker cooler system is conducted in accordance with the equipment vendor and/or in-house guidelines. The detailed procedures for clinker cooler system operation are contained in the Standard Operating Procedures SOP-KL2 and SOP-KL3. During the clinker cooler operation, opacity is measured with a continuous opacity monitor (COM). Detailed procedures for continuous monitoring system operation associated with the clinker cooler are contained in the Continuous Monitoring System Standard Operating Procedure (CMS SOP) CMSP-001.

MONITORING REQUIREMENTS FOR THE CLINKER COOLER SYSTEM

Table 4.3-2 contains the operating and monitoring requirements for the various affected source types included in the clinker cooler system. A continuous monitoring system requirement flow chart for COMS is provided as Figure 4-4. The monitoring requirement procedure flow charts for CSTPs and storage bins, either independently or in a structure, are provided as Figures 4-2 and 4-3, respectively.

TABLE 4.3-2
EMISSION LIMITS AND OPERATING PARAMETERS
FOR THE CLINKER COOLER SYSTEM

Affected Source Type	Parameter	Limit	Monitoring Requirement
Clinker Cooler	**Particulate Matter**	**0.050 kg/Mg (0.10 lb/ton) dry kiln feed**	**None**
	Opacity	**10 %**	**Continuous Opacity Monitor (COM). COM located at the outlet of the clinker cooler PMCD. COM to be installed, calibrated, maintained, and operated in accordance with 40 CFR 60, Appendix B, Performance Specification 1. See COM CMS Plan for further details CMSP-001.**
Group 1 Transfer Points	**Opacity**	**10 %**	**None**
Group 2 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of CSTP or building. See Figure 4-2 for testing of the source or Figure 4-3 for testing the building/structure.**
Group 3 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of PMCD. See Figure 4-2.**
Storage Bins	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests. See Figure 4-2.**

ALTERNATIVE MONITORING PROCEDURE

If the required continuous monitoring system for the clinker cooler system (i.e., clinker cooler stack COMs) is malfunctioning or data is not being recorded for an extended period of time while the system continues to operate, in addition to initiating corrective action to repair the monitor, alternative monitoring will be initiated in order to demonstrate that the source remained in compliance during the period where data is not available. For example, when the clinker cooler COMs is malfunctioning for more than 24 hours, a 30 minute Method 9 visual emissions test will be performed each day that the COMs data is invalid or unavailable.

MAINTENANCE PROCEDURES FOR THE CLINKER COOLER SYSTEM

Preventive maintenance (PM) at the facility is conducted in accordance with historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) which serves as a guideline for prioritizing maintenance and preventing failures of general types of process equipment at the plant. Refer to Section 3.0 for details.

CORRECTIVE ACTION PROGRAM

A corrective action program has been developed and implemented to diagnose, repair, and document equipment malfunctions. Corrective action will be initiated as soon as practicable after a malfunction is identified and will be completed within a reasonable time after its initiation.
The corrective action program includes performing the following steps to implement any corrective action.

1) Identification that a malfunction is occurring, or has occurred, that may have caused, or is causing, excess emissions.
2) A maintenance notification/malfunction form is initiated
3) A work order is generated, if necessary
4) The repair or necessary process adjustment is completed
5) If the equipment was stopped in order to complete the repair, it is brought back into operation. The operation is observed to ensure that it starts and continues to operate as expected.
6) The work order/maintenance notification/malfunction form is closed out by inputting the following information:
   a. The symptom of the malfunction
   b. The cause of the malfunction
   c. The start and end time for the malfunction, and
   d. The description of the repair completed

Cement Manufacture System (Finish MillS)

PROCESS DESCRIPTION

The finish milling process grinds the clinker into a fine powder. Additives are added during the grinding to produce the final product. Baghouses filled with bags, filter the finish mill air stream.

A pulse-jet baghouse is designed with internal frame structures called cages. The dust does not penetrate the bags and collects on the bags' outside surface and forms a dustcake. At specified intervals, the dustcake is periodically removed by a pulse jet of compressed air into the bag that causes a sudden expansion of the bag. Primarily inertial forces remove the dust when the bag reaches its maximum expansion. The collected material is returned to the process, sold as by-product, or removed for disposal.

A reverse-air baghouse is compartmentalized to allow for isolation during cleaning. The air stream enters through the bottom of the collector and is directed to the filter bags. The dust is collected on the inside of the vertically hanging bags, while the clean air exits through the outside of the bag. During the cleaning cycle, the air stream is stopped from entering a compartment. The compartment is then pressurized with a low-pressure flow of clean air. Dust is removed by allowing the bags to collapse, which causes the dustcake to break and fall into the hopper. The collected material is returned to the process, sold as by-product, or removed for disposal.

The HAC code numbers for the cement manufacture system range from 52X-XXX to L10-BCX. This includes the following affected source types: the finish mills, conveying system transfer points, storage bins, and baghouse PMCDs.

Table 4.4-1 provides a list of the affected sources in the system.

TABLE 4.4-1
CEMENT MANUFACTURE SYSTEM – AFFECTED SOURCES

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	523-WF1	#3 FINISH MILL GYP BELT-SILO K-24"-RAMSEY	BELTS-FINISH	CSTP
3	524-BC1	#4 FINISH MILL GYPSUM BELT #1-18"-NOTT CO.	BELTS-FINISH	CSTP
3	531-BC1	#1 FINISH FEED BELT-24" JEFFERY	BELTS-FINISH	CSTP
3	531-BF1	#1 FIN MILL FEED CONV DUST COLLECTOR-MIKROPUL-CFM 4,500	DUST COL-FIN	CSTP
3	531-SC1	#1 FINISH MILL MASONARY SUGAR FEEDER	FEEDER-VIB	CSTP
3	531-SC2	DRY MATERIAL VOLUMETRIC FEEDER	FEEDER-VOL	CSTP
3	531-WF1	#1 FINISH MILL GYP BELT SILO F-24" FLANGED	BELTS-FINISH	CSTP
3	531-WF2	#1 FINISH MILL CLINKER BELT C -SILO 12-24" FLANGED	BELTS-FINISH	CSTP
3	531-WF3	#1 FINISH CLINKER BELT B SILO 11-24" FLANGED	BELTS-FINISH	CSTP
3	531-WF4	#1 FINISH MILL LIMESTONE BELT A-24" FLANGED	BELTS-FINISH	CSTP
3	532-BC1	#2 FINISH MILL FEED BELT CONV.-24"-EHRSAM	BELTS-FINISH	CSTP
3	532-BF1	#2 FINISH MILL FEED BELT DUST COL-MIKROPUL-CFM 4,500	DUST COL-FIN	APCD
3	532-SC1	SCREW FOR #2 FINISH FEED BELT DUST COLLECTOR, 34-1-243.	SCREW-FINISH	CSTP
3	532-WF1	#2 FINISH MILL GYP BELT-SILO H-24"-RAMSEY	BELTS-FINISH	CSTP
3	532-WF2	#2 FINISH MILL CLINKER BELT SILO 14-24"-RAMSEY	BELTS-FINISH	CSTP
3	532-WF3	#2 FINISH MILL CLK BELT-SILO 15-24"-RAMSEY	BELTS-FINISH	CSTP
3	533-BC1	#3 FINISH MILL FEED BELT CONVEYOR-24"-EHRSAM	BELTS-FINISH	CSTP
3	533-BF1	#3 FINISH MILL FEED DUST COL-MIKROPUL-CFM 4,500	DUST COL-FIN	APCD
3	533-WF2	#3 FINISH MILL CLK BELT C-SILO 18-24"-RAMSEY	BELTS-FINISH	CSTP
3	533-WF3	#3 FINISH MILL CLINKER BELT B-SILO 17-24"-RAMSEY	BELTS-FINISH	CSTP
3	534-BC2	#4 FINISH MILL EAST/WEST FEED BELT-24"-NOTT CO.	BELTS-FINISH	CSTP
3	534-BC3	#4 FINISH MILL FEED BELT(NORTH)-24"-NOTT CO.	BELTS-FINISH	CSTP
3	534-BF1	#4 FINISH MILL - 467 ELEVATOR DUST COLLECTOR	DUST COL-FIN	APCD
3	534-BF2	DUST COLLECTOR FOR 34-1-408 BELT	DUST COL-FIN	APCD
3	534-FV1	#4 FINISH MILL FLAP VALVE ON 534-BF1 DUST COLLECTOR	VALVE-FLOW	CSTP
2	534-WF1	#4 FINISH MILL GYPSUM BELT C-SILO G- 24"-RAMSEY ENG.	BELTS-FINISH	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	534-WF2	#4 FINISH MILL CLINKER BELT A-SILO 16-30"-RAMSEY ENG.	BELTS-FINISH	CSTP
2	534-WF3	#4 FINISH MILL CLINKER BELT B-SILO 13-30"-RAMSEY	BELTS-FINISH	CSTP
3	561-BF1	#1 FINISH MILL WEST DUST COLLECTOR; NORBLO CFM 14,500/ CONVERTED BY BHA TO REVERSE AIR	DUST COL-FIN	APCD
3	561-BF1	.01 #1 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	561-BF1	.02 #1 FINISH MILL WEST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	561-BF1	.03 #1 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	561-BF1	.04 #1 FINISH MILL WEST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	561-BF1	.05 #1 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	561-BF2	#1 FINISH MILL EAST DUST COLLECTOR; NORBLO CFM 14,500/ CONVERTED BY BHA TO	DUST COL-FIN REVERSE AIR.	APCD
3	561-BF2	.01 #1 FINISH MILL EAST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	561-BF2	.02 #1 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	561-BF2	.03 #1 FINISH MILL EAST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	561-BF2	.04 #1 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	561-BF2	.05 #1 FINISH MILL EAST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	561-BM1	#1 FINISH MILL	MILL	MILL
1	561-FV1	FLAP VALVE OFF 561-SR1 SEPERATOR #1 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	561-SC1	#1 FINISH MILL DISCHARGE SCREW CONV-16"	SCREW-FINISH	CSTP
3	562-BF1	#2 FINISH MILL DUST COLLECTOR-NORBLO-CFM 45,000/ CONVERTED BY BHA TO REVERSE AIR.	DUST COL-FIN	APCD
3	562-BF1	.01 #2 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	562-BF1	.02 #2 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	562-BF1	.03 #2 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	562-BF1	.04 #2 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	562-BF1	.05 #2 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	562-BF1	.06 #2 FINISH MILL EAST DUST COLLECTOR #6 COMP	DUST COL-FIN	APCD

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	562-BF1	.07 #2 FINISH MILL WEST DUST COLLECTOR #7 COMP	DUST COL-FIN	APCD
3	562-BF1	.08 #2 FINISH MILL EAST DUST COLLECTOR #8 COMP	DUST COL-FIN	APCD
3	562-BF1	.09 #2 FINISH MILL WEST DUST COLLECTOR #9 COMP	DUST COL-FIN	APCD
3	562-BF1	.0A #2 FINISH MILL EAST DUST COLLECTOR #A COMP	DUST COL-FIN	APCD
3	562-BF1	.0B #2 FINISH MILL WEST DUST COLLECTOR #B COMP	DUST COL-FIN	APCD
3	562-BF1	.0C #2 FINISH MILL EAST DUST COLLECTOR #C COMP	DUST COL-FIN	APCD
3	562-BF1	.0D #2 FINISH MILL WEST DUST COLLECTOR #D COMP	DUST COL-FIN	APCD
3	562-BF1	.0E #2 FINISH MILL EAST DUST COLLECTOR #E COMP	DUST COL-FIN	APCD
3	563-BM1	#2 FINISH MILL	MILL	MILL
1	562-FV1	FLAP VALVE OFF 562-SR1 SEPERATOR #2 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	562-SC1	#2 FINISH MILL SCREW CONVEYOR-18"	SCREW-FINISH	CSTP
1	563-AS1	#3 FINISH AIRSLIDE FROM ELEVATOR TO SEPARATOR	AIRSLIDE	CSTP
3	563-BF1	#3 FINISH MILL DUST COLLECTOR-NORBLO-CFM 45,000	DUST COL-FIN	APCD
3	563-BF1	.01 #3 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	563-BF1	.02 #3 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	563-BF1	.03 #3 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	563-BF1	.04 #3 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	563-BF1	.05 #3 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	563-BF1	.06 #3 FINISH MILL EAST DUST COLLECTOR #6 COMP	DUST COL-FIN	APCD
3	563-BF1	.07 #3 FINISH MILL WEST DUST COLLECTOR #7 COMP	DUST COL-FIN	APCD
3	563-BF1	.08 #3 FINISH MILL EAST DUST COLLECTOR #8 COMP	DUST COL-FIN	APCD
3	563-BF1	.09 #3 FINISH MILL WEST DUST COLLECTOR #9 COMP	DUST COL-FIN	APCD
3	563-BF1	.0A #3 FINISH MILL EAST DUST COLLECTOR #A COMP	DUST COL-FIN	APCD
3	563-BF1	.0B #3 FINISH MILL WEST DUST COLLECTOR #B COMP	DUST COL-FIN	APCD
3	563-BF1	.0C #3 FINISH MILL EAST DUST COLLECTOR #C COMP	DUST COL-FIN	APCD
3	563-BF1	.0D #3 FINISH MILL WEST DUST COLLECTOR #D COMP	DUST COL-FIN	APCD

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	563-BF1	.0E #3 FINISH MILL EAST DUST COLLECTOR #E COMP	DUST COL-FIN	APCD
3	563-BM!	#3FINISH MILL	MILL	MILL
1	563-FV1	FLAP VALVE OFF 563-SR1 SEPERATOR #3 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	563-SC1	#3 FINISH MILL SCREW CONVEYOR-18"	SCREW-FINISH	CSTP
1	564-AS1	#4 FINISH MILL AIRSLIDE FROM MILL TO FEED ELEVATOR	AIRSLIDE	CSTP
1	564-AS1	#4 FINISH MILL AIR SLIDE DISCHARGE MATERIAL TRAP	AIRSLIDE	CSTP
1	564-AS2	#4 FINISH AIRSLIDE FROM FEED ELEVATOR TO SEPARATOR	AIRSLIDE	CSTP
3	564-BE2	#4 FINISH MILL MAIN ELEVATOR	ELEVATOR	CSTP
3	564-BF1	#4 FINISH MILL (WEST) DUST COLLECTOR MIKROPUL-CFM 35,0000	DUST COL-FIN	APCD
3	564-BF1	.01 #4 FINISH MILL WEST DUCT COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	564-BF1	.02 #4 FINISH MILL WEST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	564-BF1	.03 #4 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	564-BF1	.04 #4 FINISH MILL WEST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	564-BF2	#4 FINISH MILL (EAST) DUST COLLECTOR MIKROPUL-CFM 35,0000	DUST COL-FIN	APCD
3	564-BF2	.01 #4 FINISH MILL EAST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	564-BF2	.02 #4 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	564-BF2	.03 #4 FINISH MILL EAST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	564-BF2	.04 #4 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	564-BF3	#4 FINISH MILL (ELEVATOR) DUST COLLECTOR 6TH FLOOR 5,000 CFM	DUST COL-FIN	APCD
3	564-BF3	.01 #4 FINISH MILL (MILL) DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	564-BF4	#4 FINISH MILL (MILL) DUST COLLECTOR MIKROPUL-CFM 20,000	DUST COL-FIN	APCD
3	564-BM1	#4 FINISH MILL	MILL	MILL
1	564-FV1	#4 FINISH MILL FLAP VALVE FROM FLOWMETER TO FEED END	VALVE-FLOW	CSTP
3	564-SC1	#4 FINISH MILL SCREW CONVEYOR #1 (WEST SCREW)	SCREW-FINISH	CSTP
1	581-AS1	#1 FINISH MILL AIRSLIDE -- COOLER BY-PASS FROM SEPARATOR TO 34-1-125 AIRSLIDE	AIRSLIDE	CSTP
1	581-AS2	#1 FINISH MILL AIRSLIDE FROM COOLER TO F-K PUMP	AIRSLIDE	CSTP
1	582-SG1	12" X 24" ROTARY VALVE ON PUMP 34-1-213	MILL-2F-MISC	CSTP
1	583-AS1	#3 FINISH AIRSLIDE -- COOLER BY-PASS	AIRSLIDE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
		FROM SEPARATOR TO F-K PUMP		
1	583-AS2	#3 FINISH AIRSLIDE FROM COOLER TO F-K PUMP	AIRSLIDE	CSTP
1	584-AS4	#4 FINISH MILL AIRSLIDE FROM WEST SEPARATOR DUST TRAP	AIRSLIDE	CSTP
1	584-AS5	#4 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP	AIRSLIDE	CSTP
1	584-AS6	#4 FINISH MILL AIRSLIDE FROM SEPARATOR	AIRSLIDE	CSTP
3	584-AS8	#4 FINISH MILL AIRSLIDE TO CEMENT COOLER	AIRSLIDE	CSTP
3	584-AS9	#4 FINISH MILL AIRSLIDE FROM COOLER TO Z-FLAP PUMPS	AIRSLIDE	CSTP
1	591-FV1	FLAP VALVE #1 WEST SEPARTOR #1 FINISH MILL TO DISTRIBUTION BOX 591-DB1	VALVE-FLOW	CSTP
1	591-FV2	FLAP VALVE #2 EAST SEPERATOR #1 FINISH MILL TO DISTRIBUTION BOX 591-DB1	VALVE-FLOW	CSTP
1	592-AS3	#2 FINISH MILL AIRSLIDE FROM WEST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	592-AS3	#2 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	592-FV1	FLAP VALVE #1 WEST SEPERATOR #2 FINISH MILL TO 593-AS3 AIR SLIDE	VALVE-FLOW	CSTP
1	592-FV2	FLAP VALVE #2 EAST SEPERATOR #2 FINISH MILL TO 592-AS4 AIR SLIDE	VALVE-FLOW	CSTP
1	593-AS2	#3 FINISH AIRSLIDE FROM WEST DUST COLLECTOR HOPPER TO 34-1-327-1	AIRSLIDE	CSTP
1	593-AS3	#3 FINISH AIRSLIDE FROM EAST DUST COLLECTOR HOPPER TO 34-1-327-2	AIRSLIDE	CSTP
1	593-AS4	#3 FINISH AIRSLIDE FROM WEST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	593-AS4	#3 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	593-FV1	FLAP VALVE #1 WEST SEPERATOR #3 FINISH MILL TO 593-AS3 AIR SLIDE	VALVE-FLOW	CSTP
1	593-FV2	FLAP VALVE #2 EAST SEPERATOR #3 FINISH MILL TO 593-AS4 AIR SLIDE	VALVE-FLOW	CSTP
1	593-RT1	12" X 24" ROTARY VALVE ON PUMP 34-1-313	MILL-3F-MISC	CSTP
1	594-AS3	#4 FINISH MILL AIRSLIDE FROM EAST AND WEST DUST COLLECTOR SCREWS	AIRSLIDE	CSTP
3	594-AS7	#4 FINISH MILL AIRSLIDE FROM 594-AS6 TO 594-SM1	AIRSLIDE	CSTP
3	594-BF1	#4 FINISH MILL PRODUCT TRANSFER BAGHOUSE	DUST COL-FIN	APCD
1	594-FV1	#4 FINISH MILL FLAP VALVE WEST SEPARATOR	VALVE-FLOW	CSTP
1	594-FV2	#4 FINISH MILL FLAP VALVE EAST SEPARATOR	VALVE-FLOW	CSTP
3	594-FV3	#4 FINISH MILL FLAP VALVE MILL DUST COLLECTOR	VALVE-FLOW	CSTP
3	594-FV4	#4 FINISH MILL FLAP VALVE DUST COLLECTOR ELEVATOR	VALVE-FLOW	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	594-SM1	CEMENT SAMPLER	SAMPLER	CSTP
3	594-SM2	CEMENT SAMPLER	SAMPLER	CSTP
1	K1A-3B1	#1 FINISH MILL LIME ADDITVE TANK	LIME ADDITIVE	SILO
3	K1A-3S1	#1 FINISH MILL GYPSUM SILO (#F)	SILO	SILO
3	K1A-3S2	#4 FINISH MILL GYPSUM SILO (#G)	SILO	SILO
3	K1A-3S3	#2 FINISH MILL GYPSUM SILO (#H)	SILO	SILO
3	K1A-3S4	#3 FINISH MILL GYPSUM SILO (#K)	SILO	SILO
2	K21-FM1	#1 FINISH MILL LIME ADDITIVE FLOWMETER	LIME ADDITIVE	CSTP
3	K21-RF1	#1 FINISH MILL LIME ADDITIVE ROTARY FEEDER	LIME ADDITIVE	CSTP
2	K21-SC1	#1 FINISH MILL LIME ADDITVE SCREW CONVEYOR	LIME ADDITIVE	CSTP
3	K24-BC1	#4 FINISH GYPSUM BELT	BELTS-FINISH	APCD
2	K24-BC2	#4 FINISH SLAG HOPPER FEEDER BELT	BELTS-FINISH	CSTP
2	K24-HP1	#4 FINISH SLAG HOPPER	BIN/HOPPER	CSTP
3	59A-3S1	#6 STORAGE CEMENT INTERSTICE #1	SILO	SILO
3	59A-3S2	#6 STORAGE CEMENT INTERSTICE #2	SILO	SILO
3	59A-3S3	#6 STORAGE CEMENT INTERSTICE #3	SILO	SILO
3	59A-3S4	#6 STORAGE CEMENT INTERSTICE #4	SILO	SILO
3	59A-3S5	#6 STORAGE CEMENT SILO #37	SILO	SILO
3	59A-3S6	#6 STORAGE CEMENT SILO #38	SILO	SILO
3	59A-3S7	#6 STORAGE CEMENT SILO #39	SILO	SILO
3	59A-3S8	#6 STORAGE CEMENT SILO #40	SILO	SILO
3	59A-3S9	#6 STORAGE CEMENT SILO #41	SILO	SILO
3	59A-3SA	#6 STORAGE CEMENT SILO #42	SILO	SILO
3	59A-3SB	#6 STORAGE CEMENT SILO #59	SILO	SILO
3	59A-3SC	#6 STORAGE CEMENT SILO #60	SILO	SILO
3	59A-3SD	#6 STORAGE CEMENT SILO #61	SILO	SILO
3	59A-3SE	#6 STORAGE CEMENT SILO #62	SILO	SILO
3	59A-3SF	#6 STORAGE CEMENT SILO #63	SILO	SILO
3	59A-3SG	#6 STORAGE CEMENT SILO #64	SILO	SILO
3	59A-BF1	TRUCK SILO DUST COLLECTOR-BHA CONVERSION OF NORBLO-CFM 5,000	DUST COL-SHIP	APCD
3	59A-BF2	DUST COLLECTOR SILO TOP NEW-MIKROPUL	DUST COL-SHIP	APCD
3	59A-DG1	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DG2	#2F LINE, TRUCK SILOS, BIN 37, (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DG3	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, INTERSTICE 1 RIGHT HAND 8" SK Valve	TRANSPORT VALVE	CSTP
3	59A-DG4	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DG5	#2F LINE, TRUCK SILOS, BIN 38, (OLD SIDE), TOP LINE, RIGHT HAND SK Valve	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59A-DG6	#2F LINE, TRUCK SILOS, BIN #40 (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	59A-DG7	#2F LINE, TRUCK SILOS BIN #42 OR INTERSTICE 2, (OLD SIDE), TOP LINE,RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DG8	#2F LINE, TRUCK SILOS (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DG9	#2F LINE, TRUCK SILOS, BIN 60, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	59A-DGA	#2F LINE, TRUCK SILOS, BIN 59, (NEW SIDE), TOP LINE, LEFT HAND 8" SK	TRANSPORT VALVE.	CSTP
3	59A-DGB	#2F LINE, TRUCK SILOS, BIN 62, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGC	#2F LINE, TRUCK SILOS, BIN 64 OR INTERTICE 4, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGD	#2F LINE, TRUCK SILOS, INTERSTICE 3, (OLD SIDE), TOP LINE, LEFT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGE	#2F LINE, TRUCK SILOS, BIN 61 OR BIN 63, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGF	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGG	#4F LINE, TRUCK SILOS, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGH	#4F LINE, TRUCK SILOS, BIN 60, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGI	#4F LINE, TRUCK SILOS, BIN 62, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGJ	#4F LINE, TRUCK SILOS, INTERSTICE 4 & BIN 64, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGK	#4F LINE, TRUCK SILOS, BIN 59, (NEW SIDE), BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGL	#4F LINE, TRUCK SILOS, INTERSTICE 3, (NEW SIDE), BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGM	#4F LINE, TRUCK SILOS, BIN 61 OR 63, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59A-DGN	#2F LINE, TRUCK SILOS, BIN #39 OR #41, TOP LINE, (OLD SIDE) RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	59A-SG1	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 2, 39, 41 & 42	TRANSPORT VALVE	CSTP
3	59A-SG2	#1F LINE, TRUCK SILOS, GATE TO BLOCK LINE TO SILOS 39 AND 40 8" SLIDE GATE	GATE	CSTP
3	59A-SG3	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 2 & 42	TRANSPORT VALVE	CSTP
3	59A-SG4	#1F LINE, TRUCK SILOS, BIN #41, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59A-SG5	#1F LINE, TRUCK SILOS, BIN #39, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SG6	#1F LINE, TRUCK SILO, GATE TO BLOCK LINES TO SILOS 1, 37, 38 & 40 8" SLIDE GATE	GATE	CSTP
3	59A-SG7	#1F LINE, TRUCK SILOS, MIDDLE LINE, BIN #40 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SG8	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 1, 37 & 38	TRANSPORT VALVE	CSTP
3	59A-SG9	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 1 & 38	TRANSPORT VALVE	CSTP
3	59A-SGA	#1F LINE, TRUCK SILOS, BIN #37, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGB	#4F LINE, TRUCK SILOS, BIN #37, OLD SIDE, BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGC	#4F LINE, TRUCK SILOS, BIN #38, OLD SIDE BOTTOM LINE, BIN #38 8" SLIDE GATE	TRANSPORT VALVE	CSTP
3	59A-SGD	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGE	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGF	#4F LINE, TRUCK SILOS, INTERSTICE 1, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE	TRANSPORT VALVE	CSTP
3	59A-SGG	#4F LINE, TRUCK SILOS, BIN #39, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGH	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGI	#4F LINE, TRUCK SILOS, BIN 40, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGJ	#1F LINE, TRUCK SILOS, MIDDLE LINE, BIN #42 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGK	#1F LINE, TRUCK SILOS, BIN #2, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGL	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGM	#4F LINE, TRUCK SILOS, INTERSTICE 2, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE	TRANSPORT VALVE	CSTP
3	59A-SGN	#4F LINE, TRUCK SILOS, BIN 41, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGP	#4F LINE, TRUCK SILOS, BIN 42, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGQ	#1F LINE, TRUCK SILOS, BIN #1, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGR	#1F LINE, TRUCK SILOS, BIN #38, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59A-SGS	#4 TFR LINE, TRUCK SILO, INTERSTICE #1	GATE	CSTP
3	59A-SGT	#4 TFR LINE, TRUCK SILO BLOCK LINE TO GO INTO #1 OR GO TO #4O OR #2	GATE	CSTP
3	59A-SGU	#4 TFR LINE, TRUCK SILO SILO #40	GATE	CSTP
3	59A-SGV	#4 TFR LINE, TRUCK SILO INTERSTICE #2	GATE	CSTP
3	59B-3S1	#4 STORAGE CEMENT SILO #13	SILO	SILO
3	59B-3S2	#4 STORAGE CEMENT SILO #14	SILO	SILO

