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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2930
Plant ID No.:	009-00096
Applicant:	Holcim (US) Inc.
Facility Name:	Weirton Terminal
Location:	Brooke County
NAICS Code:	423320
Application Type:	Construction
Received Date:	April 24, 2012
Engineer Assigned:	Steven R. Pursley, PE
Fee Amount:	$1,000.00
Date Received:	April 25, 2012
Complete Date:	June 19, 2012
Due Date:	September 17, 2012
Applicant Ad Date:	April 23, 2012
Newspaper:	*The Weirton Daily Times*
UTM's:	Easting: 533.014 km Northing: 4,470.423 km Zone: 17
Description:	Construction of a cement distribution terminal

DESCRIPTION OF PROCESS

The facility will receive, store and ship Portland Cement, ground granulated blast furnace slag and/or other cementious materials.

Cement will be unloaded at the barge unloading station on the Ohio River. A Nicholson Docksider barge unloading system will be used to remove cement from the barge. The Docksider includes two 10-ton kettles and a 7,500 cfm vacuum system. The vacuum system pulls cement out of the barge and into the bottom of one kettle. The air passes through the cartridge filters in the upper half of the kettle and is exhausted to the atmosphere. The filters capture the cement, and the kettle fills. When full, the kettle is valved out and cement from barge unloading is routed to the other kettle. While the second kettle is filling, cement in the first kettle is evacuated and pneumatically transferred to the

silos. This process of alternating between kettles continues until the barge is empty.

From the Docksider, cement will be transferred pneumatically via a pipeline to a bucket elevator at the base of the two 2,000 short ton silos. The elevator moves the cement to the top of the silos where air slides distribute the cement to either silo no.1 or silo no2. This process is assisted by airflow from a C.P. Environmental Filters 15,000 cfm baghouse which controls particulate emissions from the silo loading process.

Cement will be loaded out from the two silos to a common truck loading spout which is inserted into the cement truck hatch and lowered to create a seal. The truck loading operation dust emissions are controlled with a 1,400 cfm DCL dust collector built into the spout.

Primary operation will be barge unloading at 250 tons per hour and truck loading at 250 tons per hour. There is the ability to unload trucks at 250 tons per hour in the unlikely event that barge unloading is not available. In this case the truck unloading would be in lieu of barge unloading. Truck unloading is also done infrequently when a truck has to reduce weight post loading. There is no rail loading or unloading capability.

SITE INSPECTION

A site inspection of the proposed site was performed by the writer on June 27, 2012. The facility will be located in the Half Moon Industrial Park in Weirton. During the inspection I took several photos which are included in the file.

To get to the facility take I-77 north to Ohio exit 47 just north of Cambridge, Ohio. Turn right unto US 22 east and go approximately 63 miles. Take WV exit 2 onto State Route 2 and go approximately 0.6 miles and turn left onto Freedom Way. Proceed approximately 1 mile and the facility will be on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

All point source emissions are controlled by filters (either cartridge filters or baghouses). Emissions from each point source were calculated by the applicant by assuming an inlet loading of 10 gr/dscf and a control efficiency of 99.8%.

Haul road emissions were calculated by the applicant using old AP-42 Chapter 11.2.6. The emissions shown below were performed by the writer using the Latest AP-42 Chapter 13 which give significantly higher results. The default AP-42 silt loading factor for concrete batch plants of 12 g/m^2 was used.

Emissions from the proposed facility should be as follows:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Barge Unloading	1.29	5.60	1.29	5.60	1.29	5.60
Silo Loading	2.57	11.30	2.57	11.30	2.57	11.30
Truck Loading	0.24	1.10	0.24	1.10	0.24	1.10
Haul Road	4.55	19.91	0.91	3.98	0.91	3.98
Total	**8.65**	**37.91**	**5.01**	**21.98**	**5.01**	**21.98**

REGULATORY APPLICABILITY

The following state regulations apply to the facility (no federal rules i.e. NSPS, MACT/NESHAPs are applicable):

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation).

Because uncontrolled emissions from the facility exceed 6 pounds per hour and 10 tons per year of PM the facility is subject to 45CSR13.

45CSR17 To Prevent and Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.

The main requirement of 45CSR17 is the prohibition of fugitive particulate matter which causes or contributes to statutory air pollution. Holcim will comply with this requirement with the use of pneumatic transfer systems controlled by a baghouse and dust collectors. Additionally, all haulroads will be paved and watered as necessary.

45CSR22 Air Quality Management Fee Program

The facility is not subject to any NSPS, MACT or NESHAP. Additionally, the facility is defined as a minor source under 45CSR30. Therefore the facility is not subject to 45CSR30 and will pay its annual fees through the Rule 22 program.

Nonapplicability Determinations

45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

Since this is not a manufacturing source (cement is simply unloaded, stored and shipped) it is not subject to 45CSR7.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

No non-criteria regulated pollutants are expected to be emitted from the facility.

AIR QUALITY IMPACT ANALYSIS

Because this is a minor source as defined in 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

The permittee shall maintain the following records:

* Records of monthly EPA Method 22 opacity testing and any corrective actions taken.
* Monthly throughput of cementious material.
* Monthly inspection of all baghouse bags.

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-2930 for the construction of a cement distribution terminal in Weirton, Brooke County, be granted to Holcim (US) Inc.

Steven R. Pursley, PE
Engineer

July 18, 2012