

EXHIBIT A

013-003

Action 020

BOULDER COUNTY HEALTH DEPARTMENT AIR POLLUTION CONTROL FIELD INSPECTION WORKSHEET

Source Number:	003	County Number:	013
Emission Points:	ALL	Date:	12/1/94

Company: Southwestern Portland Cement	Inspector:
Site Location: 5134 Ute Highway, Lyons Colorado	Contact Person: John Lohr, Kieth Huck, Bob Trujillo or Steve Mossberg
Telephone Number: 823-6685	County: Boulder
Inspection Type: Major - equipment verification	EIS Update: no
Permit Number: see report	Compliance Status: In Compliance

Total Hours Required:	5.5 HOURS
Prep / Travel:	1.5 hours
Inspection:	2.5 hours
Report / EIS:	1.5 hours



This was a major source inspection as per APCD / BCHD 1994 Air Contract. It was the second inspection of the year. The inspection was conducted with Steve Mossberg, Environmental and Safety Compliance Specialist, Bob Trujillo, Production Manager and Keith Huck, Maintenance Manager for Southdown Corporation.

The source is a dry process portland cement manufacturing facility. The plant was in full operation during the inspection. Mr. Bob Jorgenson of CDPHE had previously certified the CEM for the Clinker Cooler Stack. Southwestern Portland had previously failed a test on that same stack a few months prior. They attributed the problem to a hole in the bags. Mr. Huck indicated that they do in-house inspections on a monthly basis to insure the bags are properly working. The CEM monitor is completely on-line to monitor emissions from the Kiln and the Limestone Dryer as per permit conditions. The CEM is set to alarm when the permit limitations are approached (see report for permit).

Dowe Flats

On December 2, 1993, Southwestern Portland Cement submitted the application to State Health for the proposed DOW Flats quarry located to the northeast of the existing plant. The application submitted includes, APENs,

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technical support data, and the proposed fugitive dust plan. John Lohr, Plant Manager, indicated that the existing quarry has a useful life of approximately three more years, with a total life span of approximately 25 years. John indicated that they would like to be mining the DOW Flats quarry by the Fall of 1995. The DOW Flats quarry has the same geologic characteristics as the current quarry with a more continuous slope, making it easier to mine the area. The draft permits on DOW Flats were approved by the state, but were modified in order to work with the citizens based on the public comments received. The permit modifications have been submitted and approved by the state. There was an overall reduction in emissions resulting from the modifications.

The water crossings and roads are currently being constructed in the pit. They will not begin mining the pit until fall of 1995. The Dowe Flats pit is the largest of the existing pits at just larger than 1900 Acres. A belt conveyor system will transport rock from the pit to the plant. It will consist of over two miles of belt. The transfer points will have emissions controls (see fugitive emissions control plan). The belt will cross highway 66 leading to Lyons. Although the above road crossing design is not complete, it will be aesthetically pleasing as requested by citizens.

The limestone in the pit is virtually on the surface of the ground, therefore there will be very little overburden material. The limestone ridge is visible from the road and extends from the southern section of the property north to Rabbit Mountain. The expected total limestone production from this quarry will be 12.5 million tons. The shale is located just to the east of the limestone ridge.

Mining Pits A & C

Pit A is used to acquire 40% of the processed material on site. Pit A is the limestone pit. The pit, at the east end, is approximately 150' deep. The limestone layer is approximately 15' deep and the overburden 70' deep. The moisture content of this pit is approximately 5%.

Gypsum is hauled in at approximately 25,000 tons/year. The shale pit (Pit B) to the west of the property has been mined for approximately three months now. During the inspection, they were preparing to blast. Bob indicated that they blast in the shale pit approximately 2X/week. Every time they blast or drill in the shale pit they acquire samples for product quality. They sample at five foot intervals and acquire grab samples. Analysis of the material takes approximately 30 minutes to complete. The limestone is a more contiguous material and is only sampled 1X / 2 weeks.

Pit E is being reclaimed. The pit was 150' deep and is nearly completely refilled with overburden material.

Belt #7 to #9 Transfer Point

As stated in earlier reports this transferr point has been an ongoing concern for the past several years. The improvements to this section were scheduled to be completed in the July shutdown. Extensive work has been completed on this area. During the July shutdown, the top section of belt #7 was completely disassembled and re-engineered in an attempt to completely enclose the transfer. It has eliminated the problem of the buildup of material on the outside of the storage silo. There is still a significant problem with the dust vents inside the penthouse. The moisture of the dust is such that it clogs up the dust collectors continuously and as a result the inside of the penthouse is very dust laden. The buildup in spots is several inches thick. At the time of the inspection this area was being cleaned, which gave us the opportunity to thoroughly inspect the planned re-design.