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59B-3S3	#4 STORAGE CEMENT SILO #15	SILO	SILO
3	59B-3S4	#4 STORAGE CEMENT SILO #16	SILO	SILO
3	59B-3S5	#4 STORAGE CEMENT SILO #17	SILO	SILO
3	59B-3S6	#4 STORAGE CEMENT SILO #18	SILO	SILO
3	59B-3S7	#4 STORAGE CEMENT SILO #19	SILO	SILO
3	59B-3S8	#4 STORAGE CEMENT SILO #20	SILO	SILO
3	59B-3S9	#4 STORAGE CEMENT SILO #21	SILO	SILO
3	59B-3SA	#4 STORAGE CEMENT SILO #22	SILO	SILO
3	59B-3SB	#4 STORAGE CEMENT SILO #23	SILO	SILO
3	59B-3SC	#4 STORAGE CEMENT SILO #24	SILO	SILO
3	59B-3SD	#4 STORAGE CEMENT INTERSTICE #1	SILO	SILO
3	59B-3SE	#4 STORAGE CEMENT INTERSTICE #4	SILO	SILO
3	59B-3SF	#4 STORAGE CEMENT INTERSTICE #2	SILO	SILO
3	59B-3SG	#4 STORAGE CEMENT INTERSTICE #5	SILO	SILO
3	59B-3SH	#4 STORAGE CEMENT INTERSTICE #3	SILO	SILO
3	59B-3SI	#4 STORAGE CEMENT INTERSTICE #6	SILO	SILO
3	59B-3SJ	#4 STORAGE FLAT BIN #7	SILO	SILO
3	59B-3SK	#4 STORAGE FLAT BIN #8	SILO	SILO
3	59B-3SL	#4 STORAGE FLAT BIN #9	SILO	SILO
3	59B-BF1	#4 STORAGE SILO DUST COLLECTOR	DUST COL-SHIP	APCD
3	59B-DG1	#4 STORAGE, BIN #9 WEST, 8" RIGHT HAND SK VALVE	TRANSPORT VALVE	CSTP
3	59B-DG2	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG3 OR 59B-DG4	TRANSPORT VALVE	CSTP
3	59B-DG3	#4 STORAGE, CEMENT SILO'S #13 & #14 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DG4	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG5 (SOUTH) OR 59B-DGD (NORTH)	TRANSPORT VALVE	CSTP
3	59B-DG5	#4 STORAGE, INTERSTICE #4 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DG6	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG7 OR 59B-DG8	TRANSPORT VALVE	CSTP
3	59B-DG7	#4 STORAGE, CEMENT SILO'S #16 & #17 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DG8	#4 STORAGE, INTERSTICE #5 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DG9	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DGA OR 59B-DGB	TRANSPORT VALVE	CSTP
3	59B-DGA	#4 STORAGE, CEMENT SILO'S #19 & #20 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGB	#4 STORAGE, INTERSTICE #6 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGC	#4 STORAGE, CEMENT SILO'S #22 & #23 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGD	#4 STORAGE, CEMENT SILO #15 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGE	#4 STORAGE, INTERSTICE #1 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59B-DGF	#4 STORAGE, CEMENT SILO #18 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGG	#4 STORAGE, INTERSTICE #2 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGH	#4 STORAGE, CEMENT SILO #21 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGI	#4 STORAGE, CEMENT SIOL #24 OR INERSTICE #3 RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59B-DGJ	#4 STORAGE BIN #8 EAST RIGHT HAND SK VALVE	VALVE-FLOW	CSTP
3	59B-RF1	ROTARY FEEDER FOR DUST COLLECTOR 402 (59B-BF1)	ROTARY FEEDER	CSTP
3	59B-SG1	#3F LINE, #4 STORAGE SILOS FIGURE 8 VALVE #1	TRANSPORT VALVE	CSTP
3	59B-SG2	#3F LINE, #4 STORAGE, FIGURE 8 VALVE TO FLAT BINS	TRANSPORT VALVE	CSTP
3	59B-SG3	#4 STORAGE BIN #7 EAST CLARKSON VALVE	GATE	CSTP
3	59B-SG4	#4 STORAGE BIN #7 WEST CLARKSON VALVE	GATE	CSTP
3	59B-SG5	#4 STORAGE LINE BLOCK ON MAIN CLARKSON VALVE	GATE	CSTP
3	59B-SG6	#4 STORAGE BIN #8 WEST CLARKSON VALVE	GATE	CSTP
3	59B-SG7	#3 LINE, #4 STORAGE LINE BLOCK ON MAIN, CLARKSON VALVE	GATE	CSTP
3	59B-SG8	#4 STORAGE BIN #9 EAST CLARKSON VALVE	GATE	CSTP
3	59C-3S1	#7 STORAGE CEMENT INTERSTICE #10	SILO	SILO
3	59C-3S2	#7 STORAGE CEMENT SILO #43	SILO	SILO
3	59C-3S3	#7 STORAGE CEMENT SILO #44	SILO	SILO
3	59C-3S4	#7 STORAGE CEMENT SILO #45	SILO	SILO
3	59C-3S5	#7 STORAGE CEMENT SILO #46	SILO	SILO
3	59C-3S6	#7 STORAGE CEMENT SILO #47	SILO	SILO
3	59C-3S7	#7 STORAGE CEMENT SILO #48	SILO	SILO
3	59C-3S8	#7 STORAGE CEMENT SILO #49	SILO	SILO
3	59C-3S9	#7 STORAGE CEMENT SILO #50	SILO	SILO
3	59C-3SA	#7 STORAGE CEMENT SILO #51	SILO	SILO
3	59C-3SB	#7 STORAGE CEMENT SILO #52	SILO	SILO
3	59C-3SC	#7 STORAGE CEMENT SILO #53	SILO	SILO
3	59C-3SD	#7 STORAGE CEMENT SILO #54	SILO	SILO
3	59C-3SE	#7 STORAGE CEMENT SILO #55	SILO	SILO
3	59C-3SF	#7 STORAGE CEMENT SILO #56	SILO	SILO
3	59C-3SG	#7 STORAGE CEMENT SILO #57	SILO	SILO
3	59C-3SH	#7 STORAGE CEMENT SILO #58	SILO	SILO
3	59C-BF1	TOP RAIL SILOS VENT DUST COLLECTOR-NORBLOCFM 7,650	DUST COL-SHIP	APCD
3	59C-DG1	#2 & #4F LINE, RAIL SILO'S, BIN 43, MIDDLE LINE, LEFT HAND 10" SK VALVE, 1ST VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59C-DG2	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, NORTH OR WEST RIGHT HAND 10" SK VALVE, 2ND VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	59C-DG3	#2 & #4F LINE, RAIL SILO'S, BIN 48, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG4	#2 & #4F LINE, RAIL SILO'S, BIN 44, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG5	#2 & #4F LINE, RAIL SILO'S, INTERSTICE 10, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG6	#2 & #4F LINE, RAIL SILO'S, BIN 49, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG7	#2 & #4F LINE, RAIL SILO'S, BIN 45, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG8	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE,NORTH OR WEST RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DG9	#2 & #4F LINE, RAIL SILO'S, BIN 46 OR 50, MIDDLE LINE, RIGHT 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGA	#3F LINE, RAIL SILO'S, BIN 43, BOTTOM LINE LEFT HAND 8" SK VALVE, 1ST SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	59C-DGB	#3F LINE, RAIL SILO'S, BOTTOM LINE, NORTH OR WEST RIGHT HAND 8" SK VALVE, 2ND VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	59C-DGC	#3F LINE, RAIL SILO'S, BIN 48, BOTTOM LINE RIGHT HAND 8" SK VALVE, 3RD SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	59C-DGD	#3F LINE, RAIL SILO'S, BIN 44, BOTTOM LINE LEFT HAND 8" SK VALVE, 4TH SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	59C-DGE	#3F LINE, RAIL SILO'S, BIN 10, BOTTOM LINE RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGF	#3F LINE, RAIL SILO'S, BIN 49, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGG	#3F LINE, RAIL SILO'S, BIN 45, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGH	#3F LINE, RAIL SILO'S, BOTTOM LINE, NORTH OR WEST RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGI	#3F LINE, RAIL SILO'S, BIN 50, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGJ	#2 & #4F LINE, RAIL SILO'S, BIN 47, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGK	#2 & #4F LINE, RAIL SILO'S, BIN 51, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGL	#2 & #4F LINE, RAIL SILO'S, BIN 52, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGM	#2 & #4F LINE, RAIL SILO'S, BIN 55 OR 56, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGN	#2 & #4F LINE, RAIL SILO'S, BIN 53, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59C-DGP	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, BIN #57 OR 58 LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGQ	#3F LINE, RAIL SILO'S, BIN 47, BOTTOM LINE-RIGHT HAND 8" SK VALVE, 1ST	TRANSPORT VALVE	CSTP
3	59C-DGR	#3F LINE, RAIL SILO'S, BIN 51, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGS	#3F LINE, RAIL SILO'S, BIN 52, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGT	#3F LINE, RAIL SILO'S, BIN 55, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGU	#3F LINE, RAIL SILO'S, BOTTOM LINE, BIN 53 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGV	#3F LINE, RAIL SILO'S, BIN 54, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGW	#3F LINE, RAIL SILO'S, BIN 58, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-DGX	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, LEFT HAND 10" SK VALVE	GATE	CSTP
3	59C-DGY	#2 & #4F LINE, RAIL SILO'S, BIN 54, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG1	TRANSFER LINE, RAIL SILOS, BIN 47, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG2	TRANSFER LINE, RAIL SILOS, BLOCK LINE FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG3	TRANSFER LINE, RAIL SILOS, BIN 48, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG4	TRANSFER LINE. RAIL SILOS, LINE BLOCK FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG5	TRANSFER LINE, RAIL SILOS, BIN 44, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SG6	TRANSFER LINE, RAIL SIL0S, LINE BLOCK FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	59C-SG7	TRANSFER LINE, RAIL SILOS, INTERTICE 10, FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	59C-SG8	TRANSFER LINE, RAIL SILOS, LINE BLOCK FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	59C-SG9	TRANSFER LINE, RAIL SILOS, BIN 49, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59C-SGA	TRANSFER LINE, RAIL SILOS, BIN 46, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	59D-3S1	#5 STORAGE CEMENT SILO #25	SILO	SILO
3	59D-3S2	#5 STORAGE CEMENT SILO #26	SILO	SILO
3	59D-3S3	#5 STORAGE CEMENT SILO #27	SILO	SILO
3	59D-3S4	#5 STORAGE CEMENT SILO #28	SILO	SILO
3	59D-3S5	#5 STORAGE CEMENT SILO #29	SILO	SILO
3	59D-3S6	#5 STORAGE CEMENT SILO #30	SILO	SILO
3	59D-3S7	#5 STORAGE CEMENT SILO #31	SILO	SILO
3	59D-3S8	#5 STORAGE CEMENT SILO #32	SILO	SILO
3	59D-3S9	#5 STORAGE CEMENT SILO #33	SILO	SILO
3	59D-3SA	#5 STORAGE CEMENT SILO #34	SILO	SILO

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59D-3SB	#5 STORAGE CEMENT SILO #35	SILO	SILO
3	59D-3SC	#5 STORAGE CEMENT SILO #36	SILO	SILO
3	59D-BF1	#5 CEM STG-PH SILO VENT DUST COL-MIKROPUL-CFM 10,000	DUST COL-SHIP	APCD
3	59D-DG2	#2F LINE, #5 STORAGE, BIN #36, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59D-DG3	#2F LINE, #5 STORAGE, BIN #34, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59D-DG4	#2F LINE, #5 STORAGE, BIN #32, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59D-DG5	#2F LINE, #5 STORAGE, BIN #30, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59D-DG6	#2F LINE, #5 STORAGE, BIN #28 OR BIN #26, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	59D-FV1	#5 STORAGE FLAP VALVE ON DUST COLLECTOR 520 59D-BF1	VALVE-FLOW	CSTP
3	59D-SC1	#5 STORAGE SCREW CONVATOR FOR DUST COLLECTOR 520 (59D-BF1)	SCREW-SHIPPING	CSTP
3	59D-SG1	#1F LINE, #5 STORAGE, BIN #25, 8" LINE (NORTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SG2	#1F LINE, #5 STORAGE, BIN #27, 8" LINE (NORTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SG3	#1F LINE, #5 STORAGE, BIN #26, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SG4	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SG5	#2F LINE, #5 STORAGE, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SG6	#2F LINE, #5 STORAGE, BIN #31, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SG7	#2F LINE, #5 STORAGE, 8" (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SG8	#2F LINE, #5 STORAGE, BIN #33, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SG9	#2F LINE, #5 STORAGE, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SGA	#2F LINE, #5 STORAGE, BIN #35, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	59D-SGB	#1F LINE, #5 STORAGE, BIN #28, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGC	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGD	#1F LINE, #5 STORAGE, BIN #29, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGE	#1F LINE, #5 STORAGE, BIN #30, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGF	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGG	#1F LINE, #5 STORAGE, BIN #31, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	59D-SGH	#1F LINE, #5 STORAGE, BIN #32, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGI	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGJ	#1F LINE, #5 STORAGE, BIN #33, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGK	#1F LINE, #5 STORAGE, BIN #34, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGL	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGM	#1F LINE, #5 STORAGE, BIN #35, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGN	#1F LINE, #5 STORAGE, BIN #36, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	59D-SGP	#1F LINE, #5 STORAGE, 8" LINE (SOUTH SIDE) SLIDE GATE	GATE	CSTP
3	59D-SGQ	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE TO (SOUTH SIDE)	GATE	CSTP
3	59D-SGR	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE	GATE	CSTP
3	59D-SGS	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE FOR BIN #29	GATE	CSTP
3	59D-SGT	#1F LINE, #5 STORAGE, 8" LINE (NORTH SIDE) SLIDE GATE	GATE	CSTP
3	L10-BCA	GYPSUM BELT CONV #1-SILO F-24"-JEFFERY	BELT-COAL-GYP	CSTP
3	L10-BCB	GYPSUM BELT CONV #2-SILO F & K- 24"-EHRSAM	BELT-COAL-GYP	CSTP
3	L10-BCC	REVERSIBLE GYP BELT TO SILOS G & H 24"	BELT-COAL-GYP	CSTP

OPERATION PROCEDURES FOR THE Cement Manufacture System

The operation of the system is conducted in accordance with the equipment vendor and/or in-house guidelines. The detailed procedures for system operation are contained in the Standard Operating Procedures (SOP) SOP-FM1, SOP-FM2, SOP-FM3 and SOP-FM4.

MONITORING REQUIREMENTS FOR THE Cement Manufacture System

Table 4.4-2 contains the monitoring requirements for the various affected source types included in the raw meal preparation system. Figures 4-1 through 4-3 are flow charts describing the monitoring requirement procedures for each affected source type.

TABLE 4.4-2
EMISSION LIMITS AND OPERATING PARAMETERS
FOR THE CEMENT MANUFACTURE SYSTEM

Affected Source Type	Parameter	Limit	Monitoring Requirement
Finish Mill	**Opacity**	**10 %**	**Daily Method 22 Tests. See Figure 4-1.**
Group 1 Transfer Points	**Opacity**	**10 %**	**None**
Group 2 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of CSTP or building. See Figure 4-2 for testing of the source or Figure 4-3 for testing the building/structure.**
Group 3 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of PMCD. See Figure 4-2.**
Storage Bins	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests. See Figure 4-2.**

MAINTENANCE PROCEDURES FOR THE CEMENT MANUFACTURE SYSTEM

Preventive maintenance (PM) at the facility is conducted in accordance with historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) which serves as a guideline for prioritizing maintenance and preventing failures of general types of process equipment at the plant. Refer to Section 3.0 for details.

CORRECTIVE ACTION PROGRAM

A corrective action program has been developed and implemented to properly diagnose, repair, and document equipment malfunctions. Corrective action will be initiated within 1 hour after a malfunction is identified and will be completed within a reasonable time after its initiation.
The corrective action program includes performing the following steps to implement any corrective action.

1) Identification that a malfunction is occurring, or has occurred, that may have caused, or is causing, excess emissions.
2) A maintenance notification/malfunction form is initiated
3) A work order is generated, if necessary
4) The repair or necessary process adjustment is completed
5) If the equipment was stopped in order to complete the repair, it is brought back into operation. The operation is observed to ensure that it starts and continues to operate as expected.
6) The work order/maintenance notification/malfunction form is closed out by inputting the following information:
   a. The symptom of the malfunction
   b. The cause of the malfunction
   c. The start and end time for the malfunction, and
   d. The description of the repair completed

PACKING, DISPATCH, AND DISTRIBUTION

PROCESS DESCRIPTION

This section is applicable to the shipping of cement products in bulk via bags, rail or truck from silos 6007 through 6066. There are several subsystems that withdraw bulk cement or grancem from railcars, blend from storage silo to storage silo, withdraw bulk cement from the storage silos, transport the cement to several loading points and deposit the cement in the transport vehicle.

The major components of the systems include screw conveyors, material pumps, airslides, bucket elevators, loading spouts and packers.

The HAC code numbers for the packing, dispatch, and distribution system range from 61X-XXX to 6EX-XXX. This includes the following affected source types: conveying system transfer points, storage bins, and baghouse PMCDs.

Table 4.5-1 provides a list of the affected sources in the system.

