Operations and Maintenance Plan
FG CKD HAND SYS
Sources: EU: DUST RETURN 5, FEED END 6, CKD PUGMILL

1.0 Source Description

The FG CKD HAND SYS System is used to capture Cement Kiln Dust (CKD) for reuse in cement making, to be sold for beneficial reuse or disposed of in the onsite landfill. CKD is conditioned by the addition of water prior to placement in the onsite Type III Landfill. Its main system components are:

- A dust return system that removes dust from various conveyance sources and collects it for use.
- The Pugmill recieves CKD from the kiln area and the CKD is mixed with water in the pugmill. The conditioned CKD is then loaded into the dust truck and it is transported to the Type III landfill and deposited in the active cell.

2.0 System Emission Points and Air Pollution Control Equipment

During FG CKD HAND SYS System operations, particulate matter is emitted at several emission points. The system includes a number of fabric filters to control particulate matter emissions during cement transfer and storage operations. The following table summarizes system emission points and applicable air pollution control devices (APCDs), as well as the visual inspection interval (see Section 6.0):

Emission Point #	Description	Air Pollution Control Device	Equipment #	VE Inspection Interval
31-181	Dust collector, screw conveyor	Fabric Filter #1	31-181	Monthly
31-182	Dust collector, Kiln 19 air slide pickups	Fabric Filter #2	31-182	Monthly
31-183	Dust collector #3, compressor air dust filter	Dust collector	31-183	Monthly
31-184	Dust collector, Kiln 20 screw conveyor pickup	Fabric Filter #4	31-184	Monthly
31-185	Dust collector, Kiln 21 screw conveyor (pickup?)	Fabric Filter #5	31-185	Monthly
31-186	Dust collector, truck loading	Fabric Filter #6	31-186	Monthly
31-187	Dust collector, dust tank control 31-006	Fabric Filter	31-187	Monthly
32-171	Dust collector, reclaim elevator	Fabric Filter #101	32-171	Monthly
32-172	Dust collector, Kiln 23 screw conveyor pups	Fabric Filter #102	32-172	Monthly
32-173	Dust collector, Kiln 22 screw conveyor pups	Fabric Filter #103	32-173	Monthly
33-250	Dust collector, Pug Mill and CKD receiving	Fabric Filter	33-250	Monthly

3.0 Applicable Emission Limit

The emission limits applicable to the FG CKD HAND SYS Systems are the following:

- Visible emissions must not exceed 10% percent opacity.

4.0 Operator Procedures for Minimizing Visible Emissions from the FG CKD HAND SYS System During Normal System Operations

FG CKD HAND SYS System operation is performed in accordance with the Lafarge Standard Operating Procedures (SOPs) documents for the Feed System, Feed Reclaim, Dust Return, and Pug Mill. Applicable SOPs include the following:

- Kiln 19
- Kiln 20
- Kiln 21
- Kiln 22
- Kiln 23
- Pug Mill

These procedures are kept in the plant's Environmental department system. The SOPs discuss how the plant will be operated, and are used for job-specific training. The tasks necessary to ensure proper operation of the FG CKD HAND SYS Systems while emitting the minimum emissions are included within the SOPs.

5.0 Preventive Maintenance

Preventative maintenance work orders are maintained on the Plant's Windows-based electronic maintenance management system, MAXIMO. Maintenance Department technicians perform preventative maintenance (PM) tasks on the CKD System equipment, including:

Equipment #	Equipment Name
	Kiln Group 5 Feed Reclaim System
31-182	Dust collector, Kiln 19 air slide pickups
31-102	Kiln 19 air slide
31-103	Kiln 19 air slide
31-184	Dust collector, Kiln 20 screw conveyor pickup
31-216	Kiln 20 screw conveyor
31-185	Dust collector, Kiln 21 screw conveyor (pickup?)
31-213	Air slide Kiln 21

Equipment #	Equipment Name
31-217	Kiln 21 screw conveyor
31-181	Dust collector, screw conveyor
31-244	Screw conveyor
31-247	Screw conveyor
31-091	Bucket elevator
31-210	Screw conveyor
31-228	Screw conveyor
31-094	Screw conveyor
31-246	Screw conveyor
31-243	Screw conveyor
31-242	Screw conveyor
31-186	Dust Collector, truck loading
	Kiln Group 5 Dust Return System
31-187	Dust collector, dust tank control 31-006
31-006	Dust tank
31-183	Dust collector #3, compressor air dust filter
	Kiln Group 6 Feed Reclaim System
32-171	Dust collector, reclaim elevator
32-131	Reclaim elevator
32-132	Reclaim elevator
32-172	Dust collector, Kiln 23 screw conveyor pups
32-003	Dust bin #3
32-133	Bucket elevator
32-134	Bucket elevator
32-106	Screw conveyor
32-113	Screw conveyor
32-173	Dust collector, Kiln 22 screw conveyor pups
32-102	Screw conveyor
32-103	Screw conveyor
	CKD Pugmill System
33-014	KG5 CKD F.K. Pump
33-114	KG6 CKD F.K. Pump
33-116	CKD F.K. Line
33-251	Return Air Fan
33-250	Dust Collector
33-252	Dust Collector Fan
33-200	CKD Storage Tank
33-230	Blower
33-208	Flow Control Gate
33-212	Rotary Airlock
33-305	Screw Conveyor
33-310	Pug Mill

The FG CKD HAND SYS System PM schedule is maintained on MAXIMO. The PM schedules and the PM task lists for equipment in the FG CKD HAND SYS System are based upon past experience with similar equipment and upon the manufacturer's documentation.

When conducting PM activities, maintenance technicians use checklists from the MAXIMO database that list PM tasks, steps, and instructions. The technician completes the PM checklist and returns the form to the Maintenance Planner, who verifies completion of the checklist and logs the completed checklist into MAXIMO. Electronic verification of the completed checklist is maintained in the MAXIMO database for a minimum of five years following completion of the PM.

5.0 Periodic Review and Update of this Operations and Maintenance Plan

The Environmental Manager (or a designated representative) will review this FG CKD HAND SYS System Operations and Maintenance Plan once per year for adequacy and currency. Documentation of the annual review or update will be retained in Environmental Department files for five years.

6.0 Operations and Maintenance Plan Revision History

Revision	Date	Purpose
1.0	February 2004	Initial plan generation
2.0	June 2008	Production Increase
3.0	October 2011	ROP Renewal