Southwestern Portland has been working with an engineering firm in an attempt to fix this problem for the long term. They have come up with two different designs that would address the problem. Both of these options

incorporate using a much larger cfm in order to obtain a greater capture efficiency. The small DC Volks dust collectors would be replaced with a much larger one that would resolve the problems of clogging. The options will cost the company approximately \$150,000 for the project. It will be completed by the summer of 1995. Kieth will be submitting specifications on the project to this department. In addition, Kieth will supply us with a written summarization of what changes are to take affect.

The #4 to #6 belt transfer point will be improved at the end of December of this year by including a much larger collector.

During the inspection the roads within the plant were being watered and swept. Kieth indicated that they use a dry sweeper every day and a wet sweeper three days a week. in addition, a large water tanker waters the roads at the facility. There was no visible emissions during the inspection.

The points at the facility are as follows:

<u>Point #</u>	<u>Point Description</u>
	<u>Permit</u>
01	Primary Crusher - grandfathered
02	Raw Material Dryer -12B0444-1
03	Secondary Crusher - grandfathered
04	Raw Material Storage Silo - grandfathered
05	Raw Mill (grinding) - grandfathered
06	Homogenizing / Blending - grandfathered
07	Precalciner / Kiln Process - 12B0444-2
08	Clinker Cooler - 12B0444-2
09	Clinker Storage Silos - grandfathered
10	Clinker Conveying / A-Frame Storage - grandfathered
11	Finish Mill - grandfathered
12	Cement Load Out - grandfathered
13	Cement Storage Silos - grandfathered
14	Coal Unloading - exempt
15	Clinker Storage - outside - 84B0369F
16	Drilling - grandfathered
17	Blasting - grandfathered
18	Truck Loading & Un-loading - 84B0369F
19	Haul Roads - 84B0369F
20	Scraper Activities - grandfathered
21	Grading - grandfathered
22	Bulldozing - grandfathered
23	Wind Erosion - grandfathered
24	Wind Erosion - Stockpiles - grandfathered

Southwestern Portland is following the proper baghouse maintenance procedures as outlined by Keith Huck, Maintenance Engineer for SWP. Bob Trujillo gave me a complete listing of all control equipment at the facility and the process it is associated with(attached). The permit number corresponding to the process is marked on

all subject equipment.

The waste kiln dust is either being sold or reclaimed in the quarry. According to John Lohr, 10% of the waste dust is sold to Summitville, 30% goes back into the process and the remainder is hauled to the quarry for storage and reclamation. The following is a description of the plant process as determined by inspection:

Points 16-24 Raw Material Acquisition

There was a limited amount of material acquisition occurring during the inspection. We drove around the various pits on site to determine if there were any problems with fugitive emissions. No fugitive emissions were noted at any of the acquisition or dump areas. All of the haul roads throughout were being heavily watered. According to Bob Trujillo the following pits are used for the following purposes:

-A Pit = Shale acquisition

-C Pit = Limestone Acquisition

-E Pit = South of Hygiene Rd. as of July 1993 has been closed and is under reclamation

A total of 183,653 Tons of material was hauled in from the Larimer Pit in 1993. The remaining material was from pits at the Lyons facility.

Point 01, Primary Crusher

The primary crusher was in operation during the inspection, no emission was observed. There was not very much dust in the area. The crusher is controlled by a micropulse baghouse. The baghouse is automatically cleaned by pulses of air that are triggered when the magnahelic pressure (pressure differential across the various bags) reaches a certain number. There are a series of spray bars on the belts that control the fugitive emissions at the belt transfer point. From the transfer belt the material is carried to the raw material dryer.

Point 02, Raw Material Dryer (Permit #12B0444-1)

There was no visible emission at the time of the inspection. The permit number was marked on the dryer. After the material is dried to remove all moisture, it is taken back to the secondary crusher where it crushed to a specific size.

Point 03, Secondary Crusher

There was no visible emissions noted during the inspection. The material being crushed is transported to the crusher via an enclosed belt system. The crushed material is then transported to the homogenizing silo where any material that has not been properly crushed is sent back to the secondary crusher. The homogenizing silo blends the correct mixtures for the type of cement needed. From here the material is transferred to the raw material silos.

Point 04, Raw Materials Silos

Discussed previously in this inspection report.

Point 05 & 06, Raw Materials Grinding

There was no emissions observed at this point during the inspection. The particulate emissions at this point is controlled by a baghouse.

Point 07, Precalciner / Kiln (Permit #12B0444-2)

The precalciner is the beginning of the process, as it forms the chemical reaction of liberating CO₂ which in turn

will form the chemical reaction that is required to make cement.

There was no visible emissions during the inspection. Two baghouses control particulate emissions from the kiln process. One of the two baghouses is called the alkali bypass. The alkali bypass removes most of the waste kiln dust from the kiln exhaust stream which contains recondensed hydrocarbons, high alkali dust and sulfur oxides.