TABLE 4.5-1
PACKING, DISPATCH, AND DISTRIBUTION SYSTEM
AFFECTED SOURCES

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	61A-3B1	SURGE BIN FOR 223 PUMP ON MAIN FLOOR OF #2 CEMENT STORAGE	BIN/HOPPER	BIN
3	61A-3B2	# 2 CEMENT STRORAGE RECYLING BIN	BIN/HOPPER	BIN
3	61A-BE1	#2 CEM STG ELEV & DRIVE BELT -- NW ELEVATOR	ELEVATORS	CSTP
3	61A-BF1	DUST COLLECTOR ON MAIN FLOOR OF #2 CEMENT STORAGE	DUST COL-SHIP	APCD
1	61A-RF1	ROTARY AIRLOCK FOR DUST COLLECTOR DISCHARGE SCREW IN #2 CEMENT STORAGE	AIRLOCK	CSTP
1	61A-RF2	ROTARY AIRLOCK SILO #18	AIRLOCK	CSTP
1	61A-RF3	ROTARY AIRLOCK SILO #15	AIRLOCK	CSTP
1	61A-RF6	ROTARY AIRLOCK SILO #17	AIRLOCK	CSTP
1	61A-RF7	ROTARY AIRLOCK - SILO #14	AIRLOCK	CSTP
1	61A-SC1	RECLAIM SCREW CONVEYOR #6 NORTH SILOS-N	SCREW-SHIPPING	CSTP
1	61A-SC2	WEIGH SCREW CONVEYOR SILO #18	SCREW-SHIPPING	CSTP
1	61A-SC3	WEIGH SCREW CONVEYOR SILO #15	SCREW-SHIPPING	CSTP
1	61A-SC4	RECLAIM SCREW CONVEYOR #5 NORTH SILOS-S	SCREW-SHIPPING	CSTP
1	61A-SC5	RECLAIM SCREW CONVEYOR #4 CTR SILOS-N	SCREW-SHIPPING	CSTP
1	61A-SC6	WEIGH SCREW CONVEYOR SILO #17	SCREW-SHIPPING	CSTP
1	61A-SC7	WEIGH SCREW CONVEYOR SILO #14	SCREW-SHIPPING	CSTP
1	61A-SC8	RECLAIM SCREW CONVEYOR #3 CTR SILOS-S	SCREW-SHIPPING	CSTP
1	61A-SC9	RECLAIM SCREW CONVEYOR #2 SOUTH SILOS-N	SCREW-SHIPPING	CSTP
1	61A-SCA	RECLAIM SCREW CONVEYOR #1 SOUTH SILOS-S	SCREW-SHIPPING	CSTP
1	61A-SCB	CROSS SCREW CONVEYOR #7	SCREW-SHIPPING	CSTP
1	61A-SCC	RECLAIM SCREW CONVEYOR #7	SCREW-SHIPPING	CSTP
1	61A-SCD	RECLAIM SCREW CONVEYOR #6	SCREW-SHIPPING	CSTP
1	61A-SCE	RECLAIM SCREW CONVEYOR #5	SCREW-SHIPPING	CSTP
1	61A-SCF	#2 CEM STG CROSS SCREW CONV #2 (LEFT HANDED SCREW)	SCREW-SHIPPING	CSTP
1	61A-SCG	#2 CEM STG RECLAIM SCREW CONV # 4	SCREW-SHIPPING	CSTP
1	61A-SCH	SCREW CONVEYOR UNDER SCREEN SCREW	SCREW-SHIPPING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	61A-SCI	BULK LOADING SCREW CONVEYOR (S), LOADOUT	SCREW-SHIPPING	CSTP
1	61A-SCJ	DUST COLLECTOR DISCHARGE SCREW FOR 21-1-220 DUST COLLECTOR IN #2 CEMENT STORAGE	SCREW-SHIPPING	CSTP
1	61A-SG2	SLIDE GATE ABOVE PUMP IN BASEMENT OF #1 OLD PACKHOUSE	SLIDE GATES	CSTP
1	61A-SY1	#2 CEMENT STORAGE SCREENING SCREW	SCREW-SHIPPING	CSTP
1	621-AS1	#1 BAY SOUTH AIRSLIDE FROM BIN #41	TRUCK LOADING	CSTP
1	621-AS2	#1 BAY AIRSLIDE FROM BIN #39	TRUCK LOADING	CSTP
1	621-AS3	#1 BAY AIRSLIDE FROM BIN #1	TRUCK LOADING	CSTP
1	621-AS4	#1 BAY NORTH AIRSLIDE FROM BIN #37	TRUCK LOADING	CSTP
3	621-BF1	EAST LOADING DUST COLLECTOR OLD SILOS-NORBLO-CFM 1,100/ CONVERTED BY BHA TO PULSE JET.	DUST COL-SHIP	APCD
3	621-FV1	EAST OLD TRUCK TIPPING VALVE FOR DUST COLLECTOR 621-BF1 (113)	VALVE-FLOW	CSTP
3	621-LA1	EAST LOADING SPOUT #1 BAY OLD SILOS	TRUCK LOADING	CSTP
1	621-PG1	BAY #1, BIN #41, BIN VALVE	TRUCK LOADING	CSTP
1	621-PG2	BAY #1, BIN #39, BIN VALVE	TRUCK LOADING	CSTP
1	621-PG3	BAY #1, BIN #1, BIN VALVE	TRUCK LOADING	CSTP
1	621-PG4	BAY #1, BIN #37, BIN VALVE	TRUCK LOADING	CSTP
1	621-SG1	EAST OLD TRUCK SILO #41 SLIDE GATE	GATE	CSTP
1	621-SG2	EAST OLD TRUCK SILO #39 SLIDE GATE	GATE	CSTP
1	621-SG3	EAST OLD TRUCK SILO #1 SLIDE GATE	GATE	CSTP
1	621-SG4	EAST OLD TRUCK SILO #37 SLIDE GATE	GATE	CSTP
1	622-AS1	#2 BAY SOUTH AIRSLIDE FROM BIN #42	TRUCK LOADING	CSTP
1	622-AS2	#2 BAY AIRSLIDE FROM BIN #2	TRUCK LOADING	CSTP
1	622-AS3	#2 BAY AIRSLIDE FROM BIN #40	TRUCK LOADING	CSTP
1	622-AS4	#2 BAY NORTH AIRSLIDE FROM BIN #38	TRUCK LOADING	CSTP
3	622-BF1	WEST LOADING DUST COLLECTOR	DUST COL-SHIP	APCD
3	622-FV1	WEST OLD TRUCK TIPPING VALVE FOR DUCT COLLECTOR 622-BF1 (111)	VALVE-FLOW	CSTP
3	622-LA1	WEST LOADING SPOUT #2 BAY-OLD SILOS	TRUCK LOADING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	622-LC1	LUMP GRINDER, BIN #38, BAY 2	TRUCK LOADING	CSTP
1	622-PG1	BAY #2, BIN #42, BIN VALVE	TRUCK LOADING	CSTP
1	622-PG2	BAY #2, BIN #2, BIN VALVE	TRUCK LOADING	CSTP
1	622-PG3	BAY #2, BIN #40, BIN VALVE	TRUCK LOADING	CSTP
1	622-PG4	BAY #2, BIN #38, BIN VALVE	TRUCK LOADING	CSTP
1	622-SG1	WEST OLD TRUCK SILO #42 SLIDE GATE	GATE	CSTP
1	622-SG2	WEST OLD TRUCK SILO #2 SLIDE GATE	GATE	CSTP
1	622-SG3	WEST OLD TRUCK SILO #40 SLIDE GATE	GATE	CSTP
1	622-SG4	WEST OLD TRUCK SILO #38 SLIDE GATE	GATE	CSTP
1	623-AS1	BAY #3 SOUTH AIRSLIDE FROM BIN #63	TRUCK LOADING	CSTP
1	623-AS2	BAY #3 AIRSLIDE FROM BIN #61	TRUCK LOADING	CSTP
1	623-AS3	BAY #3 AIRSLIDE FROM BIN #3	TRUCK LOADING	CSTP
1	623-AS4	BAY #3 NORTH AIRSLIDE FROM BIN #59	TRUCK LOADING	CSTP
3	623-BF1	DUST COLLECTOR LOAD EAST ROW-MIKROPUL	DUST COL-SHIP	APCD
3	623-FV1	EAST NEW TRUCK TIPPING VALVE FOR DUST COLLECTOR 623-BF1 (233)	VALVE-FLOW	CSTP
3	623-LA1	LOADING SPOUT CENTER EAST ROW #3 BAY	TRUCK LOADING	CSTP
1	623-LC1	LUMP GRINDER, BIN #63, BAY 3	TRUCK LOADING	CSTP
1	623-PG1	BAY #3, BIN #63, BIN VALVE	TRUCK LOADING	CSTP
1	623-PG2	BAY #3, BIN #61, BIN VALVE	TRUCK LOADING	CSTP
1	623-PG3	BAY #3, BIN #3, BIN VALVE	TRUCK LOADING	CSTP
1	623-PG4	BAY #3, BIN #59, BIN VALVE	TRUCK LOADING	CSTP
1	623-SG1	EAST NEW TRUCK SILO #63 SLIDE GATE	GATE	CSTP
1	623-SG2	EAST NEW TRUCK SILO #61 SLIDE GATE	GATE	CSTP
1	623-SG3	EAST NEW TRUCK SILO #3 SLIDE GATE	GATE	CSTP
1	623-SG4	EAST NEW TRUCK SILO #59 SLIDE GATE	GATE	CSTP
1	624-AS1	BAY #4 SOUTH AIRSLIDE FROM BIN #64	TRUCK LOADING	CSTP
1	624-AS2	BAY #4 AIRSLIDE FROM BIN #4	TRUCK LOADING	CSTP
1	624-AS3	BAY #4 AIRSLIDE FROM BIN #62	TRUCK LOADING	CSTP
1	624-AS4	BAY #4 NORTH AIRSLIDE FROM BIN #60	TRUCK LOADING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	624-BF1	DUST COLLECTOR NEW SILOS WEST ROW-MIKROPUL	DUST COL-SHIP	APCD
3	624-FV1	WEST NEW TRUCK TIPPING VALVE FOR DUCT COLLECTOR 624-BF1 (232)	VALVE-FLOW	CSTP
3	624-LA1	LOADING SPOUT CENTER WEST ROW #4 BAY	TRUCK LOADING	CSTP
1	624-PG1	BAY #4, BIN #64, BIN VALVE	TRUCK LOADING	CSTP
1	624-PG2	BAY #4, BIN #4, BIN VALVE	TRUCK LOADING	CSTP
1	624-PG3	BAY #4, BIN #62, BIN VALVE	TRUCK LOADING	CSTP
1	624-PG4	BAY #4, BIN #60, BIN VALVE	TRUCK LOADING	CSTP
1	624-SG1	WEST NEW TRUCK SILO #64 SLIDE GATE	GATE	CSTP
1	624-SG2	WEST NEW TRUCK SILO #4 SLIDE GATE	GATE	CSTP
1	624-SG3	WEST NEW TRUCK SILO #62 SLIDE GATE	GATE	CSTP
1	624-SG4	WEST NEW TRUCK SILO #60 SLIDE GATE	GATE	CSTP
1	631-AS1	RAIL SILO SOUTH AIRSLIDE BIN #43	AIRSLIDE	CSTP
1	631-AS2	RAIL SILO SOUTH AIRSLIDE BIN #44	AIRSLIDE	CSTP
1	631-AS3	RAIL SILO SOUTH AIRSLIDE BIN #45	AIRSLIDE	CSTP
1	631-AS4	RAIL SILO SOUTH AIRSLIDE BIN #48	AIRSLIDE	CSTP
1	631-AS5	RAIL SILO SOUTH AIRSLIDE BIN #47	AIRSLIDE	CSTP
1	631-AS6	RAIL SILO SOUTH AIRSLIDE BIN #46	AIRSLIDE	CSTP
1	631-AS7	RAIL SILO SOUTH AIRSLIDE BIN #49	AIRSLIDE	CSTP
1	631-AS8	RAIL SILO SOUTH AIRSLIDE BIN #50	AIRSLIDE	CSTP
1	631-AS9	RAIL SILO SOUTH GATHERING AIRSLIDE FOR SILOS 46,50,45,&49	AIRSLIDE	CSTP
1	631-ASA	RAIL SILO SOUTH GATHERING AIRSLIDE FOR BINS 44,48,34&47	AIRSLIDE	CSTP
1	631-ASB	RAIL SILO SOUTH AIRSLIDE TO SPOUT 631-CG1	AIRSLIDE	CSTP
3	631-BF1	RAIL SILO SOUTH LOADING DUST COL-NORBLO-CFM 3,000/ CONVERTED BY BHA TO PULSE	DUST COL-SHIP	APCD
3	631-FV1	RAIL SILO SOUTH TIPPING VALVE FOR DUST COLLECTOR 631-BF1 (728)	VALVE-FLOW	CSTP
1	631-PG1	SOUTH BAY, BIN 43, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG2	SOUTH BAY, BIN 44, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG3	SOUTH BAY, BIN 45, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG4	SOUTH BAY, BIN 48, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG5	SOUTH BAY, BIN 47, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG6	SOUTH BAY, BIN 46, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	631-PG7	SOUTH BAY, BIN 49, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-PG8	SOUTH BAY, BIN 50, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	631-SG1	RAIL SILO SOUTH BIN #43 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG2	RAIL SILO SOUTH BIN #44 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG3	RAIL SILO SOUTH BIN #45 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG4	RAIL SILO SOUTH BIN #48 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG5	RAIL SILO SOUTH BIN #47 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG6	RAIL SILO SOUTH BIN #46 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG7	RAIL SILO SOUTH BIN #49 SLIDE GATE	RAIL LOADING	CSTP
1	631-SG8	RAIL SILO SOUTH BIN #50 SLIDE GATE	RAIL LOADING	CSTP
1	632-AS1	RAIL SILO NORTH AIRSLIDE BIN #51	AIRSLIDE	CSTP
1	632-AS2	RAIL SILO NORTH AIRSLIDE BIN #52	AIRSLIDE	CSTP
1	632-AS3	RAIL SILO NORTH AIRSLIDE BIN #53	AIRSLIDE	CSTP
1	632-AS4	RAIL SILO NORTH AIRSLIDE BIN #54	AIRSLIDE	CSTP
1	632-AS5	RAIL SILO NORTH AIRSLIDE BIN #55	AIRSLIDE	CSTP
1	632-AS6	RAIL SILO NORTH AIRSLIDE BIN #56	AIRSLIDE	CSTP
1	632-AS7	RAIL SILO NORTH AIRSLIDE BIN #57	AIRSLIDE	CSTP
1	632-AS8	RAIL SILO NORTH AIRSLIDE BIN #58	AIRSLIDE	CSTP
1	632-AS9	RAIL SILO NORTH AIRSLIDE BIN #10	AIRSLIDE	CSTP
1	632-ASA	RAIL SILO NORTH GATHERING AIRSLIDE FOR BINS 51,55,52&56	AIRSLIDE	CSTP
1	632-ASB	RAIL SILO NORTH GATHERING AIRSLIDE FOR BINS 53,57,54&58	AIRSLIDE	CSTP
1	632-ASC	RAIL SILO NORTH AIRSLIDE TO SPOUT 632-CG1 (721)	AIRSLIDE	CSTP
3	632-BF1	RAIL SILO LOADING NORTH-DUST COLLECTOR-NORBLO,CFM-3,000	DUST COL-SHIP	APCD
3	632-FV1	RAIL SILO NORTH TIPPING VALVE FOR DUST COLLECTOR 632-BF1 (725)	VALVE-FLOW	CSTP
1	632-PG1	NORTH BAY, BIN 51, BIN VALVE COMING OUT OF SILO TO AIRSLIDE	RAIL LOADING	CSTP
1	632-PG2	NORTH BAY, BIN 52, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG3	NORTH BAY, BIN 53, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG4	NORTH BAY, BIN 54, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG5	NORTH BAY, BIN 55, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	632-PG6	NORTH BAY, BIN 56, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG7	NORTH BAY, BIN 57, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG8	NORTH BAY, BIN 58, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-PG9	NORTH BAY, BIN 10, BIN VLAVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	632-SG1	RAIL SILO NORTH BIN #51 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG2	RAIL SILO NORTH BIN #52 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG3	RAIL SILO NORTH BIN #53 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG4	RAIL SILO NORTH BIN #54 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG5	RAIL SILO NORTH BIN #55 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG6	RAIL SILO NORTH BIN #56 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG7	RAIL SILO NORTH BIN #57 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG8	RAIL SILO NORTH BIN #58 SLIDE GATE	RAIL LOADING	CSTP
1	632-SG9	RAIL SILO NORTH BIN #10 SLIDE GATE	RAIL LOADING	CSTP
3	661-3B1	EAST SURGE TANK #1	PACKER	CSTP
3	661-3B2	EAST SURGE TANK #2	PACKER	CSTP
3	661-3B3	EAST SURGE TANK #3	PACKER	CSTP
1	661-AS1	EAST AIRSLIDE FOR #1 SURGE TANK	PACKER	CSTP
1	661-AS2	EAST AIRSLIDE FOR #2 SURGE TANK	PACKER	CSTP
1	661-AS3	EAST AIRSLIDE FOR #3 SURGE TANK	PACKER	CSTP
3	661-BF1	#4 PACKHOUSE DUST COLLECTOR FOR #1 PACKER-SLY-CFM-9,490	DUST COL-SHIP	APCD
3	661-BF2	#4 PACKHOUSE DUST COLLECTOR FOR #2 PACKER- SLY-CFM 9,490	DUST COL-SHIP	APCD
3	661-CN1	CYCLONE FOR SURGE TANKS 661-3B1 AND 661-3B2	PACKER	CSTP
3	661-CN2	CYCLONE FOR SURGE TANK 661-3B3	PACKER	CSTP
1	661-MW1	SPILL SCREW FLOP VALVES BELOW #1 PACKING MACHINE (NORTHEAST)	VALVE-FLOW	CSTP
1	661-MW2	SPILL SCREW FLOP VALVES BELOW #2 PACKING MACHINE (SOUTHEAST)	VALVE-FLOW	CSTP
3	661-PM1	#4 PACKHOUSE #1 PACKER SE, TYPE I-IA "47	PACKER	PACKER
3	661-PM2	#4 PACKHOUSE #2 PACKER NE, TYPE I "94"	PACKER	PACKER
1	661-RB1	METER BELT CONVEYOR-24"(EAST)	BELT-PK-PALLET	CSTP
1	661-SC1	#4 PACKHOUSE FEED SCREW CONV #2	SCREW-SHIPPING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
1	661-SC2	#4 PACKHOUSE FEED SCREW CONV #1	SCREW-SHIPPING	CSTP
1	661-SC3	#4 PACKHOUSE #2 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	661-SC4	#4 PACKHOUSE #1 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	661-SY1	#4 PACKHOUSE #2 SCREEN	SCREEN-SHIPPING	CSTP
3	661-SY2	#4 PACKHOUSE #1 SCREEN	SCREEN-SHIPPING	CSTP
3	662-3B1	WEST SURGE TANK #1	PACKER	CSTP
3	662-3B2	WEST SURGE TANK #2	PACKER	CSTP
3	662-3B3	WEST SURGE TANK #3	PACKER	CSTP
1	662-AS1	WEST AIRSLIDE FOR #1 SURGE TANK	PACKER	CSTP
1	662-AS2	WEST AIRSLIED FOR #2 SURGE TANK	PACKER	CSTP
1	662-AS3	WEST AIRSLIDE FOR #3 SURGE TANK	PACKER	CSTP
3	662-BF1	#4 PACKHOUSE DUST COLLECTOR FOR #3 PACKERS-SLY-CFM 9,490	DUST COL-SHIP	APCD
3	662-BF2	#4 PACKHOUSE DUST COLLECTOR FOR #4 PACKERS-SLY-CFM 9,490	DUST COL-SHIP	APCD
3	662-CN1	CYCLONE FOR SURGE TANKS 662-3B1 AND 662-3B2	PACKER	CSTP
3	662-MW1	SPILL SCREW FLOP VALVES BELOW #3 PACKING MACHINE (SOUTHWEST)	VALVE-FLOW	CSTP
3	662-MW2	SPILL SCREW FLOP VALVES BELOW #4 PACKING MACHINE (NORTHWEST)	VALVE-FLOW	CSTP
3	662-PM1	#4 PACKHOUSE #3 PACKER SW, TYPE III & IA	PACKER	PACKER
3	662-PM2	#4 PACKHOUSE #4 PACKER NW (MASONS)	PACKER	PACKER
1	662-RF1	ROTARY FEEDER SILO 30	ROTARY FEEDER	CSTP
1	662-RF2	ROTARY FEEDER SILO 27	ROTARY FEEDER	CSTP
1	662-RF3	ROTARY FEEDER SILO #28	ROTARY FEEDER	CSTP
1	662-RF4	ROTARY FEEDER SILO 25	ROTARY FEEDER	CSTP
1	662-RF5	ROTARY FEEDER SILO 26	ROTARY FEEDER	CSTP
1	662-SC1	HIGH EARLY SCREW CONV. SOUTH	SCREW-SHIPPING	CSTP
1	662-SC2	#5 CEM STG-PH MASON SCREW CONV N.	SCREW-SHIPPING	CSTP
3	662-SC3	#4 PACKHOUSE #4 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	662-SC4	#4 PACKHOUSE #3 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
1	662-SC5	#4 PACKHOUSE FEED SCREW CONV #4	SCREW-SHIPPING	CSTP
1	662-SC6	#4 PACKHOUSE FEED SCREW CONV #3	SCREW-SHIPPING	CSTP

Group Type (1, 2 or 3)	MC HAC	Equipment Description	Equip Key	Source Type
3	662-SY1	#4 PACKHOUSE #4 SCREEN	SCREEN-SHIPPING	CSTP
3	662-SY2	#4 PACKHOUSE #3 SCREEN	SCREEN-SHIPPING	CSTP
2	6E1-HP1	GRANCEM UNLOADING WEST HOPPER	CEMENT STORAGES	CSTP
2	6E1-HP2	GRANCEM UNLOADING EAST HOPPER	CEMENT STORAGES	CSTP

OPERATION PROCEDURES FOR THE PACKING, DISPATCH, AND DISTRIBUTION SYSTEM

The operation of the system is conducted in accordance with the equipment vendor and/or in-house guidelines. The detailed procedures for system operation are contained in the Standard Operating Procedures SOP-RBL, SOP-TBL, SOP-BAG, SOP-1BH, SOP-GUS and SOP-1GT.

MONITORING REQUIREMENTS FOR THE PACKING, DISPATCH, AND DISTRIBUTION SYSTEM

Table 4.5-2 contains the monitoring requirements for the various affected source types included in the system. Figures 4-1 through 4-3 are flow charts describing the monitoring requirement procedures for each affected source type.

TABLE 4.5-2
EMISSION LIMITS AND OPERATING PARAMETERS
FOR THE PACKING, DISPATCH, AND DISTRIBUTION SYSTEM

Affected Source Type	Parameter	Limit	Monitoring Requirement
Group 1 Transfer Points	**Opacity**	**10 %**	**None**
Group 2 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of CSTP or building. See Figure 4-2 for testing of the source or Figure 4-3 for testing the building/structure.**
Group 3 Transfer Points	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests of PMCD. See Figure 4-2.**
Storage Bins	**Opacity**	**10 %**	**Monthly 1-minute Method 22 Tests. See Figure 4-2.**

MAINTENANCE PROCEDURES FOR THE PACKING, DISPATCH, AND DISTRIBUTION SYSTEM

Preventive maintenance (PM) at the facility is conducted in accordance with historical maintenance records, vendor manuals for specific pieces of equipment, and/or the results of a Failure Mode Effects Analysis (FMEA) which serves as a guideline for prioritizing maintenance and preventing failures of general types of process equipment at the plant. Refer to Section 3.0 for details.

CORRECTIVE ACTION PROGRAM

A corrective action program has been developed and implemented to ensure that all equipment malfunctions are properly diagnosed, repaired, and documented.
Corrective action will be initiated as soon as practicable after a malfunction is identified and will be completed within a reasonable time after its initiation.
The corrective action program includes performing the following steps to implement any corrective action.

1) Identification that a malfunction is occurring, or has occurred, that may have caused, or is causing, excess emissions.
2) A maintenance notification/malfunction form is initiated
3) A work order is generated, if necessary
4) The repair or necessary process adjustment is completed
5) If the equipment was stopped in order to complete the repair, it is brought back into operation. The operation is observed to ensure that it starts and continues to operate as expected.
6) The work order/maintenance notification/malfunction form is closed out by inputting the following information:
   a. The symptom of the malfunction
   b. The cause of the malfunction
   c. The start and end time for the malfunction, and
   d. The description of the repair completed

Appendix C: Applicable Limits and Requirements From 40 CFR 63 Subpart LLL

Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry,

Applicability and designation of affected facility

(a) The affected sources subject to this subpart are:
- (1) Each kiln and in-line kiln/raw mill.
- (2) Each clinker cooler.
- (3) Each raw mill.
- (4) Each finish mill.
- (5) Each raw material dryer.
- (6) Each raw material, clinker, or finished product storage bin.
- (7) Each conveying system transfer point.
- (8) Each bagging system.
- (9) Each bulk loading or unloading system.

(b) The first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill.
The primary and secondary crushers and any other equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill, emission unit 0300-4-F.
40 CFR 63.1340

Emission Standards and Operating Limits

Standards for kilns and in-line kiln/raw mills.

(a) The permittee shall not cause to be discharged into the atmosphere from any kiln or in-line kiln/raw mill (including any associated alkali bypass) any gases which:
- (1) Contain particulate matter in excess of 0.15 kg per metric ton (0.30 lb. per ton) of feed (dry basis) to the kiln.
- (2) Exhibit greater than 20 percent opacity.
- (3) Contain D/F (tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans) in excess of:
  - (i) 0.20 ng per dscm (8.7E-11 gr per dscf) (TEQ) corrected to seven percent oxygen: or
  - (ii) 0.40 ng per dscm (1.7E-10 gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to particulate matter control device is 204 ^{o}C (400 ^{o}F) or less.
  40 CFR 63.1343(b)

Operating limits for kilns and in-line kiln/raw mills

(a) The permittee must operate the in-line kiln/raw mill such that:
- (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 paragraph (b) of this section

and established during the performance test when the raw mill was operating is not exceeded.

(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 paragraph (b) of this section and established during the performance test when the raw mill was not operating is not exceeded.

(3) The applicable temperature for the alkali bypass, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraphs (a)(1) through (a)(3)of this section is determined in accordance with **paragraph (b)(3)(iv) of *Performance testing requirements.***

40 CFR 63.1344

Standards for clinker coolers

(a) The permittee shall not cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) exhibit opacity greater than ten (10) percent.

40 CFR 63.1345

Standards for new and reconstructed raw material dryers

The permittee shall not cause to be discharged into the atmosphere from any new or reconstructed raw material dryer any gases which exhibit opacity greater than ten (10) percent.

40 CFR 63.1346

Standards for raw and finish mills

The permittee shall not cause to be discharged into the atmosphere from the mill sweep or air separator air pollution control devices of any raw or finish mill any gases which exhibit opacity greater than ten (10) percent.

40 CFR 63.1347

Standards for affected sources other than kilns; in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills

The permittee shall not cause to be discharged into the atmosphere from any new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; or any existing raw material dryer any gases which exhibit opacity in excess of ten percent.

40 CFR 63.1348

Monitoring and Compliance Provisions

Performance testing requirements

(a) The owner or operator shall demonstrate initial compliance with the above listed emission limits using the test methods and procedures in paragraph (b) of this section and 40 CFR 63.7. Performance tests shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, as well as other relevant information.

The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

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

(b) Performance tests to demonstrate compliance with this subpart shall be conducted as specified in paragraphs (1) to (4) of this section.

(1) The permittee shall demonstrate initial compliance for in-line kiln/raw mill particulate matter emissions by conducting separate performance tests as specified in paragraphs (b)(1)(i) to (b)(1)(iii) of this section while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The permittee shall demonstrate initial compliance for clinker cooler particulate matter emissions by conducting a performance test as specified in paragraphs (b)(1)(i) to (b)(1)(iii) of this section. The opacity exhibited during the period of the Method 5 of Appendix A CFR Part 60 performance tests required by paragraph (b)(1)((i) of this section shall be determined as required in paragraphs (b)(1)(i) through (iv) of this section.

(i) EPA Method 5 of Appendix A CFR Part 60 shall be used to determine Particulate Matter (PM) emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance.

(ii) Suitable methods shall be used to determine the in-line kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using:

$$E=(C_s Q_{sd})/P$$

Where:

E = emission rate of particulate matter, kg/Mg of kiln feed.
C_s = concentration of PM, kg/dscm.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(iv) The opacity exhibited during the Method 5 test required by(b) (1)(i) above shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run and used to demonstrate initial

compliance with the applicable opacity limits of the kiln/raw mill.

(2) The owner or operator of any affected sources subject to limitations on opacity under this subpart that is not subject to (b)(1) of this section shall demonstrate initial compliance with the affected source opacity limit by conducting a test in accordance Method 9 of Appendix A CFR Part 60. The performance test shall be conducted under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. The maximum six-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in compliance with the standard. The duration of the Method 9 performance test shall be 3-hours (30 6-minute averages), except that the duration of the of the Method 9 performance test may be reduced to 1-hour if (a) there are no individual readings greater than 10 percent opacity, and (b) there are no more than three readings of 10 percent for the first 1-hour period.

(3) The owner or operator of an affected source subject to limitations on D/F emissions shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of Appendix A CFR Part 60. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. The duration of each run shall be at least three hours and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln/raw mill Particulate Matter Control Device (PMCD), and the temperature at the inlet to the alkali bypass PMCD must be continuously recorded during the period of the Method 23 test, and the temperature records must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) 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 paragraph (b) of *Operating limits for kilns and in-line kiln/raw mills*.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraph (b)(1) shall be repeated every five years, except that the initial performance test of opacity for the in-line kiln/raw mill and clinker cooler is not required.

(d) Performance tests D/F required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) The owner or operator is required to repeat the performance tests for in-line kiln/raw mills as

specified in paragraphs (b)(1) and (b)(3) of this section within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test.

(f) The table below provides a summary of the performance test requirements of this section. *40 CFR 63.1349*

Summary of Performance Test Requirements

Affected source and pollutant	Performance test
New and existing kiln and in-line kiln/raw mill PM	EPA Method 5[(1)]
New and existing kiln and in-line kiln/raw mill Opacity	COM
New and existing kiln and in-line kiln/raw mill D/F	EPA Method 23[(2)]
New and existing clinker cooler PM	EPA Method 5[(1)]
New and existing clinker cooler Opacity	COM
New and existing raw and finish mill Opacity	EPA Method 9[(1)]
New and existing raw material dryer and materials handling processes(raw material storage, clinker storage, finished product storage, conveyor transfer points, baging, and bulk loading and unloading systems) Opacity	EPA Method 9[(1)]

[(1)] Required initially and every five (5) years thereafter.
[(2)] Required initially and every 30 months thereafter.

<u>Monitoring requirements</u>

(a) The owner or operator of this facility 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 for review and approval as part of the application for a part 70 permit and shall include the following information:
   (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 listed above under *Emission Standards and Operating Limits*;
   (2) Corrective actions to be taken when required by paragraph (e) of this section;
   (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; and
   (4) Procedures to be used to periodically monitor affected sources subject to opacity standards under *Standards for new and reconstructed raw material dryers*, and *Standards for affected sources other than kiln;, in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills*. Such procedures must include the provisions of (a)(4)(i) through (a)(4)(iv) of this section.
      (i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A of 40 CFR 60. The test must be conducted while the affected source is in operation.
      (ii) 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 must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) 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 must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A of 40 CFR 60. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct a Method 22 visible emissions monitoring under this subsection shall not apply to any totally enclosed conveying system transfer point regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of (i) to (iv), above, for each conveying system transfer point within the building or for the building itself, according to (vii) below.

(vii) If visible emissions from a building are monitored, the requirements of (i) through (iv) above apply to the monitoring of the building, and you must also do the following: Test visible emissions from each side, roof and vent of the building for at least one minute. The test must be conducted under normal operating conditions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of the kiln or in-line kiln/raw mill shall monitor opacity where emissions are vented from these affected sources and the alkali bypass.

(1) The owner or operator shall install, calibrate, and continuously operate a continuous opacity monitor (COM) to continuously monitor the opacity of the emissions discharged to the atmosphere. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR 63 Subpart A *General Provisions*, and according to Performance Specifications 1 (PS-1) of 40 CFR 60, Appendix B.

(2) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard.

(d) The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler in accordance with paragraphs (d)(1) and (d)(2) of this paragraph.

(1) The owner or operator shall install, calibrate, and continuously operate a continuous

opacity monitor (COM) to continuously monitor the opacity of the emissions discharged to the atmosphere. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR 63 Subpart A *General Provisions*, and according to Performance Specifications 1 (PS-1) of 40 CFR 60, Appendix B.

(2) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

(e) The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and separator PMCDs of these affected sources, in accordance with the procedures of Method 22 of 40 CFR 60, Appendix A . The Method 22 test shall be conducted while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during the Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operations and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and

(2) Within 22 hours of the end of the Method 22 test in which visible emissions were observed, conduct a visual opacity test of each stack from which visible emissions were observed in accordance with Method 9 of 40 CFR 60, Appendix A. The duration of the Method 9 test shall be thirty minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in (b)(3)(iv) of *Performance testing requirements*.

(ii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) 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 readings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of each kiln or in-line kiln/raw mill at least once per year.

(h) The owner or operator of an affected source subject to a limitation on opacity under *Standards for new and reconstructed raw material dryers*, and *Standards for affected sources other than kiln;, in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills* shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph (a) of this section.

(i) The owner or operator of an affected source subject to a particulate matter standard under *Standards for kilns and in-line kiln/raw mills* shall install, calibrate, maintain and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. The compliance deadline for installing the PM CEMS and all requirements relating to performance of the PM CEMS and implementation of the PM CEMS is deferred pending further rulemaking.

(j) An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of this subpart, except for emission standards for THC, subject to the provisions of paragraphs (j)(1) to (j)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (j)(3)(i) through (j)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculateed; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later.

The Administrator will not approve an alternative monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to prove or disprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart. *40 CFR 63.1350*

Reporting, and Recordkeeping

Reporting requirements

(a) 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 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 for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in Sec. 63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by Sec. 63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by Sec. 63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by Sec. 63.1349.

(3) As required by Sec. 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 Sec. 63.6(i) shall submit such reports by the dates specified in the written extension of compliance.

(4) As required by Sec. 63.10(d)(5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in Sec. 63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports;

and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(6) As required by Sec. 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 Sec. 63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by Sec. 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 Sec. 63.7 and described in Sec. 63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under Sec. 63.8(e).

(8) As required by Sec. 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.

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in Sec. 63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in Sec. 63.1344(a) and (b);

(ii) All failures to calibrate thermocouples and other temperature sensors as required under Sec. 63.1350(f)(7) of this subpart; and

(iii) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under Sec. 63.1344(c).

(iv) The results of any combustion system component inspections conducted within the reporting period as required under Sec. 63.1350(i).

(v) All failures to comply with any provision of the operation and maintenance plan developed in accordance with Sec. 63.1350(a).

(10) 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

<u>Recordkeeping requirements</u>

(a) The permittee 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 Sec. 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.

(b) The owner or operator shall maintain records for each affected source as required by Sec. 63.10(b)(2) and (b)(3) of this part; and
   (1) All documentation supporting initial notifications and notifications of compliance status under Sec. 63.9;
   (2) All records of applicability determination, including supporting analyses; and
   (3) If the owner or operator has been granted a waiver under Sec. 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(c) 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 Sec. 63.10(c).
40 CFR 63.1355

<u>Temporary, conditioned exemption from particulate matter and opacity standards</u>

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from:
   (1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.
   (2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The permittee must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted.
The plan must include:
   (1) The number of test conditions and the number of runs for each test condition;
   (2) The target particulate matter emission level for each test condition;
   (3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and
   (4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with Sec. 63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in Sec. 63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional

information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

(e) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs and conditions.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.
40 CFR 63.1357

Delegation of authority

(a) In delegating implementation and enforcement authority to a State under subpart E of this part, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States:

(1) Approval of alternative non-opacity emission standards under Sec. 63.6(g).
(2) Approval of alternative opacity standards under Sec. 63.6(h)(9).
(3) Approval of major changes to test methods under Secs. 63.7(e)(2)(ii) and 63.7(f). A major change to a test method is a modification to a federally enforceable test method that uses unproven technology or procedures or is an entirely new method (sometimes necessary when the required test method is unsuitable).
(4) Approval of major changes to monitoring under Sec. 63.8(f). A major change to monitoring is a modification to federally enforceable monitoring that uses unproven technology or procedures, is an entirely new method (sometimes necessary when the required monitoring is unsuitable), or is a change in the averaging period.
(5) Waiver of recordkeeping under Sec. 63.10(f).
40 CFR 63.1358

Authority for Requirement: 40 CFR 63 Subpart LLL and Subpart A
567 IAC 23.1(4)"bl"

Appendix D. HAC Code Cross Reference Table

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**221-BC2**	221-BC1	CLAY DISCHARGE BELT CONVEYOR-24" EHRSAM	BELT-CLAY	CSTP
3	**221-BC3**	221-BC2	CLAY BELT CONV A-123-20”-JEFFERY	BELT-CLAY	CSTP
3	**2EA-BC1**	221-BC3	CLAY BELT CONV B-124-20”-JEFFERY	BELT-CLAY	CSTP
3	**221-BE1**	221-BE1	CLAY DISCHARGE ELEVATOR-CHAIN BELT	ELEVATORS	CSTP
3	**221-BF3**	221-BF3	CLAY TRANSFER BLDG-DUST COLLECTOR	DUST COL	APCD
3	**221-CH1**	221-CH1	CLAY DRYER CHUTE FEEDER	DRYER	CSTP
3	**221-DR1**	221-DR1	CLAY DRYER-11 X 100-A-C MFG.CO	DRYER	DRYER
3	**221-EP1**	221-EP1	CLAY ELECTROSTATIC PRECIPITATOR-WHEELABRATOR-FRYE INC.	PRECIPITATOR	APCD
1	**221-FV2**	221-FV2	FLAP VALVE BELOW 221-BF3 DUST COLLECTOR	VALVE-FLOW	CSTP
1	**221-FV3**	221-FV3	FLAP VALVE BELOW 221-BF4 DUST COLLECTOR	VALVE-FLOW	CSTP
1	**221-HP1**	221-HP1	CLAY DRYER HOPPER	DRYER	CSTP
3	**221-MC1**	221-MC1	CLAY MULTICLONE DUST COLLECTOR	DUST COL-CLAY	APCD
3	**221-MC2**	221-MC2	SCREEN MULTICONE DUST COLLECTOR-CLAY	DUST COL-CLAY	APCD
1	**221-RF1**	221-RF1	ROTARY FEEDER FOR 32-1-231 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	**221-RF2**	221-RF2	ROTARY FEEDER FOR 32-1-232 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	**221-RF3**	221-RF3	ROTARY FEEDER FOR 32-1-233 CLAY FEEDER DUST SCREW CONVEYOR	ROTARY FEEDER	CSTP
1	**221-RF4**	221-RF4	ROTARY FEEDER BELOW 221-SC4 SCREW CONVEYOR ON CLAY DRYER MULTICLONE	SCREW-CLAY	CSTP
1	**2EA-SG1**	2EA-SG1	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3S1 SILO	GATE	CSTP
1	**2EA-SG2**	2EA-SG2	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3B2 SILO	GATE	CSTP
1	**2EA-SG3**	2EA-SG3	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3S3 SILO	GATE	CSTP
1	**2EA-SG4**	2EA-SG4	SLIDE GATE BETWEEN 2E1-DB1 AND 2E1-3B4 SILO	GATE	CSTP
3	**2EA-DB1**	2EA-DB1	DISTRIBUTION BOX TO SILO 2E1-3S1, 2E1-3S2, 2E1-3S3, 2E1-3S4 & 2E1-3B5	GATE	CSTP
3	**2EA-BF2**	2EA-BF2	CLAY SILOS TOP OF MILL DUST COLLECTOR – MIKROPUL – CFM 4,000	DUST COL-CLAY	APCD
3	**2EA-BC1**	2EA-BC1	CLAY BETL CONV B-124-20”-JEFFERY	BETL-CLAY	CSTP
3	**221-SC1**	221-SC1	CLAY HOPPER DUST SCREW CONV 9" SOUTH	SCREW-CLAY	CSTP
3	**221-SC2**	221-SC2	CLAY HOPPER DUST SCREW CONV CENTER	SCREW-CLAY	CSTP
3	**221-SC3**	221-SC3	CLAY HOPPER SCREW CONV 9" NORTH	SCREW-CLAY	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**221-SC4**	221-SC4	CLAY MULTICLONE SCREW CONV	SCREW-CLAY	CSTP
3	**221-SC5**	221-SC5	CLAY GATHERING SCREW 12" CONV	SCREW-CLAY	CSTP
3	**221-SC6**	221-SC6	CLAY RETURN DUST SCREW	SCREW-CLAY	CSTP
3	**22-VS1**	221-VS1	CLAY SCREEN-TYLER F-600 SER.#7088	SCREEN	CSTP
3	**221-AF1**	251-AF1	CLAY APRON FEEDER-CHAIN BELT	APRON	CSTP
3	**221-BC1**	251-BC1	CLAY BELT-DRYER FEED CONVEYOR-24"-EHRSAM	BELT-CLAY	CSTP
3	**332-BC1**	332-BC1	#2 RAW MILL FEED BELT - 24" - JEFFERY-EHRSAM	BELTS-RAW	CSTP
3	**332-BF1**	332-BF1	2 RAW MILL FEED DUST COLLECTOR-MIKROPUL-CFM 4,500	DUST COL-RAW	APCD
3	**362-MW1**	332-DG1	DISTRIBUTION GATE TO 362-BE1 OR 362-BE2 BUCKET ELEVATOR #2 RAW MILL	GATE	CSTP
2	**332-RF2**	332-RF2	#2R ASH ROTARY FEEDER	ROTARY FEEDER	CSTP
2	**332-SC1**	332-SC1	#2 RAW FEED DUST COL SCREW	SCREW-RAW	CSTP
2	**332-SC2**	332-SC2	#2R ASH DISCHARGE SCREW TO MAIN FEED BELT	SCREW-RAW	CSTP
2	**332-WF1**	332-WF1	#2 RAW MILL LIMESTONE BELT SILO #4 - 36"	BELTS-RAW	CSTP
2	**332-WF2**	332-WF2	#2 RAW MILL SAND BELT SILO #5 - 24"	BELTS-RAW	CSTP
2	**332-WF3**	332-WF3	#2 RAW MILL KAOLIN BELT SILO #6 - 24" RAMSEY ENGINEERING	BELTS-RAW	CSTP
2	**332-WF4**	332-WF4	#2 RAW MILL IRON ORE BELT-24"	BELTS-RAW	CSTP
2	**332-WF5**	332-WF5	#2 RAW ASH WEIGH FEEDER	BELTS-RAW	CSTP
3	**333-BC1**	333-BC1	#3 RAW FEED BELT CONV-24" JEFFERY MFG.	BELTS-RAW	CSTP
3	**333-BF1**	333-BF1	#3 RAW FEED BELT DC-MIKROPUL-CFM 4,500	DUST COL-RAW	APCD
3	**333-FV1**	333-FV1	FLAP VALVE BELOW 333-BF1 DUST COLLECTOR	VALVE-FLOW	CSTP
2	**333-RF1**	333-RF1	#3 RAW MILL CLAY SILO 3 ROTARY FEEDER	ROTARY FEEDER	CSTP
2	**333-RF2**	333-RF2	#3 RAW MILL ASH ROTARY FEEDER	ROTARY FEEDER	CSTP
3	**333-SC1**	333-SC1	#3 RAW FEED BELT DUST COL SCREW CONVEYOR	SCREW-RAW	CSTP
2	**333-SC2**	333-SC2	ASH DISCHARGE SCREW CONVEYOR TO MAIN FEED BELT #3 RAW MILL	SCREW-RAW	CSTP
2	**333-WF1**	333-WF1	#3 RAW MILL LIMESTONE FEEDER-30"-RAMSEY ENG.	BELTS-RAW	CSTP
2	**333-WF2**	333-WF2	#3 RAW MILL SAND FEEDER SILO 2-24"-RAMSEY ENG. SER.#336	BELTS-RAW	CSTP
2	**333-WF3**	333-WF3	#3 RAW MILL KAOLIN FEEDER SILO 3-24"-RAMSEY ENG. SER.#335	BELTS-RAW	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
2	**333-WF4**	333-WF4	#3 RAW IRON ORE WEIGH FEEDER 55'8"	BELTS-RAW	CSTP
2	**333-WF5**	333-WF5	#3 RAW MILL ASH WEIGH FEEDER	BELTS-RAW	CSTP
3	**362-BF1**	362-BF1	#2 RAW MILL EAST DUST COLLECTOR-NORBLO-CFM 35,000/ CONVERTED BY BHA TO Reverse air	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.01 #2 RAW MILL EAST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.02 #2 RAW MILL EAST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.03 #2 RAW MILL EAST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.04 #2 RAW MILL EAST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.05 #2 RAW MILL EAST DUST COLLECTOR #5 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.06 #2 RAW MILL EAST DUST COLLECTOR #6 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.07 #2 RAW MILL EAST DUST COLLECTOR #7 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.08 #2 RAW MILL EAST DUST COLLECTOR #8 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.09 #2 RAW MILL EAST DUST COLLECTOR #9 COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.0A #2 RAW MILL EAST DUST COLLECTOR #A COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.0B #2 RAW MILL EAST DUST COLLECTOR #B COMP	DUST COL-RAW	APCD
3	**362-BF1**	362-BF1	.0C #2 RAW MILL EAST DUST COLLECTOR #C COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	#2 RAW MILL WEST DUST COLLECTOR-NORBLO-CFM 35,000/ CONVERTED BY BHA TO	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.01 #2 RAW MILL WEST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.02 #2 RAW MILL WEST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.03 #2 RAW MILL WEST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.04 #2 RAW MILL WEST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.05 #2 RAW MILL WEST DUST COLLECTOR #5 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.06 #2 RAW MILL WEST DUST COLLECTOR #6 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.07 #2 RAW MILL WEST DUST COLLECTOR #7 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.08 #2 RAW MILL WEST DUST COLLECTOR #8 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.09 #2 RAW MILL WEST DUST COLLECTOR #9 COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.0A #2 RAW MILL WEST DUST COLLECTOR #A COMP	DUST COL-RAW	APCD
3	**362-BF2**	362-BF2	.0B #2 RAW MILL WEST DUST COLLECTOR #B COMP	DUST COL-RAW	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**362-BF2**	362-BF2	.0C #2 RAW MILL WEST DUST COLLECTOR #C COMP	DUST COL-RAW	APCD
3	**362-BM1**	362-BM1	RAW MILL #2	RAW MILL	RAW MILL
1	**362-FV1**	362-FV1	FLAP VALVE #1 EAST SEPARATOR #2 RAW MILL TO MILL	VALVE-FLOW	CSTP
1	**362-FV2**	362-FV2	FLAP VALVE #2 WEST SEPARATOR #2 RAW MILL TO MILL	VALVE-FLOW	CSTP
3	**363-BF1**	363-BF1	#3 RAW MILL (MILL) DUST COLLECTOR-MIKROPUL-CFM 15,000	DUST COL-RAW	APCD
3	**363-BF1**	363-BF1	.01 #3 RAW MILL (MILL) DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	**363-BF2**	363-BF2	#3 RAW MILL EAST SEPARATOR DUST COLLECTOR CENTER-MIKROPUL-CFM 30,000	DUST COL-RAW	APCD
3	**363-BF2**	363-BF2	.01 #3 RAW MILL EAST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	**363-BF2**	363-BF2	.02 #3 RAW MILL EAST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	**363-BF2**	363-BF2	.03 #3 RAW MILL EAST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	**363-BF2**	363-BF2	.04 #3 RAW MILL EAST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	**363-BF3**	363-BF3	#3 RAW MILL WEST SEPARATOR DUST COLLECTOR MIKROPUL-CFM 30,000	DUST COL-RAW	APCD
3	**363-BF3**	363-BF3	.01 #3 RAW MILL WEST DUST COLLECTOR #1 COMP	DUST COL-RAW	APCD
3	**363-BF3**	363-BF3	.02 #3 RAW MILL WEST DUST COLLECTOR #2 COMP	DUST COL-RAW	APCD
3	**363-BF3**	363-BF3	.03 #3 RAW MILL WEST DUST COLLECTOR #3 COMP	DUST COL-RAW	APCD
3	**363-BF3**	363-BF3	.04 #3 RAW MILL WEST DUST COLLECTOR #4 COMP	DUST COL-RAW	APCD
3	**363-BM1**	363-BM1	RAW MILL #3	RAW MILL	RAW MILL
3	**39A-BF1**	380-BF1	DUST COLLECTOR, HOMO SILOS DUST COLLECTOR TOP OF #3 EAST HOMO	DUST COL-KILNS	APCD
3	**39A-RF1**	380-FD1	FLY ASH ROTARY AIRLOCK	AIRLOCK	CSTP
3	**39A-SC1**	380-SC1	SCREW, HOMO SILOS D.C. EXHAUST SCREW CONVEYOR (380-SC1)	SCREW-KILNS	CSTP
3	**39A-SG2**	380-SG5	DIVERTOR GATE FROM FLY ASH SILO TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
3	**39A-SG5**	380-SG6	DIVERTOR GATE FROM #2 KILN BAGHOUSE WASTE DUST TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
3	**392-FA1**	382-BL1	#2 RAW MILL BLOWER FOR AIRFLOAT 31-2-216,218	BLOWER	CSTP
3	**392-FA2**	382-BL2	#2 RAW MILL BLOWER FOR AIR FLOAT 31-2-217,218	BLOWER	CSTP
3	**41B-BE1**	390-BE1	KILN FEED BIN ELEVATOR-HOMOG.	ELEVATORS	CSTP
3	**41B-BF1**	390-BF1	FEED BIN DUST COLLECTOR-NORBLO-CFM 6,000	DUST COL-KILNS	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**41B-GT1**	390-VV1	GATE ON AIR SLIDE 390-AS1 TO KILN FEED TANKS 1 OR 2	GATE	CSTP
1	**41B-SG1**	391-SG1	SLIDE GATE NORTH HOMOGENIZING SILO	GATE	CSTP
1	**41B-PG2**	391-TV1	VALVE, HOMO DISCHARGE FLOW CONTROL N SILO	VALVE-FLOW	CSTP
1	**41B-VA1**	391-VM1	NORTH HOMOGENIZING SILO VALVE #1	VALVE-FLOW	CSTP
1	**41B-VA2**	391-VM2	NORTH HOMOGENIZING SILO VALVE #2	VALVE-FLOW	CSTP
1	**41B-VA3**	391-VM3	NORTH HOMOGENIZING SILO VALVE #3	VALVE-FLOW	CSTP
1	**41B-VA4**	391-VM4	NORTH HOMOGENIZING SILO VALVE #4	VALVE-FLOw	CSTP
1	**392-FV1**	392-FV1	FLAP VALVE #1 EAST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB2	VALVE-FLOW	CSTP
1	**392-FV2**	392-FV2	FLAP VALVE #2 EAST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB2	VALVE-FLOW	CSTP
1	**392-FV3**	392-FV3	FLAP VALVE #3 WEST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB1	VALVE-FLOW	CSTP
1	**392-FV4**	392-FV4	FLAP VALVE #4 WEST SEPARATOR #2 RAW MILL TO DISTRIBUTION BOX 392-DB1	VALVE-FLOW	CSTP
1	**392-SG1**	392-SG1	FIGURE 8 VALVE BETWEEN 382-PU1 AND NORTH HOMOGENIZING SILO	VALVE-FLOW	CSTP
1	**41B-PG2**	392-TV1	VALVE, HOMO DISCHARGE FLOW CONTROL S SILBLO-CFM 6,000	VALVE-FLOW	CSTP
1	**393-FV1**	393-FV1	FLAP VALVE BETWEEN 393-SC1 SCREW CONVEYOR AND 383-AS1 AIRSLIDE	VALVE-FLOW	CSTP
1	**393-FV2**	393-FV2	FLAP VALVE BELOW EAST SEPARATOR D.C. SCREW CONVEYOR	MILL-RAW-MISC	CSTP
1	**393-FV3**	393-FV3	FLAP VALVE BELOW WEST SEPARATOR D.C. SCREW CONVEYOR	MILL-RAW-MISC	CSTP
1	**393-FV4**	393-FV4	FLAP VALVE BETWEEN 363-SR1 SEPARATOR AND 383-AS3 AIRSLIDE	VALVE-FLOW	CSTP
1	**393-FV5**	393-FV5	FLAP VALVE BETWEEN 363-SR1 SEPARATOR AND 383-AS1 AIRSLIDE	VALVE-FLOW	CSTP
1	**39A-FV1**	39A-FV1	FLAP VALVE BETWEEN 380-CN1 CYCLONE AND 380-AS1 AIRSLIDE	VALVE-FLOW	CSTP
2	**39A-SG1**	39A-SG1	SLIDE GATE BETWEEN ASH SILO AND ROTARY FEEDER 380-FD1	GATE	CSTP
1	**39A-SG3**	39A-SG3	DIVERTOR GATE FROM FLY ASH SILO TO #3 EAST HOMOGENIZING SILO	GATE	CSTP
1	**39A-SG4**	39A-SG4	DIVERTOR GATE FROM ASH SILO TO #1 NORTH HOMOGENIZING SILO	GATE	CSTP
3	**3EA-3S1**	3EA-3S1	ASH SILO	FLY ASH	SILO
3	**3EA-3S2**	3EA-3S2	ASH SILO (C) FOR #2 RAW MILL	SILO	SILO
3	**3EA-3S3**	3EA-3S3	ASH SILO (A) FOR #3 RAW MILL	SILO	SILO
3	**3EA-3S4**	3EA-3S4	ASH SILO #8	SILO	SILO