The material enters the kiln from the pre-heater at approximately 700 degrees fahrenheit and slowly moves toward the hottest end of the kiln. As the material moves toward the increasingly hotter temperature, it becomes slightly molten. The clinker is formed above the molten material, by floating on top of the molten material. As the material leaves the kiln and enters the Clinker Cooler it is approximately 2200 degrees fahrenheit.

Point 08 & 09, Clinker Cooler and Clinker Storage Silos

There was no visible emissions observed from this point during the inspection. The particulate emissions are controlled by a baghouse. There is an exhaust fan that takes the excess heat from the cooling process and directs it back to the kiln for a more efficient energy transfer. After the material is cooled it is transferred to the A-Frame for storage.

Point 10, Clinker Conveying and A-Frame Storage

There was no visible emissions observed at this point during the inspection. The particulate emissions control for this point is a baghouse. Drag chains transfer the cooled clinker material to a belt which takes it to the A-Frame for storage. There was some pile up of dust / clinker on the top of the A-Frame where the belt enters the A-Frame. This is one of the areas to be targeted for improving during the annual maintenance shut down.

Point 11, 12, 13, Finish Mill, Cement Load-Out, and Cement storage

Point #11, Finish Mill, was not operating at the time of the inspection. There was no visible emissions from either of the two remaining points. The particulate emissions for all three points are controlled by a baghouse. The finish mill takes any materials that have not been ground to specification and re-grinds them.

Point 14, Coal Unloading & Storage (Exempt)

This point used to be permit #P-10-718, but was granted an exemption from permit requirements in 1993. It should be noted that even though the point is exempt, if the thruput exceeds 50,000 tons per year of coal a Revised APEN will need to be filed with the State APCD. There was no coal being unloaded during the inspection.

Point 15, Clinker Storage Piles - Outside (Permit #84B0369F)

There was no visible emissions from this point during the inspection. The piles are watered as necessary. This source as well as the haul roads and loading activities are regulated under the fugitive dust control plan attached to the permit.

STATUS:

In Compliance

BAGHOUSE LIST

<u>BAGHOUSE ID NO.</u>	<u>APEN</u>	<u>EMISSION SOURCE</u>
225-8	1	Primary Crusher
225-10	1	Discharge of Surge Silo
225-11	2	Raw Material Dryer
225-3 VENT CRUSHER OR DUST SILO?	3	Secondary Crusher ? ^{AND DUST SILO} _{CHECK DRAWG.}
225-9	3	Discharge of 229-4 Belt
225-18	3	Waste Dust Load Outscrew (LOADOUT SCREW)
225-12	4	Raw Material Silo 284-9
225-13	4	Raw Material Silo 284-7
225-14	4	Raw Material Silo 284-5
225-15 INSIDE Bld.	4	Inlet of 229-9 Belt
225-16	4	Discharge of 229-7 Belt
325-1	5	Raw Material Mill (RAW MILL)
325-2	5	Raw Material Mill (RAW MILL)
325-3	5	Raw Material Weight Feeders
325-4	5	Raw Material Silo 284-10
425-1	6	Homogenizing Silo 484-2
425-2	6	Discharge of Kiln Feed Silos 484-2 and 484-3
525-4	7	Kiln Alkali Bypass
525-14	7	Kiln Spray Tower
525-21	7	Dust Silo 584-1
525-5	8	Conveyor 529-21 and Elevator 529-23
525-8	8	Clinker Cooler
525-9	8	Clinker Cooler
525-15	8	Inlet of Conveyor 529-3

<u>BAGHOUSE ID NO.</u>	<u>APEN</u>	<u>EMISSION SOURCE</u>
525-24	8	Discharge of Conveyor 529-25
625-12	9	Clinker Silo 684-1
625-4	10	Clinker Weight Feeders
625-5	10	Clinker Weight Feeders
625-6	10	Clinker Weight Feeders
625-7	10	Clinker Weight Feeders
625-8	10	Clinker Weight Feeders
625-9	10	Clinker Weight Feeders
625-10	10	Inlet of Conveyor 629-2
625-11	10	Discharge of Conveyor 529-31
625-14	10	Conveyors 629-5 and 629-6
725-2	11	Finish Mill
725-3	11	Finish Mill
725-5	11	Fringe Bin
725-6	11	Discharge of Bin 684-2
725-7	11	Discharge of Bin 684-1
725-8	11	Discharge of Bin 684-3
825-1	13	Finish Silos A10 and A13
825-2	13	All Finish Silos Except A2, A5, A10, and A13
825-3	13	Finish Silos A2 and A5
825-4	12	Load Out System West Side
825-5	12	Load Out System East Side
825-6	12	Cement Recirculating Pump
925-1	12	Masonry Packing Machine
925-2	12	Portland Packing Machine
525-10	13	Coal Unloading Feeders

BAGHOUSE ID NO.

APEN

EMISSION SOURCE

525-11

13

Coal Silo 584-3