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**41A-3S1**	41A-3S1	KILN FEED SILO #1 NORTH	SILO	SILO
1	**41A-3S2**	41A-3S2	KILN FEED SILO #2 SOUTH	SILO	SILO
1	**41B-AS1**	41B-AS1	AIRSLIDE AND LEVEL BOX AT HOMO SILOS-FULLER	AIRSLIDE	CSTP
3	**422-BF1**	422-BF1	#2 KILN BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 300,000	DUST COL-KILNS	APCD
3	**422-BF1**	422-BF1	.05 #2 KILN BAG HOUSE #1 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.06 #2 KILN BAG HOUSE #2 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.07 #2 KILN BAG HOUSE #3 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.08 #2 KILN BAG HOUSE #4 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.09 #2 KILN BAG HOUSE #5 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0A #2 KILN BAG HOUSE #6 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0B #2 KILN BAG HOUSE #7 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0C #2 KILN BAG HOUSE #8 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0D #2 KILN BAG HOUSE #9 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0E #2 KILN BAG HOUSE #10 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0F #2 KILN BAG HOUSE #11 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0G #2 KILN BAG HOUSE #12 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0H #2 KILN BAG HOUSE #13 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0I #2 KILN BAG HOUSE #14 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0J #2 KILN BAG HOUSE #15 COMPT.	SCREW-KILNS	CSTP
3	**422-BF1**	422-BF1	.0K #2 KILN BAG HOUSE #16 COMPT.	SCREW-KILNS	CSTP
1	**422-MW1**	422-MW1	#2 KILN DISTRIBUTION GATE BETWEEN SOUTH RETURN DUST SCREW AND INCLINE DUST SCREW	GATE	CSTP
2	**422-RF1**	422-RF1	#2 KILN WASTE DUST ROTARY FEEDER	AIRLOCK	CSTP
3	**422-SC1**	422-SC1	#2 KILN BREECHING DUST SCREW CONV	SCREW-KILNS	CSTP
1	**422-SC2**	422-SC2	#2 KILN NORTH RETURN DUST SCREW CONV	SCREW-KILNS	CSTP
1	**422-SC3**	422-SC3	#2 KILN SOUTH RETURN DUST SCREW CONV	SCREW-KILNS	CSTP
1	**422-SC4**	422-SC4	#2 KILN INCLINE DUST SCREW CONV	SCREW-KILNS	CSTP
3	**422-SC5**	422-SC5	#2 KILN DUST SCREW #1 COMPT. (NW)	SCREW-KILNS	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**422-SC5**	422-SC5	#2 KILN DUST SCREW #1 COMPT. (NW)	SCREW-KILNS	CSTP
3	**422-SC6**	422-SC6	#2 KILN DUST SCREW #2 COMPT. (SW)	SCREW-KILNS	CSTP
3	**422-SC7**	422-SC7	#2 KILN DUST SCREW #3 COMPT.	SCREW-KILNS	CSTP
3	**422-SC8**	422-SC8	#2 KILN DUST SCREW #4 COMPT.	SCREW-KILNS	CSTP
3	**422-SC9**	422-SC9	#2 KILN DUST SCREW #5 COMPT.	SCREW-KILNS	CSTP
3	**422-SCA**	422-SCA	#2 KILN DUST SCREW #6 COMPT.	SCREW-KILNS	CSTP
3	**422-SCB**	422-SCB	#2 KILN DUST SCREW #7 COMPT.	SCREW-KILNS	CSTP
3	**422-SCC**	422-SCC	#2 KILN DUST SCREW #8 COMPT.	SCREW-KILNS	CSTP
3	**422-SCD**	422-SCD	#2 KILN DUST SCREW #9 COMPT.	SCREW-KILNS	CSTP
3	**422-SCE**	422-SCE	#2 KILN DUST SCREW #10 COMPT.	SCREW-KILNS	CSTP
3	**422-SCF**	422-SCF	#2 KILN DUST SCREW #11 COMPT.	SCREW-KILNS	CSTP
3	**422-SCG**	422-SCG	#2 KILN DUST SCREW #12 COMPT.	SCREW-KILNS	CSTP
3	**422-SCH**	422-SCH	#2 KILN DUST SCREW #13 COMPT.	SCREW-KILNS	CSTP
3	**422-SCI**	422-SCI	#2 KILN DUST SCREW #14 COMPT.	SCREW-KILNS	CSTP
3	**422-SCJ**	422-SCJ	#2 KILN DUST SCREW #15 COMPT.	SCREW-KILNS	CSTP
3	**422-SCK**	422-SCK	#2 KILN DUST SCREW #16 COMPT.	SCREW-KILNS	CSTP
3	**422-3K1**	422-SK1	# 2 KILN FEED END STACK	STACK	Stack
3	**422-WF1**	422-WF1	#2 KILN DUST RETURN WEIGH SCREW	SCREW-KILNS	CSTP
1	**423-BE1**	423-BE1	#3 KILN DUST RETURN ELEVATOR; CHAIN IS #1251 WITH G117 ATTACHMENTS, STOCK	ELEVATORS	CSTP
3	**423-BF1**	423-BF1	#3 KILN BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 175,000	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.07 #3 KILN BAG HOUSE #1 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.08 #3 KILN BAG HOUSE #3 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.09 #3 KILN BAG HOUSE #5 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0A #3 KILN BAG HOUSE #7 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0B #3 KILN BAG HOUSE #9 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0C #3 KILN BAG HOUSE #2 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0D #3 KILN BAG HOUSE #4 COMP.	DUST COL-KILNS	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**423-BF1**	423-BF1	.0E #3 KILN BAG HOUSE #6 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0F #3 KILN BAG HOUSE #8 COMP.	DUST COL-KILNS	APCD
3	**423-BF1**	423-BF1	.0G #3 KILN BAG HOUSE #10 COMP.	DUST COL-KILNS	APCD
3	**423-BF3**	423-BF3	#3 KILN FEED DUST COLLECTOR-MIKROPUL-CFM 5,800	DUST COL-KILNS	APCD
3	**423-3B2**	423-BI2	#3 KILN WASTE DUST BIN 2	HOMOGENIZING	CSTP
1	**423-MC1**	423-CN1	#3 KILN FEED MULTICYCLONE	DUST COL-KILNS	APCD
3	**423-MW1**	423-DG1	#3 KILN DIVERTOR GATE (DISCHARGE OF 33-1-319 ELEVATOR)	GATE	CSTP
3	**423-FV1**	423-DG2	#3 KILN WASTE DUST DUST COLLECTOR DISCHARGE DIVERTING GATE	GATE	CSTP
1	**4D3-PP1**	423-PU1	#3 KILN WASTE DUST PUMP 8" H2	PUMP-FK	CSTP
1	**423-SC1**	423-SC1	#3 KILN NORTH BREECHING SCREW CONV	SCREW-KILNS	CSTP
1	**423-SC2**	423-SC2	#3 KILN SOUTH BREECHING SCREW CONV	SCREW-KILNS	CSTP
1	**423-SC3**	423-SC3	#3 KILN BREECHING GATHERING SCREW CONV	SCREW-KILNS	CSTP
1	**423-SC4**	423-SC4	#3 KILN MULTICONE DUST SCREW CONV	SCREW-KILNS	CSTP
1	**423-SC5**	423-SC5	#3 KILN INCLINE DUST SCREW CONV TO THE WEIGH SCREW.	SCREW-KILNS	CSTP
1	**423-SC6**	423-SC6	#3 KILN BAGHOUSE GATHERING SCREW CONV	SCREW-KILNS	CSTP
1	**423-SC7**	423-SC7	#3 KILN DUST SCREW #1 COMPT	SCREW-KILNS	CSTP
3	**423-SC8**	423-SC8	#3 KILN DUST SCREW #3 COMPT	SCREW-KILNS	CSTP
3	**423-SC9**	423-SC9	#3 KILN DUST SCREW #5 COMPT	SCREW-KILNS	CSTP
3	**423-SCA**	423-SCA	#3 KILN DUST SCREW #7 COMPT	SCREW-KILNS	CSTP
3	**423-SCB**	423-SCB	#3 KILN DUST SCREW #9 COMPT	SCREW-KILNS	CSTP
3	**423-SCC**	423-SCC	#3 KILN DUST SCREW #2 COMPT	SCREW-KILNS	CSTP
3	**423-SCD**	423-SCD	#3 KILN DUST SCREW #4 COMPT	SCREW-KILNS	CSTP
3	**423-SCE**	423-SCE	#3 KILN DUST SCREW #6 COMPT	SCREW-KILNS	CSTP
3	**423-SCF**	423-SCF	#3 KILN DUST SCREW #8 COMPT	SCREW-KILNS	CSTP
3	**423-SCG**	423-SCG	#3 KILN DUST SCREW #10 COMPT	SCREW-KILNS	CSTP
1	**4D3-RT1**	423-SG1	ROTARY GATE ON WASTE DUST BIN #2	HOMOGENIZING	CSTP
1	**423-SG1**	423-SG1	SLIDE GATE ON WASTE DUST BIN TO EMERGENCY DUMP	GATE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**423-WF1**	423-WF1	WASTE DUST WEIGH SCREW - DUMPS INTO ELEVATOR 33-1-319	SCREW-KILNS	CSTP
3	**432-BC1**	432-BC2	SPILLAGE RETURN BELT TO 204 BELT	BELTS-KILN	CSTP
3	**432-BF1**	432-BF1	#2 KILN FEED DUST COLLECTOR-MIKROPUL-3,000 CFM	DUST COL-KILNS	APCD
3	**422-BF2**	432-BF2	#2 KILN FEED ELEV DUST COLLECTOR-MIKROPUL	DUST COL-KILNS	APCD
3	**432-BW1**	432-BW1	#2 KILN #2 FEED BELT WITH SCALE -30"	BELTS-KILN	CSTP
3	**422-FV1**	432-FV1	FLAP VALVE ON DUST COLLECTOR 211 (422-BF2)	VALVE-FLOW	CSTP
3	**432-FV1**	432-FV1	FLAP VALVE ON DUCT COLLECTOR 209 (432-BF1)	VALVE-FLOW	CSTP
2	**432-HP1**	432-HP1	HOPPER FOR SPILLAGE RETURN BELT TO 204 BELT	BIN/HOPPER	CSTP
1	**432-RF1**	432-RF1	#2 KILN ROTARY AUXILIARY KILN FEEDER UNDER #2 FEED TANK	BELTS-KILN	CSTP
1	**432-PG1**	432-TV1	MV-39 BALL VALVE, BETWEEN #2 FEED TANK AND LEVEL BOX.	V-BALL VALVE	CSTP
1	**432-PG2**	432-TV2	MV-40 BALL VALVE, BETWEEN LEVEL BOX AND 203 FEED BELT.	V-BALL VALVE	CSTP
1	**432-VA1**	432-VX1	#2 KILN FEED BIN #2 VALVE FOR THROTTLE GATE (432-PG1)	VALVE-FLOW	CSTP
1	**432-VA2**	432-VX2	#2 KILN FEED VALVE FOR THROTTLE GATE (433-PG2) ON AIRSLIDE 203	VALVE-FLOW	CSTP
3	**433-3B1**	433-3B1	KILN FEED LEVEL BOX	KILNS	CSTP
3	**433-BF1**	433-BF1	#3 KILN FEED DUST COLLECTOR-PUMP ROOM-MIKROPUL-CFM 3,000	DUST COL-KILNS	APCD
3	**433-FV1**	433-FV1	FLAP VALVE ON DUST COLLECTOR 328 (433-BF1)	VALVE-FLOW	CSTP
1	**433-FV2**	433-FV2	#3 KILN FEED FLAP VALVE ON CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
3	**433-PP1**	433-PU1	#3 KILN FEED PUMP #1 WEST 9 1/2 Z	PUMP-FK	CSTP
3	**433-PP2**	433-PU2	#3 KILN FEED PUMP #2 EAST 9 1/2 Z	PUMP-FK	CSTP
1	**433-PG1**	433-SG1	#3 KILN FEED BIN #1 THROTTLE GATE	GATE	CSTP
1	**433-SG1**	433-SG1	#3 KILN FEED SLIDE GATE BETWEEN AIRSLIDE (433-AS4) AND FEED PUMP 308 (433-PP1)	GATE	CSTP
1	**433-PG3**	433-SG2	#3 KILN FEED BIN #2 THROTTLE GATE	GATE	CSTP
1	**433-SG2**	433-SG2	#3 KILN FEED SLIDE GATE BETWEEN AIRSLIDE (433-AS4) AND FEED PUMP 309 (433-pp2)	GATE	CSTP
3	**433-SX1**	433-SX1	#3 KILN FEED SCREW CONVEYOR BELOW 307 (433-WF1) BELT TO AIRSLIDE 433-AS4	SCREW-KILNS	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**433-PG2**	433-TV1	8" BALL VALVE OUT OF NORTH SILO #1 AND AFTER #33-1-303 AIRSLIDE.	V-BALL VALVE	CSTP
1	**433-PG4**	433-TV2	8" BALL VALVE OUT OF SOUTH #2 TANK AND AFTER #33-1-304 AIRSLIDE.	V-BALL VALVE	CSTP
1	**433-PG5**	433-TV3	#3 KILN FEED THROTTLE GATE ON AIRSLIDE (433-AS3) TO WEIGHT BELT 307 (433-WF1)	GATE	CSTP
1	**433-VA1**	433-VA1	#3 KILN FEED BIN #1 VALVE FOR THROTTLE GATE (433-PG1)	VALVE-FLOW	CSTP
1	**433-VA3**	433-VA3	#3 KILN FEED BIN #2 VALVE FOR THROTTLE GATE (433-PG3)	VALVE-FLOW	CSTP
1	**433-VA6**	433-VA6	#3 KILN FEED AIR VALVE FEED PUMP 309 (433-PP2) TO CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
1	**433-VA7**	433-VV1	#3 KILN FEED AIR VALVE FEED PUMP 308 (433-PP1) TO CYCLONE 315 (433-CN1)	VALVE-FLOW	CSTP
1	**433-VA2**	433-VX1	#3 KILN FEED VALVE FOR THROTTLE GATE (433-PG2) ON AIRSLIDE 303	VALVE-FLOW	CSTP
1	**433-VA4**	433-VX2	#3 KILN FEED VALVE FOR THROTTLE GATE (433-PG4) ON AIRSLIDE 304	VALVE-FLOW	CSTP
1	**433-VA5**	433-VX3	#3 KILN FEED VALVE FOR THROTTLE GATE 433-PG5	VALVE-FLOW	CSTP
3	**433-WF1**	433-WF1	#3 KILN LEVEL BOX WEIGH FEEDER-30"	BELTS-KILN	CSTP
3	**462-KL1**	462-KL1	#2 KILN	KILNS	KILN
3	**433-CN1**	463-AL1	#3 KILN CYCLONE DUST COLLECTOR	DUST COL-KILNS	APCD
3	**463-KL1**	463-KL1	#3 KILN	KILNS	KILN
2	**L11-3B1**	L10-B12	#2 KILN COAL TANK	KILNS	CSTP
2	**L11-3B2**	L10-B13	#3 KILN COAL TANK	COAL-GYPCOKE	CSTP
2	**L11-BC1**	L10-BC1	CG2 COAL BELT CONV A-24"-JEFFERY MFG.	BELT-COAL-GYP	CSTP
2	**L11-BC2**	L10-BC2	COAL BELT CONV B-EAST/WEST CG3- 24"-JEFFERY	BELT-COAL-GYP	CSTP
2	**L11-BC3**	L10-BC3	COAL RECLAIM FEEDER BELT	BELT-COAL-GYP	CSTP
2	**L11-BC4**	L10-BC5	COAL RECLAIM CONVEYOR. 24"- CARRIER-CONVEYOR	BELT-COAL-GYP	CSTP
2	**L11-BC5**	L10-BC6	COAL BELT CONV-CG 4-24"-NOTT CO.	BELT-COAL-GYP	CSTP
2	**2EA-BF1**	L10-BF1	DUST COLLECTOR-COAL TRANS BLDG-TRANSFER TOWER DC	DUST COL-COAL	APCD
2	**L11-MB1**	L10-BP1	BELT PLOW ON CG2 FIRST PLOW FROM COAL/GYPSUM HOPPER	COAL-GYP-COKE	CSTP
2	**L11-MB2**	L10-BP2	BELT PLOW ON CG2 SECOND PLOW FROM COAL/GYPSUM HOPPER	COAL-GYP-COKE	CSTP
2	**K1A-MB1**	L10-BP5	BELT PLOW ON BELT 121 TO GO ON TO BELT 1	COAL-GYP-COKE	CSTP
2	**K1A-MB2**	L10-BP6	BELT PLOW ON BELT 121 TO GO TO CLINKER SILOS OR GYPSUM SILO #K	COAL-GYP-COKE	CSTP
2	**L11-VF1**	L10-VF1	RAIL CAR UNLOADING FEEDER	COAL-GYP-COKE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
2	**L11-HP1**	L11-HP1	COAL/GYPSUM SHAKER HOPPER	COAL-GYP-COKE	CSTP
3	**472-BF1**	472-BF1	#2 KILN COOLER BAGHOUSE	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.01 #2 KILN COOLER BAGHOUSE EAST COMP. #1	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.02 #2 KILN COOLER BAGHOUSE WEST COMP. #2	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.03 #2 KILN COOLER BAGHOUSE EAST COMP. #3	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.04 #2 KILN COOLER BAGHOUSE WEST COMP. #4	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.05 #2 KILN COOLER BAGHOUSE EAST COMP. #5	DUST COL-KILNS	APCD
3	**472-BF1**	472-BF1	.06 #2 KILN COOLER BAGHOUSE WEST COMP. #6	DUST COL-KILNS	APCD
3	**472-GQ1**	472-CC1	#2 KILN CLINKER COOLER-FULLER	COOLER-CLINKER	COOLER
3	**492-FVA**	472-CHA	#2 KILN COOLER TIPPING VALVE (A) NORTH COMP. #1	COOLER-CLINKER	CSTP
3	**492-FVB**	472-CHB	#2 KILN COOLER TIPPING VALVE (B) SOUTH COMP. #1	COOLER-CLINKER	CSTP
3	**492-FVC**	472-CHC	#2 KILN COOLER TIPPING VALVE (C) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	**492-FVD**	472-CHD	#2 KILN COOLER TIPPING VALVE (D) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	**492-FVE**	472-CHE	#2 KILN COOLER TIPPING VALVE (E) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	**492-FVF**	472-CHF	#2 KILN COOLER TIPPING VALVE (F) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	**492-FVG**	472-CHG	#2 KILN COOLER TIPPING VALVE (G) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	**492-FVH**	472-CHH	#2 KILN COOLER TIPPING VALVE (H) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	**492-FVI**	472-CHI	#2 KILN COOLER TIPPING VALVE (I) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	**492-FVJ**	472-CHJ	#2 KILN COOLER TIPPING VALVE (J) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	**492-FVK**	472-CHK	#2 KILN COOLER TIPPING VALVE (K) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	**492-FVL**	472-CHL	#2 KILN COOLER TIPPING VALVE (L) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	**492-FVM**	472-CHM	#2 KILN COOLER TIPPING VALVE (M) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	**492-FVN**	472-CHN	#2 KILN COOLER TIPPING VALVE (N) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	**492-FVO**	472-CHO	#2 KILN COOLER TIPPING VALVE (O) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	**492-FVP**	472-CHP	#2 KILN COOLER TIPPING VALVE (P) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	**492-FVQ**	472-CHQ	#2 KILN COOLER TIPPING VALVE (Q) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	**492-FVR**	472-CHR	#2 KILN COOLER TIPPING VALVE (R) SOUTH COMP. #5	COOLER-CLINKER	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**492-FVS**	472-CHS	#2 KILN COOLER TIPPING VALVE (S) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	**492-FVT**	472-CHT	#2 KILN COOLER TIPPING VALVE (T) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	**492-FVU**	472-CHU	#2 KILN COOLER TIPPING VALVE (U) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	**492-FVV**	472-CHV	#2 KILN COOLER TIPPING VALVE (V) SOUTH COMP. #6	COOLER-CLINKER	CSTP
3	**492-FVW**	472-CHW	#2 KILN COOLER TIPPING VALVE (W) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	**492-FVX**	472-CHX	#2 KILN COOLER TIPPING VALVE (X) SOUTH COMP. #6	COOLER-CLINKER	CSTP
3	**492-FVY**	472-CHY	#2 KILN COOLER TIPPING VALVE (Y) NORTH COMP. #6	COOLER-CLINKER	CSTP
3	**492-FVZ**	472-CHZ	#2 KILN COOLER TIPPING VALVE (Z) SOUTH COMP. #6	COOLER-CLINKER	CSTP
2	**492-CV1**	472-DC1	#2 KILN COOLER DRAG CONV-NORTH	DRAGS	CSTP
2	**492-CV2**	472-DC2	#2 KILN COOLER DRAG CONV-SOUTH	DRAGS	CSTP
3	**472-DP1**	472-DP1	OLD #2 KILN COOLER MULTICLONE DUST COLLECTOR NOW USED AS A DROP BOX	DUST COL-KILNS	APCD
3	**492-FV1**	472-FV1	TIPPING VALVE #2 KILN COOLER BELOW HEAT EXCHANGER SCREW CONVEYOR 492-SC9	VALVE-FLOW	CSTP
3	**492-FV2**	472-FV2	TIPPING VALVE #2 KILN COOLER BAGHOUSE EAST GATHERING SCREW 492-SC7	VALVE-FLOW	CSTP
3	**492-FV3**	472-FV3	TIPPING VALVE #2 KILN COOLER BAGHOUSE WEST GATHERING SCREW CONVEYOR 492-SC8	VALVE-FLOW	CSTP
3	**492-SC1**	472-SC1	#2 KILN COOLER BAGHOUSE EAST COMP. #1 SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC2**	472-SC2	#2 KILN COOLER BAGHOUSE WEST COMP. #2 SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC3**	472-SC3	#2 KILN COOLER BAGHOUSE EAST COMP. #3 SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC4**	472-SC4	#2 KILN COOLER BAGHOUSE WEST COMP. #4 SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC5**	472-SC5	#2 KILN COOLER BAGHOUSE EAST COMP. #5 SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC6**	472-SC6	#2 KILN COOLER BAGHOUSE WEST COMP. #6 SCREW CONV.	SCREW-KILNS	CSTP
1	**492-SC7**	472-SC7	#2K BH EAST COLL. GATHERING SCREW CONV.	SCREW-KILNS	CSTP
1	**492-SC8**	472-SC8	#2K BH WEST COLL. GATHERING SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SC9**	472-SC9	#2 KILN HEAT EXCHANGER HOPPER SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SCA**	472-SCA	#2K HEAT EXCH. WEST COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SCB**	472-SCB	#2K HEAT EXCH. CENTER COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	**492-SCC**	472-SCC	#2K HEAT EXCH. EAST COLL. SCREW CONV.	SCREW-KILNS	CSTP
3	**473-BF1**	473-BF1	#3 KILN COOLER BAGHOUSE DUST COLLECTOR-WHEELABRATOR-CFM 83,800	DUST COL-KILNS	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**473-BF1**	473-BF1	.01 #3 KILN COOLER BAGHOUSE EAST COMP. #1	DUST COL-KILNS	APCD
3	**473-BF1**	473-BF1	.02 #3 KILN COOLER BAGHOUSE WEST COMP. #2	DUST COL-KILNS	APCD
3	**473-BF1**	473-BF1	.03 #3 KILN COOLER BAGHOUSE EAST COMP. #3	DUST COL-KILNS	APCD
3	**473-BF1**	473-BF1	.04 #3 KILN COOLER BAGHOUSE WEST COMP. #4	DUST COL-KILNS	APCD
3	**473-BF1**	473-BF1	.05 #3 KILN COOLER BAGHOUSE EAST COMP. #5	DUST COL-KILNS	APCD
3	**473-BF1**	473-BF1	.06 #3 KILN COOLER BAGHOUSE WEST COMP. #6	DUST COL-KILNS	APCD
3	**473-GQ1**	473-CC1	#3 KILN CLINKER COOLER-FULLER	COOLER-CLINKER	COOLER
3	**493-FV5**	473-CHA	#3 KILN COOLER TIPPING VALVE (A) NORTH COMP. #1	COOLER-CLINKER	CSTP
3	**493-FV6**	473-CHB	#3 KILN COOLER TIPPING VALVE (B) SOUTH COMP. #1	COOLER-CLINKER	CSTP
3	**493-FV7**	473-CHC	#3 KILN COOLER TIPPING VALVE (C) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	**493-FV8**	473-CHD	#3 KILN COOLER TIPPING VALVE (D) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	**493-FV9**	473-CHE	#3 KILN COOLER TIPPING VALVE (E) NORTH COMP. #2	COOLER-CLINKER	CSTP
3	**493-FVA**	473-CHF	#3 KILN COOLER TIPPING VALVE (F) SOUTH COMP. #2	COOLER-CLINKER	CSTP
3	**493-FVB**	473-CHG	#3 KILN COOLER TIPPING VALVE (G) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	**493-FVC**	473-CHH	#3 KILN COOLER TIPPING VALVE (H) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	**493-FVD**	473-CHI	#3 KILN COOLER TIPPING VALVE (I) NORTH COMP. #3	COOLER-CLINKER	CSTP
3	**493-FVE**	473-CHJ	#3 KILN COOLER TIPPING VALVE (J) SOUTH COMP. #3	COOLER-CLINKER	CSTP
3	**493-FVF**	473-CHK	#3 KILN COOLER TIPPING VALVE (K) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	**493-FVG**	473-CHL	#3 KILN COOLER TIPPING VALVE (L) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	**493-FVH**	473-CHM	#3 KILN COOLER TIPPING VALVE (M) NORTH COMP. #4	COOLER-CLINKER	CSTP
3	**493-FVI**	473-CHN	#3 KILN COOLER TIPPING VALVE (N) SOUTH COMP. #4	COOLER-CLINKER	CSTP
3	**493-FVJ**	473-CHO	#3 KILN COOLER TIPPING VALVE (O) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	**493-FVK**	473-CHP	#3 KILN COOLER TIPPING VALVE (P) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	**493-FVL**	473-CHQ	#3 KILN COOLER TIPPING VALVE (Q) NORTH COMP. #5	COOLER-CLINKER	CSTP
3	**493-FVM**	473-CHR	#3 KILN COOLER TIPPING VALVE (R) SOUTH COMP. #5	COOLER-CLINKER	CSTP
3	**473-HC1**	473-CR1	#3 KILN CLINKER BREAKER-FULLER	MILL-HAMMER	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
2	**493-CV1**	473-DC1	#3 KILN NORTH COOLER DRAG CONVEYOR-FULLER	DRAGS	CSTP
2	**493-CV2**	473-DC2	#3 KILN SOUTH COOLER DRAG CONVEYOR-FULLER	DRAGS	CSTP
3	**473-DP1**	473-DP1	#3 KILN COOLER BREECHING HOPPER	COOLER-CLINKER	CSTP
3	**493-SC1**	473-SC1	#3 KILN BREECHING SCREW CONVEYOR	SCREW-KILNS	CSTP
3	**493-SC2**	473-SC2	#3 KILN INLET MANIFOLD SCREW CONVEYOR	SCREW-KILNS	CSTP
3	**493-SC3**	473-SC3	#3 KILN NORTH HOPPER SCREW CONV	SCREW-KILNS	CSTP
3	**493-SC4**	473-SC4	#3 KILN SOUTH HOPPER SCREW CONV	SCREW-KILNS	CSTP
1	**493-SC5**	473-SC5	#3 KILN GATHERING SCREW CONV #1	SCREW-KILNS	CSTP
1	**493-SC6**	473-SC6	#3 KILN GATHERING SCREW CONV #2	SCREW-KILNS	CSTP
3	**482-CN1**	482-CN1	#2 KILN CLINKER COOLER CYCLONE FROM COOLER TO COAL MILL	DUST COL-COAL	APCD
3	**482-FV1**	482-FV1	#2 KILN CLINKER COOLER FLAP/TIPPING VALVE BOTTOM OF CYCLONE	VALVE-FLOW	CSTP
3	**482-FV2**	482-FV2	#2 KILN FLAP/TIPPING VALVE BELOW DROP OUT BOX FROM COOLER TO CYCLONE	VALVE-FLOW	CSTP
1	**482-RF1**	482-RF1	#2 KILN COAL MILL CHARGER - RAYMOND 67#	CHARGER	CSTP
1	**482-SG1**	482-SG1	#2 KILN SLIDE GATE BELOW COAL TANK AND WEIGH FEEDER	GATE	CSTP
2	**482-WF1**	482-WF1	#2 KILN COAL FEEDER & SCALE-24"	BELTS-KILN	CSTP
3	**483-CN1**	483-CN1	#3 KILN CLINKER COOLER CYCLONE FROM COOLER TO COAL MILL	DUST COL-COAL	APCD
3	**483-FV1**	483-FV1	#3 KILN CLINKER COOLER FLAP/TIPPING VALVE BOTTOM OF CYCLONE	VALVE-FLOW	CSTP
3	**483-FV2**	483-FV2	#3 KILN FLAP/TIPPING VALVE BELOW DROP OUT BOX FROM COOLER TO CYCLONE	VALVE-FLOW	CSTP
2	**483-WF1**	483-WF1	#3 KILN COAL WEIGH FEEDER-24"	BELTS-KILN	CSTP
3	**49A-BC1**	490-BC1	CLINKER DOME REVERSIBLE BELT ABOVE 33-3-339	BELTS-KILN	CSTP
3	**49A-BC2**	490-BC2	#3 KILN CLINKER BELT-24"	BELTS-KILN	CSTP
3	**49A-BC3**	490-BC3	#3 KILN 343 CLINKER BELT-24"	BELTS-KILN	CSTP
3	**49A-BC4**	490-BC4	33-3-117 KILN CLK BELT CONV #2 TO SILO 11,12-24"	BELTS-KILN	CSTP
3	**49A-BC5**	490-BC5	TOP 7TH TRIPPER BELT CONV-24"	BELTS-KILN	CSTP
3	**49A-BC6**	490-BC6	TOP 7TH,CLK BELT TO SILO 16-24"	BELTS-KILN	CSTP
3	**49A-BC7**	490-BC7	33-3-131 TOP 7TH CLK BELT #5 TO SILO 13-24"	BELTS-KILN	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**49A-BC8**	490-BC8	CLINKER DOME BELT CONV TO TOP DOME 24"-GEN.CONV.	BELTS-KILN	CSTP
3	**49A-BW1**	490-BC9	CLINKER DOME RECLAIM BELT CONVEYOR 30" GEN. CONV.	BELTS-KILN	CSTP
3	**49A-CF1**	490-BF1	CLINKER DOME DUST COL FOR FEEDER 313-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-CF2**	490-BF2	CLINKER DOME DUST COL FOR FEEDER 312-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-CF3**	490-BF3	CLINKER DOME DUST COL FOR FEEDER 311-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-CF4**	490-BF4	CLINKER DOME DUST COL FOR FEEDER 310-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-CF5**	490-BF5	CLINKER DOME DUST COL FOR FEEDER 309-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-CF6**	490-BF6	CLINKER DOME DUST COL FOR FEEDER 308 NORTH-FLUIDFLO	DUST COL-KILNS	APCD
3	**49A-BF7**	490-BF7	CLINKER DOME DUST COLLECTOR-TOWER 4-MIKROPUL MODEL 64-5-8-20	DUST COL-KILNS	APCD
3	**49A-BF8**	490-BF8	DUST COLLECTOR-TOP OF DOME	DUST COL-DOME	APCD
3	**49A-BF9**	490-BF9	CLINKER TRANSFER DUST COLLECTOR-TRIPLE ELEVATORS-MIKROPUL-CFM 5,000	DUST COL-KILNS	APCD
3	**49A-BFA**	490-BFA	CLINKER DUST COLL. AT DISCHARGE END OF 339 BELT. MIKROPUL-CFM 8,600	DUST COL-KILNS	APCD
3	**49A-BFB**	490-BFB	SEC CRUSHER DUST COL TFR TOWER-BHA CONVERSION OF NORBLO-CFM 2,000	DUST COL-ROCK	APCD
3	**49A-BFC**	490-BFC	CLINKER TRANSFER TOWER DC (117/343)NORBLO-CFM 2,000	DUST COL-COAL	APCD
3	**49A-BFD**	490-BFD	#1 FINISH MILL TOP CLK SILO DUST COLLECTOR-NORBLO-CFM-4,000	DUST COL-FIN	APCD
3	**49A-BFE**	490-BFE	#2 FINISH MILL DUST COL ON 7TH-MIKROPUL	DUST COL-FIN	APCD
3	**49A-BFF**	490-BFF	#3 FINISH MILL DUST COL-TOP CLK SILO-NORBLO-CFM 3,400	DUST COL-FIN	APCD
3	**49A-BFG**	490-BFG	#3 KILN CLINKER VIB CONV DUST COL-MIKROPUL-CFM 8,600	DUST COL-KILNS	APCD
3	**49A-SC1**	490-SC1	DUST COL SCREW CONV FOR 33-3-360 DUST COLL. AT 339 DISCHARGE END.	SCREW-KILNS	CSTP
3	**49A-TR1**	490-TR1	TOP 7TH-TRIPPER	BELTS-KILN	CSTP
3	**49A-VF1**	490-VF1	VIBRATING FEEDER (CLINKER RECLAIM SOUTH)	VIBRATE FEEDER	CSTP
3	**49A-VF2**	490-VF2	VIRATING FEEDER (CLINKER RECLAIM TUNNEL)	VIBRATE FEEDER	CSTP
3	**49A-VF3**	490-VF3	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL)	VIBRATE FEEDER	CSTP
3	**49A-VF4**	490-VF4	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL	VIBRATE FEEDER	CSTP
3	**49A-VF5**	490-VF5	VIBRATING FEEDER (CLINKER RECLAIM TUNNEL	VIBRATE FEEDER	CSTP
3	**49A-VF6**	490-VF6	VIBRATING FEEDER (CLINKER RECLAIM NORTH	VIBRATE FEEDER	CSTP
3	**492-PN1**	492-AC1	#2 KILN PAN CONVEYOR	PAN CONVEYOR	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**492-FV4**	492-FV4	.01 TIPPING VALVE #1, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	**492-FV4**	492-FV4	.02 TIPPING VALVE #2, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	**492-FV4**	492-FV4	.03 TIPPING VALVE #3, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	**492-FV4**	492-FV4	.04 TIPPING VALVE #4, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO COOLER	VALVE-FLOW	CSTP
3	**492-FV5**	492-FV5	.01 TIPPING VALVE #1, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3	**492-FV5**	492-FV5	.02 TIPPING VALVE #2, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3	**492-FV5**	492-FV5	.03 TIPPING VALVE #3, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW	CSTP
3	**492-FV5**	492-FV5	.04 TIPPING VALVE #4, OLD #2 KILN COOLER MULTICLONE, DISCHARGES INTO SCREW	VALVE-FLOW CONVEYOR 492-SCA	CSTP
3	**493-PN1**	493-AC1	#3 KILN PAN CONVEYOR	PAN CONVEYOR	CSTP
3	**493-FV1**	493-FV1	#3 KILN COOLER TIPPING VALVE BELOW BREECHING SCREW CONVEYOR	VALVE-FLOW	CSTP
3	**493-FV2**	493-FV2	#3 KILN COOLER TIPPING VALVE BELOW INLET MANIFOLD SCREW CONVEYOR	VALVE-FLOW	CSTP
3	**493-FV3**	493-FV3	#3 KILN COOLDER TIPPING VALVE BELOW NORTH BAGHOUSE SCREW CONVEYOR	VALVE-FLOW	CSTP
3	**493-FV4**	493-FV4	#3 KILN COOLER TIPPING VALVE BELOW SOUTH BAGHOUSE SCREW CONVEYOR	VALVE-FLOW	CSTP
3	**493-SG1**	493-SG1	#3 KILN COOLER BAGHOUSE EAST COMP. #1 SILDE GATE	SCREW-KILNS	CSTP
3	**493-SG2**	493-SG2	#3 KILN COOLER BAGHOUSE WEST COMP. #2 SLIDE GATE	SCREW-KILNS	CSTP
3	**493-SG3**	493-SG3	#3 KILN COOLER BAGHOUSE EAST COMP. #3 SLIDE GATE	SCREW-KILNS	CSTP
3	**493-SG4**	493-SG4	#3 KILN COOLER BAGHOUSE WEST COMP. #4 SLIDE GATE	SCREW-KILNS	CSTP
3	**493-SG5**	493-SG5	#3 KILN COOLER BAGHOUSE EAST COMP. #5 SLIDE GATE	SCREW-KILNS	CSTP
3	**493-SG6**	493-SG6	#3 KILN COOLER BAGHOUSE WEST COMP. #6 SLIDE GATE	SCREW-KILNS	CSTP
3	**K23-WF1**	523-WF1	#3 FINISH MILL GYP BELT-SILO K-24"-RAMSEY	BELTS-FINISH	CSTP
3	**???**	524-BC1	#4 FINISH MILL GYPSUM BELT #1-18"-NOTT CO.	BELTS-FINISH	CSTP
3	**531-BC1**	531-BC1	#1 FINISH FEED BELT-24" JEFFERY	BELTS-FINISH	CSTP
3	**531-BF1**	531-BF1	#1 FIN MILL FEED CONV DUST COLLECTOR-MIKROPUL-CFM 4,500	DUST COL-FIN	CSTP
3	**531-SC1**	531-SC1	#1 FINISH MILL MASONARY SUGAR FEEDER	FEEDER-VIB	CSTP
3	**531-SC2**	531-SC2	DRY MATERIAL VOLUMETRIC FEEDER	FEEDER-VOL	CSTP
3	**K21-WF1**	531-WF1	#1 FINISH MILL GYP BELT SILO F-24" FLANGED	BELTS-FINISH	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**531-WF1**	531-WF2	#1 FINISH MILL CLINKER BELT C -SILO 12-24" FLANGED	BELTS-FINISH	CSTP
3	**531-WF2**	531-WF3	#1 FINISH CLINKER BELT B SILO 11-24" FLANGED	BELTS-FINISH	CSTP
3	**531-WF3**	531-WF4	#1 FINISH MILL LIMESTONE BELT A-24" FLANGED	BELTS-FINISH	CSTP
3	**532-BC1**	532-BC1	#2 FINISH MILL FEED BELT CONV.-24"-EHRSAM	BELTS-FINISH	CSTP
3	**532-BF1**	532-BF1	#2 FINISH MILL FEED BELT DUST COL-MIKROPUL-CFM 4,500	DUST COL-FIN	APCD
3	**532-SC1**	532-SC1	SCREW FOR #2 FINISH FEED BELT DUST COLLECTOR, 34-1-243.	SCREW-FINISH	CSTP
3	**K22-WF1**	532-WF1	#2 FINISH MILL GYP BELT-SILO H-24"-RAMSEY	BELTS-FINISH	CSTP
3	**532-WF1**	532-WF2	#2 FINISH MILL CLINKER BELT SILO 14-24"-RAMSEY	BELTS-FINISH	CSTP
3	**532-WF2**	532-WF3	#2 FINISH MILL CLK BELT-SILO 15-24"-RAMSEY	BELTS-FINISH	CSTP
3	**533-BC1**	533-BC1	#3 FINISH MILL FEED BELT CONVEYOR-24"-EHRSAM	BELTS-FINISH	CSTP
3	**533-BF1**	533-BF1	#3 FINISH MILL FEED DUST COL-MIKROPUL-CFM 4,500	DUST COL-FIN	APCD
3	**533-WF1**	533-WF2	#3 FINISH MILL CLK BELT C-SILO 18-24"-RAMSEY	BELTS-FINISH	CSTP
3	**533-WF2**	533-WF3	#3 FINISH MILL CLINKER BELT B-SILO 17-24"-RAMSEY	BELTS-FINISH	CSTP
3	**534-BC1**	534-BC2	#4 FINISH MILL EAST/WEST FEED BELT-24"-NOTT CO.	BELTS-FINISH	CSTP
3	**534-BC2**	534-BC3	#4 FINISH MILL FEED BELT(NORTH)-24"-NOTT CO.	BELTS-FINISH	CSTP
3	**534-BF1**	534-BF1	#4 FINISH MILL - 467 ELEVATOR DUST COLLECTOR	DUST COL-FIN	APCD
3	**534-BF2**	534-BF2	DUST COLLECTOR FOR 34-1-408 BELT	DUST COL-FIN	APCD
3	**534-FV1**	534-FV1	#4 FINISH MILL FLAP VALVE ON 534-BF1 DUST COLLECTOR	VALVE-FLOW	CSTP
2	**K24-WF1**	534-WF1	#4 FINISH MILL GYPSUM BELT C-SILO G- 24"-RAMSEY ENG.	BELTS-FINISH	CSTP
2	**534-WF1**	534-WF2	#4 FINISH MILL CLINKER BELT A-SILO 16-30"-RAMSEY ENG.	BELTS-FINISH	CSTP
2	**534-WF2**	534-WF3	#4 FINISH MILL CLINKER BELT B-SILO 13-30"-RAMSEY	BELTS-FINISH	CSTP
3	**561-BF1**	561-BF1	#1 FINISH MILL WEST DUST COLLECTOR; NORBLO CFM 14,500/ CONVERTED BY BHA TO REVERSE AIR	DUST COL-FIN	APCD
3	**561-BF1**	561-BF1	.01 #1 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**561-BF1**	561-BF1	.02 #1 FINISH MILL WEST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**561-BF1**	561-BF1	.03 #1 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**561-BF1**	561-BF1	.04 #1 FINISH MILL WEST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**561-BF1**	561-BF1	.05 #1 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	**561-BF2**	561-BF2	#1 FINISH MILL EAST DUST COLLECTOR; NORBLO CFM 14,500/ CONVERTED BY BHA TO	DUST COL-FIN REVERSE AIR.	APCD
3	**561-BF2**	561-BF2	.01 #1 FINISH MILL EAST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**561-BF2**	561-BF2	.02 #1 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**561-BF2**	561-BF2	.03 #1 FINISH MILL EAST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**561-BF2**	561-BF2	.04 #1 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	**561-BF2**	561-BF2	.05 #1 FINISH MILL EAST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	**561-BM1**	561-BM1	#1 FINISH MILL	MILL	MILL
1	**561-FV1**	561-FV1	FLAP VALVE OFF 561-SR1 SEPERATOR #1 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	**561-SC1**	561-SC1	#1 FINISH MILL DISCHARGE SCREW CONV-16"	SCREW-FINISH	CSTP
3	**562-BF1**	562-BF1	#2 FINISH MILL DUST COLLECTOR-NORBLO-CFM 45,000/ CONVERTED BY BHA TO REVERSE AIR.	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.01 #2 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.02 #2 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.03 #2 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.04 #2 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.05 #2 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.06 #2 FINISH MILL EAST DUST COLLECTOR #6 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.07 #2 FINISH MILL WEST DUST COLLECTOR #7 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.08 #2 FINISH MILL EAST DUST COLLECTOR #8 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.09 #2 FINISH MILL WEST DUST COLLECTOR #9 COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.0A #2 FINISH MILL EAST DUST COLLECTOR #A COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.0B #2 FINISH MILL WEST DUST COLLECTOR #B COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.0C #2 FINISH MILL EAST DUST COLLECTOR #C COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.0D #2 FINISH MILL WEST DUST COLLECTOR #D COMP	DUST COL-FIN	APCD
3	**562-BF1**	562-BF1	.0E #2 FINISH MILL EAST DUST COLLECTOR #E COMP	DUST COL-FIN	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**563-BM1**	563-BM1	#2 FINISH MILL	MILL	MILL
1	**562-FV1**	562-FV1	FLAP VALVE OFF 562-SR1 SEPERATOR #2 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	**562-SC1**	562-SC1	#2 FINISH MILL SCREW CONVEYOR-18"	SCREW-FINISH	CSTP
1	**563-AS1**	563-AS1	#3 FINISH AIRSLIDE FROM ELEVATOR TO SEPARATOR	AIRSLIDE	CSTP
3	**563-BF1**	563-BF1	#3 FINISH MILL DUST COLLECTOR-NORBLO-CFM 45,000	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.01 #3 FINISH MILL WEST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.02 #3 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.03 #3 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.04 #3 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.05 #3 FINISH MILL WEST DUST COLLECTOR #5 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.06 #3 FINISH MILL EAST DUST COLLECTOR #6 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.07 #3 FINISH MILL WEST DUST COLLECTOR #7 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.08 #3 FINISH MILL EAST DUST COLLECTOR #8 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.09 #3 FINISH MILL WEST DUST COLLECTOR #9 COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.0A #3 FINISH MILL EAST DUST COLLECTOR #A COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.0B #3 FINISH MILL WEST DUST COLLECTOR #B COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.0C #3 FINISH MILL EAST DUST COLLECTOR #C COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.0D #3 FINISH MILL WEST DUST COLLECTOR #D COMP	DUST COL-FIN	APCD
3	**563-BF1**	563-BF1	.0E #3 FINISH MILL EAST DUST COLLECTOR #E COMP	DUST COL-FIN	APCD
3	**563-BM1**	563-BM1	#3FINISH MILL	MILL	MILL
1	**563-FV1**	563-FV1	FLAP VALVE OFF 563-SR1 SEPERATOR #3 FINISH MILL TO FEED END OF MILL	VALVE-FLOW	CSTP
1	**563-SC1**	563-SC1	#3 FINISH MILL SCREW CONVEYOR-18"	SCREW-FINISH	CSTP
1	**564-AS1**	564-AS1	#4 FINISH MILL AIRSLIDE FROM MILL TO FEED ELEVATOR	AIRSLIDE	CSTP
1	**564-AS1**	564-AS1	#4 FINISH MILL AIR SLIDE DISCHARGE MATERIAL TRAP	AIRSLIDE	CSTP
1	**564-AS3**	564-AS2	#4 FINISH AIRSLIDE FROM FEED ELEVATOR TO SEPARATOR	AIRSLIDE	CSTP
3	**564-BF1**	564-BF1	#4 FINISH MILL (WEST) DUST COLLECTOR MIKROPUL-CFM 35,0000	DUST COL-FIN	APCD
3	**564-BF1**	564-BF1	.01 #4 FINISH MILL WEST DUCT COLLECTOR #1 COMP	DUST COL-FIN	APCD

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**564-BF1**	564-BF1	.02 #4 FINISH MILL WEST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**564-BF1**	564-BF1	.03 #4 FINISH MILL WEST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**564-BF1**	564-BF1	.04 #4 FINISH MILL WEST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	**564-BF2**	564-BF2	#4 FINISH MILL (EAST) DUST COLLECTOR MIKROPUL-CFM 35,0000	DUST COL-FIN	APCD
3	**564-BF2**	564-BF2	.01 #4 FINISH MILL EAST DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**564-BF2**	564-BF2	.02 #4 FINISH MILL EAST DUST COLLECTOR #2 COMP	DUST COL-FIN	APCD
3	**564-BF2**	564-BF2	.03 #4 FINISH MILL EAST DUST COLLECTOR #3 COMP	DUST COL-FIN	APCD
3	**564-BF2**	564-BF2	.04 #4 FINISH MILL EAST DUST COLLECTOR #4 COMP	DUST COL-FIN	APCD
3	**564-BF4**	564-BF3	#4 FINISH MILL (ELEVATOR) DUST COLLECTOR 6TH FLOOR 5,000 CFM	DUST COL-FIN	APCD
3	**564-BF3**	564-BF3	.01 #4 FINISH MILL (MILL) DUST COLLECTOR #1 COMP	DUST COL-FIN	APCD
3	**564-BF3**	564-BF4	#4 FINISH MILL (MILL) DUST COLLECTOR MIKROPUL-CFM 20,000	DUST COL-FIN	APCD
3	**564-BM1**	564-BM1	#4 FINISH MILL	MILL	MILL
1	**564-FV1**	564-FV1	#4 FINISH MILL FLAP VALVE FROM FLOWMETER TO FEED END	VALVE-FLOW	CSTP
3	**594-SC3**	564-SC1	#4 FINISH MILL SCREW CONVEYOR #1 (WEST SCREW)	SCREW-FINISH	CSTP
1	**591-AS3**	581-AS1	#1 FINISH MILL AIRSLIDE -- COOLER BY-PASS FROM SEPARATOR TO 34-1-125 AIRSLIDE	AIRSLIDE	CSTP
1	**591-AS4**	581-AS2	#1 FINISH MILL AIRSLIDE FROM COOLER TO F-K PUMP	AIRSLIDE	CSTP
1	**592-RT1**	582-SG1	12" X 24" ROTARY VALVE ON PUMP 34-1-213	MILL-2F-MISC	CSTP
1	**593-AS5**	583-AS1	#3 FINISH AIRSLIDE -- COOLER BY-PASS FROM SEPARATOR TO F-K PUMP	AIRSLIDE	CSTP
1	**593-AS6**	583-AS2	#3 FINISH AIRSLIDE FROM COOLER TO F-K PUMP	AIRSLIDE	CSTP
1	**594-AS1**	584-AS4	#4 FINISH MILL AIRSLIDE FROM WEST SEPARATOR DUST TRAP	AIRSLIDE	CSTP
1	**594-AS2**	584-AS5	#4 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP	AIRSLIDE	CSTP
1	**594-AS3**	584-AS6	#4 FINISH MILL AIRSLIDE FROM SEPARATOR	AIRSLIDE	CSTP
1	**594-AS5**	584-AS8	#4 FINISH MILL AIRSLIDE TO CEMENT COOLER	AIRSLIDE	CSTP
1	**594-AS6**	584-AS9	#4 FINISH MILL AIRSLIDE FROM COOLER TO Z-FLAP PUMPS	AIRSLIDE	CSTP
1	**591-FV1**	591-FV1	FLAP VALVE #1 WEST SEPARTOR #1 FINISH MILL TO DISTRIBUTION BOX 591-DB1	VALVE-FLOW	CSTP
1	**591-FV2**	591-FV2	FLAP VALVE #2 EAST SEPERATOR #1 FINISH MILL TO DISTRIBUTION BOX 591-DB1	VALVE-FLOW	CSTP
1	**592-AS3**	592-AS3	#2 FINISH MILL AIRSLIDE FROM WEST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**594-AS4**	592-AS3	#2 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	**592-FV1**	592-FV1	FLAP VALVE #1 WEST SEPERATOR #2 FINISH MILL TO 593-AS3 AIR SLIDE	VALVE-FLOW	CSTP
1	**592-FV2**	592-FV2	FLAP VALVE #2 EAST SEPERATOR #2 FINISH MILL TO 592-AS4 AIR SLIDE	VALVE-FLOW	CSTP
1	**593-AS1**	593-AS2	#3 FINISH AIRSLIDE FROM WEST DUST COLLECTOR HOPPER TO 34-1-327-1	AIRSLIDE	CSTP
1	**593-AS2**	593-AS3	#3 FINISH AIRSLIDE FROM EAST DUST COLLECTOR HOPPER TO 34-1-327-2	AIRSLIDE	CSTP
1	**593-AS3**	593-AS4	#3 FINISH AIRSLIDE FROM WEST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	**593-AS4**	593-AS4	#3 FINISH MILL AIRSLIDE FROM EAST SEPARATOR DUST TRAP TO COOLER	AIRSLIDE	CSTP
1	**593-FV1**	593-FV1	FLAP VALVE #1 WEST SEPERATOR #3 FINISH MILL TO 593-AS3 AIR SLIDE	VALVE-FLOW	CSTP
1	**593-FV2**	593-FV2	FLAP VALVE #2 EAST SEPERATOR #3 FINISH MILL TO 593-AS4 AIR SLIDE	VALVE-FLOW	CSTP
1	**593-RT1**	593-RT1	12" X 24" ROTARY VALVE ON PUMP 34-1-313	MILL-3F-MISC	CSTP
1	**594-AS4**	594-AS3	#4 FINISH MILL AIRSLIDE FROM EAST AND WEST DUST COLLECTOR SCREWS	AIRSLIDE	CSTP
1	**594-FV1**	594-FV1	#4 FINISH MILL FLAP VALVE WEST SEPARATOR	VALVE-FLOW	CSTP
1	**594-FV2**	594-FV2	#4 FINISH MILL FLAP VALVE EAST SEPARATOR	VALVE-FLOW	CSTP
3	**594-FV3**	594-FV3	#4 FINISH MILL FLAP VALVE MILL DUST COLLECTOR	VALVE-FLOW	CSTP
3	**594-FV4**	594-FV4	#4 FINISH MILL FLAP VALVE DUST COLLECTOR ELEVATOR	VALVE-FLOW	CSTP
1	**K1A-3B1**	K1A-3B1	#1 FINISH MILL LIME ADDITVE TANK	LIME ADDITIVE	SILO
3	**K1A-3S1**	K1A-3S1	#1 FINISH MILL GYPSUM SILO (#F)	SILO	SILO
3	**K1A-3S2**	K1A-3S2	#4 FINISH MILL GYPSUM SILO (#G)	SILO	SILO
3	**K1A-3S3**	K1A-3S3	#2 FINISH MILL GYPSUM SILO (#H)	SILO	SILO
3	**K1A-3S4**	K1A-3S4	#3 FINISH MILL GYPSUM SILO (#K)	SILO	SILO
2	**K21-FM1**	K21-FM1	#1 FINISH MILL LIME ADDITIVE FLOWMETER	LIME ADDITIVE	CSTP
3	**K21-RF1**	K21-RF1	#1 FINISH MILL LIME ADDITIVE ROTARY FEEDER	LIME ADDITIVE	CSTP
2	**K21-SC1**	K21-SC1	#1 FINISH MILL LIME ADDITVE SCREW CONVEYOR	LIME ADDITIVE	CSTP
2	**K24-BC2**	K24-BC2	#4 FINISH SLAG HOPPER FEEDER BELT	BELTS-FINISH	CSTP
2	**K24-HP1**	K24-HP1	#4 FINISH SLAG HOPPER	BIN/HOPPER	CSTP
3	**59A-3S1**	59A-3S1	#6 STORAGE CEMENT INTERSTICE #1	SILO	SILO
3	**59A-3S2**	59A-3S2	#6 STORAGE CEMENT INTERSTICE #2	SILO	SILO

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59A-3S3**	59A-3S3	#6 STORAGE CEMENT INTERSTICE #3	SILO	SILO
3	**59A-3S4**	59A-3S4	#6 STORAGE CEMENT INTERSTICE #4	SILO	SILO
3	**59A-3S5**	59A-3S5	#6 STORAGE CEMENT SILO #37	SILO	SILO
3	**59A-3S6**	59A-3S6	#6 STORAGE CEMENT SILO #38	SILO	SILO
3	**59A-3S7**	59A-3S7	#6 STORAGE CEMENT SILO #39	SILO	SILO
3	**59A-3S8**	59A-3S8	#6 STORAGE CEMENT SILO #40	SILO	SILO
3	**59A-3S9**	59A-3S9	#6 STORAGE CEMENT SILO #41	SILO	SILO
3	**59A-3SA**	59A-3SA	#6 STORAGE CEMENT SILO #42	SILO	SILO
3	**59A-3SB**	59A-3SB	#6 STORAGE CEMENT SILO #59	SILO	SILO
3	**59A-3SC**	59A-3SC	#6 STORAGE CEMENT SILO #60	SILO	SILO
3	**59A-3SD**	59A-3SD	#6 STORAGE CEMENT SILO #61	SILO	SILO
3	**59A-3SE**	59A-3SE	#6 STORAGE CEMENT SILO #62	SILO	SILO
3	**59A-3SF**	59A-3SF	#6 STORAGE CEMENT SILO #63	SILO	SILO
3	**59A-3SG**	59A-3SG	#6 STORAGE CEMENT SILO #64	SILO	SILO
3	**59A-BF1**	59A-BF1	TRUCK SILO DUST COLLECTOR-BHA CONVERSION OF NORBLO-CFM 5,000	DUST COL-SHIP	APCD
3	**59A-BF2**	59A-BF2	DUST COLLECTOR SILO TOP NEW-MIKROPUL	DUST COL-SHIP	APCD
3	**59A-DG1**	59A-DG1	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DG2**	59A-DG2	#2F LINE, TRUCK SILOS, BIN 37, (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DG3**	59A-DG3	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, INTERSTICE 1 RIGHT HAND 8" SK Valve	TRANSPORT VALVE	CSTP
3	**59A-DG4**	59A-DG4	#2F LINE, TRUCK SILOS (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DG5**	59A-DG5	#2F LINE, TRUCK SILOS, BIN 38, (OLD SIDE), TOP LINE, RIGHT HAND SK Valve	TRANSPORT VALVE	CSTP
3	**59A-DG6**	59A-DG6	#2F LINE, TRUCK SILOS, BIN #40 (OLD SIDE), TOP LINE, RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	**59A-DG7**	59A-DG7	#2F LINE, TRUCK SILOS BIN #42 OR INTERSTICE 2, (OLD SIDE), TOP LINE,RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DG8**	59A-DG8	#2F LINE, TRUCK SILOS (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DG9**	59A-DG9	#2F LINE, TRUCK SILOS, BIN 60, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	**59A-DGA**	59A-DGA	#2F LINE, TRUCK SILOS, BIN 59, (NEW SIDE), TOP LINE, LEFT HAND 8" SK	TRANSPORT VALVE.	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59A-DGB**	59A-DGB	#2F LINE, TRUCK SILOS, BIN 62, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGC**	59A-DGC	#2F LINE, TRUCK SILOS, BIN 64 OR INTERTICE 4, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGD**	59A-DGD	#2F LINE, TRUCK SILOS, INTERSTICE 3, (OLD SIDE), TOP LINE, LEFT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGE**	59A-DGE	#2F LINE, TRUCK SILOS, BIN 61 OR BIN 63, (NEW SIDE), TOP LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGF**	59A-DGF	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGG**	59A-DGG	#4F LINE, TRUCK SILOS, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGH**	59A-DGH	#4F LINE, TRUCK SILOS, BIN 60, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGI**	59A-DGI	#4F LINE, TRUCK SILOS, BIN 62, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGJ**	59A-DGJ	#4F LINE, TRUCK SILOS, INTERSTICE 4 & BIN 64, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGK**	59A-DGK	#4F LINE, TRUCK SILOS, BIN 59, (NEW SIDE), BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGL**	59A-DGL	#4F LINE, TRUCK SILOS, INTERSTICE 3, (NEW SIDE), BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGM**	59A-DGM	#4F LINE, TRUCK SILOS, BIN 61 OR 63, (NEW SIDE), BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59A-DGN**	59A-DGN	#2F LINE, TRUCK SILOS, BIN #39 OR #41, TOP LINE, (OLD SIDE) RIGHT HAND 8" SK VALVE	TRANSPORT VALVE	CSTP
3	**59A-SG1**	59A-SG1	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 2, 39, 41 & 42	TRANSPORT VALVE	CSTP
3	**59A-SG2**	59A-SG2	#1F LINE, TRUCK SILOS, GATE TO BLOCK LINE TO SILOS 39 AND 40 8" SLIDE GATE	GATE	CSTP
3	**59A-SG3**	59A-SG3	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 2 & 42	TRANSPORT VALVE	CSTP
3	**59A-SG4**	59A-SG4	#1F LINE, TRUCK SILOS, BIN #41, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SG5**	59A-SG5	#1F LINE, TRUCK SILOS, BIN #39, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SG6**	59A-SG6	#1F LINE, TRUCK SILO, GATE TO BLOCK LINES TO SILOS 1, 37, 38 & 40 8" SLIDE GATE	GATE	CSTP
3	**59A-SG7**	59A-SG7	#1F LINE, TRUCK SILOS, MIDDLE LINE, BIN #40 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SG8**	59A-SG8	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 1, 37 & 38	TRANSPORT VALVE	CSTP
3	**59A-SG9**	59A-SG9	#1F LINE, TRUCK SILOS, MAIN LINE, 8" SLIDE GATE TO SILO'S 1 & 38	TRANSPORT VALVE	CSTP
3	**59A-SGA**	59A-SGA	#1F LINE, TRUCK SILOS, BIN #37, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGB**	59A-SGB	#4F LINE, TRUCK SILOS, BIN #37, OLD SIDE, BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGC**	59A-SGC	#4F LINE, TRUCK SILOS, BIN #38, OLD SIDE BOTTOM LINE, BIN #38 8" SLIDE GATE	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59A-SGD**	59A-SGD	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGE**	59A-SGE	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGF**	59A-SGF	#4F LINE, TRUCK SILOS, INTERSTICE 1, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE	TRANSPORT VALVE	CSTP
3	**59A-SGG**	59A-SGG	#4F LINE, TRUCK SILOS, BIN #39, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGH**	59A-SGH	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGI**	59A-SGI	#4F LINE, TRUCK SILOS, BIN 40, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGJ**	59A-SGJ	#1F LINE, TRUCK SILOS, MIDDLE LINE, BIN #42 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGK**	59A-SGK	#1F LINE, TRUCK SILOS, BIN #2, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGL**	59A-SGL	#4F LINE, TRUCK SILOS (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGM**	59A-SGM	#4F LINE, TRUCK SILOS, INTERSTICE 2, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE	TRANSPORT VALVE	CSTP
3	**59A-SGN**	59A-SGN	#4F LINE, TRUCK SILOS, BIN 41, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGP**	59A-SGP	#4F LINE, TRUCK SILOS, BIN 42, (OLD SIDE), BOTTOM LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGQ**	59A-SGQ	#1F LINE, TRUCK SILOS, BIN #1, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGR**	59A-SGR	#1F LINE, TRUCK SILOS, BIN #38, MIDDLE LINE, 8" SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59A-SGS**	59A-SGS	#4 TFR LINE, TRUCK SILO, INTERSTICE #1	GATE	CSTP
3	**59A-SGT**	59A-SGT	#4 TFR LINE, TRUCK SILO BLOCK LINE TO GO INTO #1 OR GO TO #4O OR #2	GATE	CSTP
3	**59A-SGU**	59A-SGU	#4 TFR LINE, TRUCK SILO SILO #40	GATE	CSTP
3	**59A-SGV**	59A-SGV	#4 TFR LINE, TRUCK SILO INTERSTICE #2	GATE	CSTP
3	**59B-3S1**	59B-3S1	#4 STORAGE CEMENT SILO #13	SILO	SILO
3	**59B-3S2**	59B-3S2	#4 STORAGE CEMENT SILO #14	SILO	SILO
3	**59B-3S3**	59B-3S3	#4 STORAGE CEMENT SILO #15	SILO	SILO
3	**59B-3S4**	59B-3S4	#4 STORAGE CEMENT SILO #16	SILO	SILO
3	**59B-3S5**	59B-3S5	#4 STORAGE CEMENT SILO #17	SILO	SILO
3	**59B-3S6**	59B-3S6	#4 STORAGE CEMENT SILO #18	SILO	SILO
3	**59B-3S7**	59B-3S7	#4 STORAGE CEMENT SILO #19	SILO	SILO
3	**59B-3S8**	59B-3S8	#4 STORAGE CEMENT SILO #20	SILO	SILO
3	**59B-3S9**	59B-3S9	#4 STORAGE CEMENT SILO #21	SILO	SILO

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59B-3SA**	59B-3SA	#4 STORAGE CEMENT SILO #22	SILO	SILO
3	**59B-3SB**	59B-3SB	#4 STORAGE CEMENT SILO #23	SILO	SILO
3	**59B-3SC**	59B-3SC	#4 STORAGE CEMENT SILO #24	SILO	SILO
3	**59B-3SD**	59B-3SD	#4 STORAGE CEMENT INTERSTICE #1	SILO	SILO
3	**59B-3SE**	59B-3SE	#4 STORAGE CEMENT INTERSTICE #4	SILO	SILO
3	**59B-3SF**	59B-3SF	#4 STORAGE CEMENT INTERSTICE #2	SILO	SILO
3	**59B-3SG**	59B-3SG	#4 STORAGE CEMENT INTERSTICE #5	SILO	SILO
3	**59B-3SH**	59B-3SH	#4 STORAGE CEMENT INTERSTICE #3	SILO	SILO
3	**59B-3SI**	59B-3SI	#4 STORAGE CEMENT INTERSTICE #6	SILO	SILO
3	**59B-3SJ**	59B-3SJ	#4 STORAGE FLAT BIN #7	SILO	SILO
3	**59B-3SK**	59B-3SK	#4 STORAGE FLAT BIN #8	SILO	SILO
3	**59B-3SL**	59B-3SL	#4 STORAGE FLAT BIN #9	SILO	SILO
3	**59B-BF1**	59B-BF1	#4 STORAGE SILO DUST COLLECTOR	DUST COL-SHIP	APCD
3	**59B-DG1**	59B-DG1	#4 STORAGE, BIN #9 WEST, 8" RIGHT HAND SK VALVE	TRANSPORT VALVE	CSTP
3	**59B-DG2**	59B-DG2	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG3 OR 59B-DG4	TRANSPORT VALVE	CSTP
3	**59B-DG3**	59B-DG3	#4 STORAGE, CEMENT SILO'S #13 & #14 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DG4**	59B-DG4	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG5 (SOUTH) OR 59B-DGD (NORTH)	TRANSPORT VALVE	CSTP
3	**59B-DG5**	59B-DG5	#4 STORAGE, INTERSTICE #4 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DG6**	59B-DG6	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DG7 OR 59B-DG8	TRANSPORT VALVE	CSTP
3	**59B-DG7**	59B-DG7	#4 STORAGE, CEMENT SILO'S #16 & #17 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DG8**	59B-DG8	#4 STORAGE, INTERSTICE #5 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DG9**	59B-DG9	#4 STORAGE, RIGHT HAND 8" SK VALVE TO 59B-DGA OR 59B-DGB	TRANSPORT VALVE	CSTP
3	**59B-DGA**	59B-DGA	#4 STORAGE, CEMENT SILO'S #19 & #20 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGB**	59B-DGB	#4 STORAGE, INTERSTICE #6 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGC**	59B-DGC	#4 STORAGE, CEMENT SILO'S #22 & #23 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGD**	59B-DGD	#4 STORAGE, CEMENT SILO #15 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59B-DGE**	59B-DGE	#4 STORAGE, INTERSTICE #1 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGF**	59B-DGF	#4 STORAGE, CEMENT SILO #18 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGG**	59B-DGG	#4 STORAGE, INTERSTICE #2 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGH**	59B-DGH	#4 STORAGE, CEMENT SILO #21 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGI**	59B-DGI	#4 STORAGE, CEMENT SIOL #24 OR INERSTICE #3 RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59B-DGJ**	59B-DGJ	#4 STORAGE BIN #8 EAST RIGHT HAND SK VALVE	VALVE-FLOW	CSTP
3	**59B-RF1**	59B-RF1	ROTARY FEEDER FOR DUST COLLECTOR 402 (59B-BF1)	ROTARY FEEDER	CSTP
3	**59B-SG1**	59B-SG1	#3F LINE, #4 STORAGE SILOS FIGURE 8 VALVE #1	TRANSPORT VALVE	CSTP
3	**59B-SG2**	59B-SG2	#3F LINE, #4 STORAGE, FIGURE 8 VALVE TO FLAT BINS	TRANSPORT VALVE	CSTP
3	**59B-SG3**	59B-SG3	#4 STORAGE BIN #7 EAST CLARKSON VALVE	GATE	CSTP
3	**59B-SG4**	59B-SG4	#4 STORAGE BIN #7 WEST CLARKSON VALVE	GATE	CSTP
3	**59B-SG5**	59B-SG5	#4 STORAGE LINE BLOCK ON MAIN CLARKSON VALVE	GATE	CSTP
3	**59B-SG6**	59B-SG6	#4 STORAGE BIN #8 WEST CLARKSON VALVE	GATE	CSTP
3	**59B-SG7**	59B-SG7	#3 LINE, #4 STORAGE LINE BLOCK ON MAIN, CLARKSON VALVE	GATE	CSTP
3	**59B-SG8**	59B-SG8	#4 STORAGE BIN #9 EAST CLARKSON VALVE	GATE	CSTP
3	**59C-3S1**	59C-3S1	#7 STORAGE CEMENT INTERSTICE #10	SILO	SILO
3	**59C-3S2**	59C-3S2	#7 STORAGE CEMENT SILO #43	SILO	SILO
3	**59C-3S3**	59C-3S3	#7 STORAGE CEMENT SILO #44	SILO	SILO
3	**59C-3S4**	59C-3S4	#7 STORAGE CEMENT SILO #45	SILO	SILO
3	**59C-3S5**	59C-3S5	#7 STORAGE CEMENT SILO #46	SILO	SILO
3	**59C-3S6**	59C-3S6	#7 STORAGE CEMENT SILO #47	SILO	SILO
3	**59C-3S7**	59C-3S7	#7 STORAGE CEMENT SILO #48	SILO	SILO
3	**59C-3S8**	59C-3S8	#7 STORAGE CEMENT SILO #49	SILO	SILO
3	**59C-3S9**	59C-3S9	#7 STORAGE CEMENT SILO #50	SILO	SILO
3	**59C-3SA**	59C-3SA	#7 STORAGE CEMENT SILO #51	SILO	SILO
3	**59C-3SB**	59C-3SB	#7 STORAGE CEMENT SILO #52	SILO	SILO
3	**59C-3SC**	59C-3SC	#7 STORAGE CEMENT SILO #53	SILO	SILO

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59C-3SD**	59C-3SD	#7 STORAGE CEMENT SILO #54	SILO	SILO
3	**59C-3SE**	59C-3SE	#7 STORAGE CEMENT SILO #55	SILO	SILO
3	**59C-3SF**	59C-3SF	#7 STORAGE CEMENT SILO #56	SILO	SILO
3	**59C-3SG**	59C-3SG	#7 STORAGE CEMENT SILO #57	SILO	SILO
3	**59C-3SH**	59C-3SH	#7 STORAGE CEMENT SILO #58	SILO	SILO
3	**59C-BF1**	59C-BF1	TOP RAIL SILOS VENT DUST COLLECTOR-NORBLOCFM 7,650	DUST COL-SHIP	APCD
3	**59C-DG1**	59C-DG1	#2 & #4F LINE, RAIL SILO'S, BIN 43, MIDDLE LINE, LEFT HAND 10" SK VALVE, 1ST VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DG2**	59C-DG2	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, NORTH OR WEST RIGHT HAND 10" SK VALVE, 2ND VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DG3**	59C-DG3	#2 & #4F LINE, RAIL SILO'S, BIN 48, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG4**	59C-DG4	#2 & #4F LINE, RAIL SILO'S, BIN 44, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG5**	59C-DG5	#2 & #4F LINE, RAIL SILO'S, INTERSTICE 10, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG6**	59C-DG6	#2 & #4F LINE, RAIL SILO'S, BIN 49, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG7**	59C-DG7	#2 & #4F LINE, RAIL SILO'S, BIN 45, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG8**	59C-DG8	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE,NORTH OR WEST RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DG9**	59C-DG9	#2 & #4F LINE, RAIL SILO'S, BIN 46 OR 50, MIDDLE LINE, RIGHT 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGA**	59C-DGA	#3F LINE, RAIL SILO'S, BIN 43, BOTTOM LINE LEFT HAND 8" SK VALVE, 1ST SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DGB**	59C-DGB	#3F LINE, RAIL SILO'S, BOTTOM LINE, NORTH OR WEST RIGHT HAND 8" SK VALVE, 2ND VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DGC**	59C-DGC	#3F LINE, RAIL SILO'S, BIN 48, BOTTOM LINE RIGHT HAND 8" SK VALVE, 3RD SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DGD**	59C-DGD	#3F LINE, RAIL SILO'S, BIN 44, BOTTOM LINE LEFT HAND 8" SK VALVE, 4TH SK VALVE COMING OUT OF ELEVATOR.	TRANSPORT VALVE	CSTP
3	**59C-DGE**	59C-DGE	#3F LINE, RAIL SILO'S, BIN 10, BOTTOM LINE RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGF**	59C-DGF	#3F LINE, RAIL SILO'S, BIN 49, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGG**	59C-DGG	#3F LINE, RAIL SILO'S, BIN 45, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGH**	59C-DGH	#3F LINE, RAIL SILO'S, BOTTOM LINE, NORTH OR WEST RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59C-DGI**	59C-DGI	#3F LINE, RAIL SILO'S, BIN 50, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGJ**	59C-DGJ	#2 & #4F LINE, RAIL SILO'S, BIN 47, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGK**	59C-DGK	#2 & #4F LINE, RAIL SILO'S, BIN 51, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGL**	59C-DGL	#2 & #4F LINE, RAIL SILO'S, BIN 52, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGM**	59C-DGM	#2 & #4F LINE, RAIL SILO'S, BIN 55 OR 56, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGN**	59C-DGN	#2 & #4F LINE, RAIL SILO'S, BIN 53, MIDDLE LINE, RIGHT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGP**	59C-DGP	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, BIN #57 OR 58 LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGQ**	59C-DGQ	#3F LINE, RAIL SILO'S, BIN 47, BOTTOM LINE-RIGHT HAND 8" SK VALVE, 1ST	TRANSPORT VALVE	CSTP
3	**59C-DGR**	59C-DGR	#3F LINE, RAIL SILO'S, BIN 51, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGS**	59C-DGS	#3F LINE, RAIL SILO'S, BIN 52, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGT**	59C-DGT	#3F LINE, RAIL SILO'S, BIN 55, BOTTOM LINE, RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGU**	59C-DGU	#3F LINE, RAIL SILO'S, BOTTOM LINE, BIN 53 RIGHT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGV**	59C-DGV	#3F LINE, RAIL SILO'S, BIN 54, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGW**	59C-DGW	#3F LINE, RAIL SILO'S, BIN 58, BOTTOM LINE, LEFT HAND 8" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-DGX**	59C-DGX	#2 & #4F LINE, RAIL SILO'S, MIDDLE LINE, LEFT HAND 10" SK VALVE	GATE	CSTP
3	**59C-DGY**	59C-DGY	#2 & #4F LINE, RAIL SILO'S, BIN 54, MIDDLE LINE, LEFT HAND 10" SK VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG1**	59C-SG1	TRANSFER LINE, RAIL SILOS, BIN 47, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG2**	59C-SG2	TRANSFER LINE, RAIL SILOS, BLOCK LINE FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG3**	59C-SG3	TRANSFER LINE, RAIL SILOS, BIN 48, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG4**	59C-SG4	TRANSFER LINE. RAIL SILOS, LINE BLOCK FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG5**	59C-SG5	TRANSFER LINE, RAIL SILOS, BIN 44, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SG6**	59C-SG6	TRANSFER LINE, RAIL SIL0S, LINE BLOCK FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	**59C-SG7**	59C-SG7	TRANSFER LINE, RAIL SILOS, INTERTICE 10, FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	**59C-SG8**	59C-SG8	TRANSFER LINE, RAIL SILOS, LINE BLOCK FIGURE 8 VALVE	TRANSPORT VALVE	CSTP
3	**59C-SG9**	59C-SG9	TRANSFER LINE, RAIL SILOS, BIN 49, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP
3	**59C-SGA**	59C-SGA	TRANSFER LINE, RAIL SILOS, BIN 46, FIGURE 8 VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59D-3S1**	59D-3S1	#5 STORAGE CEMENT SILO #25	SILO	SILO
3	**59D-3S2**	59D-3S2	#5 STORAGE CEMENT SILO #26	SILO	SILO
3	**59D-3S3**	59D-3S3	#5 STORAGE CEMENT SILO #27	SILO	SILO
3	**59D-3S4**	59D-3S4	#5 STORAGE CEMENT SILO #28	SILO	SILO
3	**59D-3S5**	59D-3S5	#5 STORAGE CEMENT SILO #29	SILO	SILO
3	**59D-3S6**	59D-3S6	#5 STORAGE CEMENT SILO #30	SILO	SILO
3	**59D-3S7**	59D-3S7	#5 STORAGE CEMENT SILO #31	SILO	SILO
3	**59D-3S8**	59D-3S8	#5 STORAGE CEMENT SILO #32	SILO	SILO
3	**59D-3S9**	59D-3S9	#5 STORAGE CEMENT SILO #33	SILO	SILO
3	**59D-3SA**	59D-3SA	#5 STORAGE CEMENT SILO #34	SILO	SILO
3	**59D-3SB**	59D-3SB	#5 STORAGE CEMENT SILO #35	SILO	SILO
3	**59D-3SC**	59D-3SC	#5 STORAGE CEMENT SILO #36	SILO	SILO
3	**59D-BF1**	59D-BF1	#5 CEM STG-PH SILO VENT DUST COL-MIKROPUL-CFM 10,000	DUST COL-SHIP	APCD
3	**59D-DG2**	59D-DG2	#2F LINE, #5 STORAGE, BIN #36, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59D-DG3**	59D-DG3	#2F LINE, #5 STORAGE, BIN #34, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59D-DG4**	59D-DG4	#2F LINE, #5 STORAGE, BIN #32, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59D-DG5**	59D-DG5	#2F LINE, #5 STORAGE, BIN #30, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59D-DG6**	59D-DG6	#2F LINE, #5 STORAGE, BIN #28 OR BIN #26, 8" LINE (TOP/SOUTH), RIGHT HAND SK VALVE.	TRANSPORT VALVE	CSTP
3	**59D-FV1**	59D-FV1	#5 STORAGE FLAP VALVE ON DUST COLLECTOR 520 59D-BF1	VALVE-FLOW	CSTP
3	**59D-SC1**	59D-SC1	#5 STORAGE SCREW CONVATOR FOR DUST COLLECTOR 520 (59D-BF1)	SCREW-SHIPPING	CSTP
3	**59D-SG1**	59D-SG1	#1F LINE, #5 STORAGE, BIN #25, 8" LINE (NORTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SG2**	59D-SG2	#1F LINE, #5 STORAGE, BIN #27, 8" LINE (NORTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SG3**	59D-SG3	#1F LINE, #5 STORAGE, BIN #26, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SG4**	59D-SG4	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SG5**	59D-SG5	#2F LINE, #5 STORAGE, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	**59D-SG6**	59D-SG6	#2F LINE, #5 STORAGE, BIN #31, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	**59D-SG7**	59D-SG7	#2F LINE, #5 STORAGE, 8" (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**59D-SG8**	59D-SG8	#2F LINE, #5 STORAGE, BIN #33, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	**59D-SG9**	59D-SG9	#2F LINE, #5 STORAGE, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	**59D-SGA**	59D-SGA	#2F LINE, #5 STORAGE, BIN #35, 8" LINE (TOP/SOUTH), CLARKSON VALVE.	TRANSPORT VALVE	CSTP
3	**59D-SGB**	59D-SGB	#1F LINE, #5 STORAGE, BIN #28, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGC**	59D-SGC	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGD**	59D-SGD	#1F LINE, #5 STORAGE, BIN #29, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGE**	59D-SGE	#1F LINE, #5 STORAGE, BIN #30, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGF**	59D-SGF	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGG**	59D-SGG	#1F LINE, #5 STORAGE, BIN #31, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGH**	59D-SGH	#1F LINE, #5 STORAGE, BIN #32, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGI**	59D-SGI	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGJ**	59D-SGJ	#1F LINE, #5 STORAGE, BIN #33, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGK**	59D-SGK	#1F LINE, #5 STORAGE, BIN #34, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGL**	59D-SGL	#1F LINE, #5 STORAGE, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGM**	59D-SGM	#1F LINE, #5 STORAGE, BIN #35, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGN**	59D-SGN	#1F LINE, #5 STORAGE, BIN #36, 8" LINE (BOTTOM/SOUTH), SLIDE GATE.	TRANSPORT VALVE	CSTP
3	**59D-SGP**	59D-SGP	#1F LINE, #5 STORAGE, 8" LINE (SOUTH SIDE) SLIDE GATE	GATE	CSTP
3	**59D-SGQ**	59D-SGQ	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE TO (SOUTH SIDE)	GATE	CSTP
3	**59D-SGR**	59D-SGR	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE	GATE	CSTP
3	**59D-SGS**	59D-SGS	#4 TRANSFER LINE, #5 STORAGE SLIDE GATE FOR BIN #29	GATE	CSTP
3	**59D-SGT**	59D-SGT	#1F LINE, #5 STORAGE, 8" LINE (NORTH SIDE) SLIDE GATE	GATE	CSTP
3	**K1A-BC1**	L10-BCA	GYPSUM BELT CONV #1-SILO F-24"-JEFFERY	BELT-COAL-GYP	CSTP
3	**K1A-BC2**	L10-BCB	GYPSUM BELT CONV #2-SILO F & K- 24"-EHRSAM	BELT-COAL-GYP	CSTP
3	**K1A-BC3**	L10-BCC	REVERSIBLE GYP BELT TO SILOS G & H 24"	BELT-COAL-GYP	CSTP
3	**61A-3B1**	61A-3B1	SURGE BIN FOR 223 PUMP ON MAIN FLOOR OF #2 CEMENT STORAGE	BIN/HOPPER	BIN
3	**61A-3B2**	61A-3B2	# 2 CEMENT STRORAGE RECYLING BIN	BIN/HOPPER	BIN
3	**61A-BE1**	61A-BE1	#2 CEM STG ELEV & DRIVE BELT -- NW ELEVATOR	ELEVATORS	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
3	**61A-BF1**	61A-BF1	DUST COLLECTOR ON MAIN FLOOR OF #2 CEMENT STORAGE	DUST COL-SHIP	APCD
1	**61A-RF1**	61A-RF1	ROTARY AIRLOCK FOR DUST COLLECTOR DISCHARGE SCREW IN #2 CEMENT STORAGE	AIRLOCK	CSTP
1	**61A-RF2**	61A-RF2	ROTARY AIRLOCK SILO #18	AIRLOCK	CSTP
1	**61A-RF3**	61A-RF3	ROTARY AIRLOCK SILO #15	AIRLOCK	CSTP
1	**61A-RF6**	61A-RF6	ROTARY AIRLOCK SILO #17	AIRLOCK	CSTP
1	**61A-RF7**	61A-RF7	ROTARY AIRLOCK - SILO #14	AIRLOCK	CSTP
1	**61A-SC1**	61A-SC1	RECLAIM SCREW CONVEYOR #6 NORTH SILOS-N	SCREW-SHIPPING	CSTP
1	**61A-SC2**	61A-SC2	WEIGH SCREW CONVEYOR SILO #18	SCREW-SHIPPING	CSTP
1	**61A-SC3**	61A-SC3	WEIGH SCREW CONVEYOR SILO #15	SCREW-SHIPPING	CSTP
1	**61A-SC4**	61A-SC4	RECLAIM SCREW CONVEYOR #5 NORTH SILOS-S	SCREW-SHIPPING	CSTP
1	**61A-SC5**	61A-SC5	RECLAIM SCREW CONVEYOR #4 CTR SILOS-N	SCREW-SHIPPING	CSTP
1	**61A-SC6**	61A-SC6	WEIGH SCREW CONVEYOR SILO #17	SCREW-SHIPPING	CSTP
1	**61A-SC7**	61A-SC7	WEIGH SCREW CONVEYOR SILO #14	SCREW-SHIPPING	CSTP
1	**61A-SC8**	61A-SC8	RECLAIM SCREW CONVEYOR #3 CTR SILOS-S	SCREW-SHIPPING	CSTP
1	**61A-SC9**	61A-SC9	RECLAIM SCREW CONVEYOR #2 SOUTH SILOS-N	SCREW-SHIPPING	CSTP
1	**61A-SCA**	61A-SCA	RECLAIM SCREW CONVEYOR #1 SOUTH SILOS-S	SCREW-SHIPPING	CSTP
1	**61A-SCB**	61A-SCB	CROSS SCREW CONVEYOR #7	SCREW-SHIPPING	CSTP
1	**61A-SCC**	61A-SCC	RECLAIM SCREW CONVEYOR #7	SCREW-SHIPPING	CSTP
1	**61A-SCD**	61A-SCD	RECLAIM SCREW CONVEYOR #6	SCREW-SHIPPING	CSTP
1	**61A-SCE**	61A-SCE	RECLAIM SCREW CONVEYOR #5	SCREW-SHIPPING	CSTP
1	**61A-SCF**	61A-SCF	#2 CEM STG CROSS SCREW CONV #2 (LEFT HANDED SCREW)	SCREW-SHIPPING	CSTP
1	**61A-SCG**	61A-SCG	#2 CEM STG RECLAIM SCREW CONV # 4	SCREW-SHIPPING	CSTP
1	**61A-SCH**	61A-SCH	SCREW CONVEYOR UNDER SCREEN SCREW	SCREW-SHIPPING	CSTP
1	**61A-SCI**	61A-SCI	BULK LOADING SCREW CONVEYOR (S), LOADOUT	SCREW-SHIPPING	CSTP
1	**61A-SCJ**	61A-SCJ	DUST COLLECTOR DISCHARGE SCREW FOR 21-1-220 DUST COLLECTOR IN #2 CEMENT STORAGE	SCREW-SHIPPING	CSTP
1	**61A-SG2**	61A-SG2	SLIDE GATE ABOVE PUMP IN BASEMENT OF #1 OLD PACKHOUSE	SLIDE GATES	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**61A-SY1**	61A-SY1	#2 CEMENT STORAGE SCREENING SCREW	SCREW-SHIPPING	CSTP
1	**621-AS1**	621-AS1	#1 BAY SOUTH AIRSLIDE FROM BIN #41	TRUCK LOADING	CSTP
1	**621-AS2**	621-AS2	#1 BAY AIRSLIDE FROM BIN #39	TRUCK LOADING	CSTP
1	**621-AS3**	621-AS3	#1 BAY AIRSLIDE FROM BIN #1	TRUCK LOADING	CSTP
1	**621-AS4**	621-AS4	#1 BAY NORTH AIRSLIDE FROM BIN #37	TRUCK LOADING	CSTP
3	**621-BF1**	621-BF1	EAST LOADING DUST COLLECTOR OLD SILOS-NORBLO-CFM 1,100/ CONVERTED BY BHA TO PULSE JET.	DUST COL-SHIP	APCD
3	**621-FV1**	621-FV1	EAST OLD TRUCK TIPPING VALVE FOR DUST COLLECTOR 621-BF1 (113)	VALVE-FLOW	CSTP
3	**621-LA1**	621-LA1	EAST LOADING SPOUT #1 BAY OLD SILOS	TRUCK LOADING	CSTP
1	**621-PG1**	621-PG1	BAY #1, BIN #41, BIN VALVE	TRUCK LOADING	CSTP
1	**621-PG2**	621-PG2	BAY #1, BIN #39, BIN VALVE	TRUCK LOADING	CSTP
1	**621-PG3**	621-PG3	BAY #1, BIN #1, BIN VALVE	TRUCK LOADING	CSTP
1	**621-PG4**	621-PG4	BAY #1, BIN #37, BIN VALVE	TRUCK LOADING	CSTP
1	**621-SG1**	621-SG1	EAST OLD TRUCK SILO #41 SLIDE GATE	GATE	CSTP
1	**621-SG2**	621-SG2	EAST OLD TRUCK SILO #39 SLIDE GATE	GATE	CSTP
1	**621-SG3**	621-SG3	EAST OLD TRUCK SILO #1 SLIDE GATE	GATE	CSTP
1	**621-SG4**	621-SG4	EAST OLD TRUCK SILO #37 SLIDE GATE	GATE	CSTP
1	**622-AS1**	622-AS1	#2 BAY SOUTH AIRSLIDE FROM BIN #42	TRUCK LOADING	CSTP
1	**622-AS2**	622-AS2	#2 BAY AIRSLIDE FROM BIN #2	TRUCK LOADING	CSTP
1	**622-AS3**	622-AS3	#2 BAY AIRSLIDE FROM BIN #40	TRUCK LOADING	CSTP
1	**622-AS4**	622-AS4	#2 BAY NORTH AIRSLIDE FROM BIN #38	TRUCK LOADING	CSTP
3	**622-BF1**	622-BF1	WEST LOADING DUST COLLECTOR	DUST COL-SHIP	APCD
3	**622-FV1**	622-FV1	WEST OLD TRUCK TIPPING VALVE FOR DUCT COLLECTOR 622-BF1 (111)	VALVE-FLOW	CSTP
3	**622-LA1**	622-LA1	WEST LOADING SPOUT #2 BAY-OLD SILOS	TRUCK LOADING	CSTP
1	**622-LC1**	622-LC1	LUMP GRINDER, BIN #38, BAY 2	TRUCK LOADING	CSTP
1	**622-PG1**	622-PG1	BAY #2, BIN #42, BIN VALVE	TRUCK LOADING	CSTP
1	**622-PG2**	622-PG2	BAY #2, BIN #2, BIN VALVE	TRUCK LOADING	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**622-PG3**	622-PG3	BAY #2, BIN #40, BIN VALVE	TRUCK LOADING	CSTP
1	**622-PG4**	622-PG4	BAY #2, BIN #38, BIN VALVE	TRUCK LOADING	CSTP
1	**622-SG1**	622-SG1	WEST OLD TRUCK SILO #42 SLIDE GATE	GATE	CSTP
1	**622-SG2**	622-SG2	WEST OLD TRUCK SILO #2 SLIDE GATE	GATE	CSTP
1	**622-SG3**	622-SG3	WEST OLD TRUCK SILO #40 SLIDE GATE	GATE	CSTP
1	**622-SG4**	622-SG4	WEST OLD TRUCK SILO #38 SLIDE GATE	GATE	CSTP
1	**623-AS1**	623-AS1	BAY #3 SOUTH AIRSLIDE FROM BIN #63	TRUCK LOADING	CSTP
1	**623-AS2**	623-AS2	BAY #3 AIRSLIDE FROM BIN #61	TRUCK LOADING	CSTP
1	**623-AS3**	623-AS3	BAY #3 AIRSLIDE FROM BIN #3	TRUCK LOADING	CSTP
1	**623-AS4**	623-AS4	BAY #3 NORTH AIRSLIDE FROM BIN #59	TRUCK LOADING	CSTP
1	**622-PG3**	622-PG3	BAY #2, BIN #40, BIN VALVE	TRUCK LOADING	CSTP
1	**622-PG4**	622-PG4	BAY #2, BIN #38, BIN VALVE	TRUCK LOADING	CSTP
1	**622-SG1**	622-SG1	WEST OLD TRUCK SILO #42 SLIDE GATE	GATE	CSTP
1	**622-SG2**	622-SG2	WEST OLD TRUCK SILO #2 SLIDE GATE	GATE	CSTP
1	**622-SG3**	622-SG3	WEST OLD TRUCK SILO #40 SLIDE GATE	GATE	CSTP
1	**622-SG4**	622-SG4	WEST OLD TRUCK SILO #38 SLIDE GATE	GATE	CSTP
1	**623-AS1**	623-AS1	BAY #3 SOUTH AIRSLIDE FROM BIN #63	TRUCK LOADING	CSTP
1	**623-AS2**	623-AS2	BAY #3 AIRSLIDE FROM BIN #61	TRUCK LOADING	CSTP
1	**623-AS3**	623-AS3	BAY #3 AIRSLIDE FROM BIN #3	TRUCK LOADING	CSTP
1	**623-AS4**	623-AS4	BAY #3 NORTH AIRSLIDE FROM BIN #59	TRUCK LOADING	CSTP
3	**623-BF1**	623-BF1	DUST COLLECTOR LOAD EAST ROW-MIKROPUL	DUST COL-SHIP	APCD
3	**623-FV1**	623-FV1	EAST NEW TRUCK TIPPING VALVE FOR DUST COLLECTOR 623-BF1 (233)	VALVE-FLOW	CSTP
3	**623-LA1**	623-LA1	LOADING SPOUT CENTER EAST ROW #3 BAY	TRUCK LOADING	CSTP
1	**623-LC1**	623-LC1	LUMP GRINDER, BIN #63, BAY 3	TRUCK LOADING	CSTP
1	**623-PG1**	623-PG1	BAY #3, BIN #63, BIN VALVE	TRUCK LOADING	CSTP
1	**623-PG2**	623-PG2	BAY #3, BIN #61, BIN VALVE	TRUCK LOADING	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**623-PG3**	623-PG3	BAY #3, BIN #3, BIN VALVE	TRUCK LOADING	CSTP
1	**623-PG4**	623-PG4	BAY #3, BIN #59, BIN VALVE	TRUCK LOADING	CSTP
1	**623-SG1**	623-SG1	EAST NEW TRUCK SILO #63 SLIDE GATE	GATE	CSTP
1	**623-SG2**	623-SG2	EAST NEW TRUCK SILO #61 SLIDE GATE	GATE	CSTP
1	**623-SG3**	623-SG3	EAST NEW TRUCK SILO #3 SLIDE GATE	GATE	CSTP
1	**623-SG4**	623-SG4	EAST NEW TRUCK SILO #59 SLIDE GATE	GATE	CSTP
1	**624-AS1**	624-AS1	BAY #4 SOUTH AIRSLIDE FROM BIN #64	TRUCK LOADING	CSTP
1	**624-AS2**	624-AS2	BAY #4 AIRSLIDE FROM BIN #4	TRUCK LOADING	CSTP
1	**624-AS3**	624-AS3	BAY #4 AIRSLIDE FROM BIN #62	TRUCK LOADING	CSTP
1	**624-AS4**	624-AS4	BAY #4 NORTH AIRSLIDE FROM BIN #60	TRUCK LOADING	CSTP
3	**624-BF1**	624-BF1	DUST COLLECTOR NEW SILOS WEST ROW-MIKROPUL	DUST COL-SHIP	APCD
3	**624-FV1**	624-FV1	WEST NEW TRUCK TIPPING VALVE FOR DUCT COLLECTOR 624-BF1 (232)	VALVE-FLOW	CSTP
3	**624-LA1**	624-LA1	LOADING SPOUT CENTER WEST ROW #4 BAY	TRUCK LOADING	CSTP
1	**624-PG1**	624-PG1	BAY #4, BIN #64, BIN VALVE	TRUCK LOADING	CSTP
1	**624-PG2**	624-PG2	BAY #4, BIN #4, BIN VALVE	TRUCK LOADING	CSTP
1	**624-PG3**	624-PG3	BAY #4, BIN #62, BIN VALVE	TRUCK LOADING	CSTP
1	**624-PG4**	624-PG4	BAY #4, BIN #60, BIN VALVE	TRUCK LOADING	CSTP
1	**624-SG1**	624-SG1	WEST NEW TRUCK SILO #64 SLIDE GATE	GATE	CSTP
1	**624-SG2**	624-SG2	WEST NEW TRUCK SILO #4 SLIDE GATE	GATE	CSTP
1	**624-SG3**	624-SG3	WEST NEW TRUCK SILO #62 SLIDE GATE	GATE	CSTP
1	**624-SG4**	624-SG4	WEST NEW TRUCK SILO #60 SLIDE GATE	GATE	CSTP
1	**631-AS1**	631-AS1	RAIL SILO SOUTH AIRSLIDE BIN #43	AIRSLIDE	CSTP
1	**631-AS2**	631-AS2	RAIL SILO SOUTH AIRSLIDE BIN #44	AIRSLIDE	CSTP
1	**631-AS3**	631-AS3	RAIL SILO SOUTH AIRSLIDE BIN #45	AIRSLIDE	CSTP
1	**631-AS4**	631-AS4	RAIL SILO SOUTH AIRSLIDE BIN #48	AIRSLIDE	CSTP
1	**631-AS5**	631-AS5	RAIL SILO SOUTH AIRSLIDE BIN #47	AIRSLIDE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**631-AS6**	631-AS6	RAIL SILO SOUTH AIRSLIDE BIN #46	AIRSLIDE	CSTP
1	**631-AS7**	631-AS7	RAIL SILO SOUTH AIRSLIDE BIN #49	AIRSLIDE	CSTP
1	**631-AS8**	631-AS8	RAIL SILO SOUTH AIRSLIDE BIN #50	AIRSLIDE	CSTP
1	**631-AS9**	631-AS9	RAIL SILO SOUTH GATHERING AIRSLIDE FOR SILOS 46,50,45,&49	AIRSLIDE	CSTP
1	**631-ASA**	631-ASA	RAIL SILO SOUTH GATHERING AIRSLIDE FOR BINS 44,48,34&47	AIRSLIDE	CSTP
1	**631-ASB**	631-ASB	RAIL SILO SOUTH AIRSLIDE TO SPOUT 631-CG1	AIRSLIDE	CSTP
3	**631-BF1**	631-BF1	RAIL SILO SOUTH LOADING DUST COL-NORBLO-CFM 3,000/ CONVERTED BY BHA TO PULSE	DUST COL-SHIP	APCD
3	**631-FV1**	631-FV1	RAIL SILO SOUTH TIPPING VALVE FOR DUST COLLECTOR 631-BF1 (728)	VALVE-FLOW	CSTP
1	**631-PG1**	631-PG1	SOUTH BAY, BIN 43, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG2**	631-PG2	SOUTH BAY, BIN 44, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG3**	631-PG3	SOUTH BAY, BIN 45, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG4**	631-PG4	SOUTH BAY, BIN 48, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG5**	631-PG5	SOUTH BAY, BIN 47, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG6**	631-PG6	SOUTH BAY, BIN 46, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG7**	631-PG7	SOUTH BAY, BIN 49, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-PG8**	631-PG8	SOUTH BAY, BIN 50, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**631-SG1**	631-SG1	RAIL SILO SOUTH BIN #43 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG2**	631-SG2	RAIL SILO SOUTH BIN #44 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG3**	631-SG3	RAIL SILO SOUTH BIN #45 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG4**	631-SG4	RAIL SILO SOUTH BIN #48 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG5**	631-SG5	RAIL SILO SOUTH BIN #47 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG6**	631-SG6	RAIL SILO SOUTH BIN #46 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG7**	631-SG7	RAIL SILO SOUTH BIN #49 SLIDE GATE	RAIL LOADING	CSTP
1	**631-SG8**	631-SG8	RAIL SILO SOUTH BIN #50 SLIDE GATE	RAIL LOADING	CSTP
1	**632-AS1**	632-AS1	RAIL SILO NORTH AIRSLIDE BIN #51	AIRSLIDE	CSTP
1	**632-AS2**	632-AS2	RAIL SILO NORTH AIRSLIDE BIN #52	AIRSLIDE	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**632-AS3**	632-AS3	RAIL SILO NORTH AIRSLIDE BIN #53	AIRSLIDE	CSTP
1	**632-AS4**	632-AS4	RAIL SILO NORTH AIRSLIDE BIN #54	AIRSLIDE	CSTP
1	**632-AS5**	632-AS5	RAIL SILO NORTH AIRSLIDE BIN #55	AIRSLIDE	CSTP
1	**632-AS6**	632-AS6	RAIL SILO NORTH AIRSLIDE BIN #56	AIRSLIDE	CSTP
1	**632-AS7**	632-AS7	RAIL SILO NORTH AIRSLIDE BIN #57	AIRSLIDE	CSTP
1	**632-AS8**	632-AS8	RAIL SILO NORTH AIRSLIDE BIN #58	AIRSLIDE	CSTP
1	**632-AS9**	632-AS9	RAIL SILO NORTH AIRSLIDE BIN #10	AIRSLIDE	CSTP
1	**632-ASA**	632-ASA	RAIL SILO NORTH GATHERING AIRSLIDE FOR BINS 51,55,52&56	AIRSLIDE	CSTP
1	**632-ASB**	632-ASB	RAIL SILO NORTH GATHERING AIRSLIDE FOR BINS 53,57,54&58	AIRSLIDE	CSTP
1	**632-ASC**	632-ASC	RAIL SILO NORTH AIRSLIDE TO SPOUT 632-CG1 (721)	AIRSLIDE	CSTP
3	**632-BF1**	632-BF1	RAIL SILO LOADING NORTH-DUST COLLECTOR-NORBLO,CFM-3,000	DUST COL-SHIP	APCD
3	**632-FV1**	632-FV1	RAIL SILO NORTH TIPPING VALVE FOR DUST COLLECTOR 632-BF1 (725)	VALVE-FLOW	CSTP
1	**632-PG1**	632-PG1	NORTH BAY, BIN 51, BIN VALVE COMING OUT OF SILO TO AIRSLIDE	RAIL LOADING	CSTP
1	**632-PG2**	632-PG2	NORTH BAY, BIN 52, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG3**	632-PG3	NORTH BAY, BIN 53, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG4**	632-PG4	NORTH BAY, BIN 54, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG5**	632-PG5	NORTH BAY, BIN 55, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG6**	632-PG6	NORTH BAY, BIN 56, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG7**	632-PG7	NORTH BAY, BIN 57, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG8**	632-PG8	NORTH BAY, BIN 58, BIN VALVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-PG9**	632-PG9	NORTH BAY, BIN 10, BIN VLAVE COMING OUT OF SILO TO AIRSLIDES	RAIL LOADING	CSTP
1	**632-SG1**	632-SG1	RAIL SILO NORTH BIN #51 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG2**	632-SG2	RAIL SILO NORTH BIN #52 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG3**	632-SG3	RAIL SILO NORTH BIN #53 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG4**	632-SG4	RAIL SILO NORTH BIN #54 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG5**	632-SG5	RAIL SILO NORTH BIN #55 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG6**	632-SG6	RAIL SILO NORTH BIN #56 SLIDE GATE	RAIL LOADING	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**632-SG7**	632-SG7	RAIL SILO NORTH BIN #57 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG8**	632-SG8	RAIL SILO NORTH BIN #58 SLIDE GATE	RAIL LOADING	CSTP
1	**632-SG9**	632-SG9	RAIL SILO NORTH BIN #10 SLIDE GATE	RAIL LOADING	CSTP
3	**661-3B1**	661-3B1	EAST SURGE TANK #1	PACKER	CSTP
3	**661-3B2**	661-3B2	EAST SURGE TANK #2	PACKER	CSTP
3	**661-3B3**	661-3B3	EAST SURGE TANK #3	PACKER	CSTP
1	**661-AS1**	661-AS1	EAST AIRSLIDE FOR #1 SURGE TANK	PACKER	CSTP
1	**661-AS2**	661-AS2	EAST AIRSLIDE FOR #2 SURGE TANK	PACKER	CSTP
1	**661-AS3**	661-AS3	EAST AIRSLIDE FOR #3 SURGE TANK	PACKER	CSTP
3	**661-BF1**	661-BF1	#4 PACKHOUSE DUST COLLECTOR FOR #1 PACKER-SLY-CFM-9,490	DUST COL-SHIP	APCD
3	**661-BF2**	661-BF2	#4 PACKHOUSE DUST COLLECTOR FOR #2 PACKER- SLY-CFM 9,490	DUST COL-SHIP	APCD
3	**661-CN1**	661-CN1	CYCLONE FOR SURGE TANKS 661-3B1 AND 661-3B2	PACKER	CSTP
3	**661-CN2**	661-CN2	CYCLONE FOR SURGE TANK 661-3B3	PACKER	CSTP
1	**661-MW1**	661-MW1	SPILL SCREW FLOP VALVES BELOW #1 PACKING MACHINE (NORTHEAST)	VALVE-FLOW	CSTP
1	**661-MW2**	661-MW2	SPILL SCREW FLOP VALVES BELOW #2 PACKING MACHINE (SOUTHEAST)	VALVE-FLOW	CSTP
3	**661-PM1**	661-PM1	#4 PACKHOUSE #1 PACKER SE, TYPE I-IA "47	PACKER	PACKER
3	**661-PM2**	661-PM2	#4 PACKHOUSE #2 PACKER NE, TYPE I "94"	PACKER	PACKER
1	**661-RB1**	661-RB1	METER BELT CONVEYOR-24"(EAST)	BELT-PK-PALLET	CSTP
1	**661-SC1**	661-SC1	#4 PACKHOUSE FEED SCREW CONV #2	SCREW-SHIPPING	CSTP
1	**661-SC2**	661-SC2	#4 PACKHOUSE FEED SCREW CONV #1	SCREW-SHIPPING	CSTP
1	**661-SC3**	661-SC3	#4 PACKHOUSE #2 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	**661-SC4**	661-SC4	#4 PACKHOUSE #1 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	**661-SY1**	661-SY1	#4 PACKHOUSE #2 SCREEN	SCREEN-SHIPPING	CSTP
3	**661-SY2**	661-SY2	#4 PACKHOUSE #1 SCREEN	SCREEN-SHIPPING	CSTP
3	**662-3B1**	662-3B1	WEST SURGE TANK #1	PACKER	CSTP
3	**662-3B2**	662-3B2	WEST SURGE TANK #2	PACKER	CSTP
3	**662-3B3**	662-3B3	WEST SURGE TANK #3	PACKER	CSTP

Group Type (1, 2 or 3)	New MC HAC	Old MC HAC	Equipment Description	Equip Key	Source Type
1	**662-AS1**	662-AS1	WEST AIRSLIDE FOR #1 SURGE TANK	PACKER	CSTP
1	**662-AS2**	662-AS2	WEST AIRSLIED FOR #2 SURGE TANK	PACKER	CSTP
1	**662-AS3**	662-AS3	WEST AIRSLIDE FOR #3 SURGE TANK	PACKER	CSTP
3	**662-BF1**	662-BF1	#4 PACKHOUSE DUST COLLECTOR FOR #3 PACKERS-SLY-CFM 9,490	DUST COL-SHIP	APCD
3	**662-BF2**	662-BF2	#4 PACKHOUSE DUST COLLECTOR FOR #4 PACKERS-SLY-CFM 9,490	DUST COL-SHIP	APCD
3	**662-CN1**	662-CN1	CYCLONE FOR SURGE TANKS 662-3B1 AND 662-3B2	PACKER	CSTP
3	**662-MW1**	662-MW1	SPILL SCREW FLOP VALVES BELOW #3 PACKING MACHINE (SOUTHWEST)	VALVE-FLOW	CSTP
3	**662-MW2**	662-MW2	SPILL SCREW FLOP VALVES BELOW #4 PACKING MACHINE (NORTHWEST)	VALVE-FLOW	CSTP
3	**662-PM1**	662-PM1	#4 PACKHOUSE #3 PACKER SW, TYPE III & IA	PACKER	PACKER
3	**662-PM2**	662-PM2	#4 PACKHOUSE #4 PACKER NW (MASONS)	PACKER	PACKER
1	**662-RF1**	662-RF1	ROTARY FEEDER SILO 30	ROTARY FEEDER	CSTP
1	**662-RF2**	662-RF2	ROTARY FEEDER SILO 27	ROTARY FEEDER	CSTP
1	**662-RF3**	662-RF3	ROTARY FEEDER SILO #28	ROTARY FEEDER	CSTP
1	**662-RF4**	662-RF4	ROTARY FEEDER SILO 25	ROTARY FEEDER	CSTP
1	**662-RF5**	662-RF5	ROTARY FEEDER SILO 26	ROTARY FEEDER	CSTP
1	**662-SC1**	662-SC1	HIGH EARLY SCREW CONV. SOUTH	SCREW-SHIPPING	CSTP
1	**662-SC2**	662-SC2	#5 CEM STG-PH MASON SCREW CONV N.	SCREW-SHIPPING	CSTP
3	**662-SC3**	662-SC3	#4 PACKHOUSE #4 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
3	**662-SC4**	662-SC4	#4 PACKHOUSE #3 SPILL SCREW CONVEYOR	SCREW-SHIPPING	CSTP
1	**662-SC5**	662-SC5	#4 PACKHOUSE FEED SCREW CONV #4	SCREW-SHIPPING	CSTP
1	**662-SC6**	662-SC6	#4 PACKHOUSE FEED SCREW CONV #3	SCREW-SHIPPING	CSTP
3	**662-SY1**	662-SY1	#4 PACKHOUSE #4 SCREEN	SCREEN-SHIPPING	CSTP
3	**662-SY2**	662-SY2	#4 PACKHOUSE #3 SCREEN	SCREEN-SHIPPING	CSTP
2	**6E1-HP1**	6E1-HP1	GRANCEM UNLOADING WEST HOPPER	CEMENT STORAGES	CSTP
2	**6E1-HP2**	6E1-HP2	GRANCEM UNLOADING EAST HOPPER	CEMENT STORAGES	CSTP

Appendix E. Fugitive Dust Plan

During the public comment period associated with the draft title V permit (EIQ # 92-2518, Facility # 17-01-009), Holcim submitted comments regarding the Fugitive Dust Rule (567 IAC 23.3(2)(c)), as incorporated in Section II Plant Wide Conditions of the draft title V permit. Included with these comments was a proposed "Fugitive Dust Plan" which identified numerous potential sources of fugitive dust at the facility and specific measures or precautions to reduce or control such emissions, as applicable, to prevent the same from creating a nuisance and/or crossing the property boundaries of the Facility. As the proposed Fugitive Dust Plan is not classified as an "applicable requirement" it is not incorporated or otherwise made a part of this Title V permit. Notwithstanding, IDNR has evaluated the measures or precautions specified in the Plan for consistency and potential compliance with the Fugitive Dust Rule and has determined that such measures or precautions are considered, but may not constitute all, "reasonable precautions" given the nature and circumstances regarding the identified potential sources of fugitive dust. It should be noted that additional precautions may become necessary should the identified measures prove to be ineffective or due to adverse ambient conditions. Nothing herein excuses Holcim from compliance with the Fugitive Dust Rule.

Fugitive Dust Plan

Potential Source	Current Control (Continuous)	Method of Measurement	Monitoring Frequency	Threshold Corrective Action Step 1 Implemented	Corrective Action Step 1	Recordkeeping Requirements When Implementing Corrective Action Step 1	Threshold Corrective Action Step 2 Implemented	Corrective Action Step 2
Clay Road (M4)	ACO Required Surfactant Addition, Sweeping, and Watering	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Scrape clay product from road, sweep area, and water road	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Water road every 2-hours
Quarry Road (M3)	ACO Required Surfactant Addition	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Water area of dusting	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Apply additional layer of surfactant
Quarry Blasting	Rock Chips	Visual	Once per Event	Fugitive Dust Risk Identified that may cause a nuisance to the public or environment	Delay Shot When Possible	Date, Time, Potential Cause, Weather Conditions	NA	NA
Clay Crusher Behind Operations	Sweeping and Watering of Roads	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Water area of dusting	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Cease Operation
Dome Belt Transfer	Flashing, hooded conveyor	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Assess and perform mechanical adjustment to limit atmospheric interaction with product as possible.	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Perform mechanical modification to eliminate spillage, dusting, or other potential cause
Secondary Crusher Operations	Dust collection and building control	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Assess and perform mechanical adjustment to limit atmospheric interaction with product as possible.	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Perform mechanical modification to eliminate spillage, dusting, or other potential cause
Clay Pile Scraper Tractor	Watering Pile Face (non-regulatory requirement)	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Water face of pile every 4 hours.	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Water face of pile every 2 hours.
Clay Rail Car Unloading	Monitoring Weather conditions and clay conditions	Visual	Once per Shift when operating	Fugitive Dust Risk Identified	Change rail car and track-hoe orientation, modify pile size and location	Date, Time, Potential Cause, Weather Conditions	Dusting noted, with the potential to impact outside of property boundary	Cease Operation