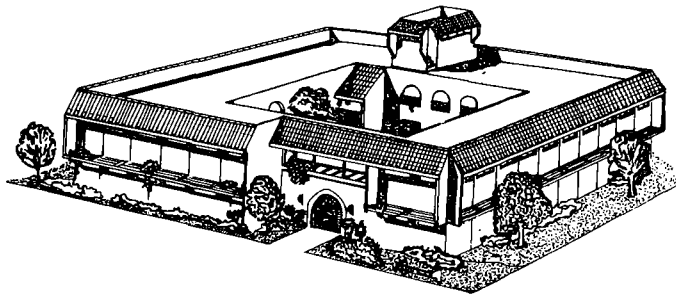


HILLSBOROUGH COUNTY  
ENVIRONMENTAL PROTECTION

COMMISSION

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MEMORANDUM

Date November 13, 1986

To Bill Thomas, DER

From Henry Robert Lue thru Jerry Campbell, EPC

Subject: Comments on General Portland, Inc. Technical Evaluation & Preliminary Determination- Permit #AC29-122068

The Hillsborough County Environmental Protection Commission (HCEPC) acknowledges the receipt of the Technical Evaluation and Preliminary Determination for General Portland, Inc. vacuum unloading system. After a thorough review of the permit, we recommend the following changes.

1. Since phase II of the clinker unloading system was not constructed, and the permittee has instructed us it will not be constructed, the following specific should be added.
  - ie. "If the permittee chooses to construct the sources covered under this permit, then the construction of the second phase of the clinker unloading system (controlled by baghouses #29, 30, 31 & 32) covered under permit AC29-094093 is prohibited."
2. Please delete specific condition #7. The opacity limit is already set at 5% i.e. specific condition #4.
3. To determine initial compliance we suggest the following condition be added.

"Test the dust collectors and shiphold for the following pollutant(s) within thirty days of start-up of the cement unloading facility. Submit two (2) copies of the tests data to the Air Section of the Hillsborough County Environmental Protection Commission within forty five days of such testing [Section 17-2.700(2), F.A.C.]."

<u>Dust Collector</u>	<u>Test</u>	<u>Test Method</u>
#27	VE, Flow	9, 2
#28	VE, Flow	9, 2
#42	VE, Flow	9, 2
#43	VE, Flow	9, 2
#44	VE, PM	9, 5
#45	VE	9
#46	VE	9
#47	VE	9
#48	VE	9

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BAQM

<u>Dust Collector</u>	<u>Test</u>	<u>Test Method</u>
#49	VE	9
#50	VE	9
#51	VE	9
#52	VE	9
Shiphold	VE	9

4. Please re-write specific condition #8 as follows:

"Compliance tests, in accordance with Rule 17-2.700, F.A.C., shall be submitted to the Hillsborough County Environmental Protection Commission within 45 days after completion of the test."

5. Please add the following condition:

"Visible emission at the shiphold shall not exceed 5% opacity."

6. Please re-write specific condition #9 as follows:

"Applications for operating permits shall be submitted to the Hillsborough County Environmental Protection Commission within 45 days of completion of compliance testing or at least 60 days prior to the expiration date of this permit, whichever occurs first."

NB: Please see attached discussion for the modifications CAPS need to do before issuing the new permit.

# DISCUSSION

The new cement vacuum unloading system will require the use of dust collectors #27 and #28 controlling emissions from the No. 7 conveyor belt. However, these two dust collectors are already covered under operating permits #A029-115401 and A029-115402 and part of construction permit #AC29-094093. Therefore, before a new construction permit can be issued the following rational must be considered:

1. Construction permit AC29-094093 - Clinker Unloading, Transfer, and Storage (Phase I & II) - included two 30,000 ton capacity clinker storage silos, seven (7) dust collectors - #26, #27, #28, #30, #31, & #32, and the associated conveying systems.

The new proposal explicitly negates the construction of Phase II of the project which includes the two (2) 30,000 ton capacity clinker storage silos, and all other emission sources controlled by dust collectors #29, #30, #31, and #32. Therefore, it is necessary to include a specific condition in the new construction permit to prohibit the use of dust collectors #29, #30, #31, and #32.

2. Operating permits A029-115401 and A029-115402 - the "Clinker Transfer Points" controlled by dust collectors #27 and #28 must be modified (after modifying CAPs issued permit #AC29-094093). The new proposal, "Cement Unloading, Transfer, and Storage", will require more operating time than the 720 hr/yr per source stipulated in the original construction and operating permits. In fact, General Portland, Inc. would like the hours of operation to be increased to 1733 hours/year for each of the two sources controlled by dust collectors #27 & #28. They would also like to retain the permits to continue unloading clinker in the event that they someday may have to revert to grinding clinker.

With Phase II of the 'Clinker Project' scraped, clinker will be unloaded directly into the Mill Feed Silos via the #7 conveyor belt at a maximum rate of 500 tons per hour. The construction and operating permits allow a maximum of 720,000 tons of clinker to be unloaded per year. Therefore, the new modified permit should show the new operating times calculated as follows:

$$720,000 \frac{\text{ton}}{\text{yr}} \times \frac{\text{hr}}{500 \text{ ton}} = 1440 \frac{\text{hr}}{\text{yr}}$$

At these operating hours, the total emissions from dust collectors #27 & #28 base on design flow rates and 0.03 grain/dscf (RACT allowable) would be 3.34 TPY and 2.22 TPY respectively. However, as far as accountable emissions for New Source Review, only a design flow rate of 6000 ACFM @ 0.03 grain/dscf resulting in an emission rate of 1.11 TPY should be accounted for at point #28. The reason being that this point has been in existence for years and was recently modified by installing an additional 6000 ACFM baghouse and replacing the old fan with a new 12,000 acfm fan. So, what we have now at point #28 is two independent 6000 acfm dust collectors driven by a common 12,000 acfm fan.

3. A new construction permit for the vacuum unloading of cement into two 15,000 ton capacity storage silos is recommended. The original proposal to build the system with a 30,000 ton capacity silo was changed. Along with this change, three more dust collection systems were introduced - Specifically, dust collector #42 will be removed from the truck loading station to the air slide - bucket elevator - air slide system leading to the two 15,000 ton storage silos. The two truck loading stations will have dust collectors #51 and #52 as emission control devices. The air slide - bucket elevator - air slide system leading to the Mill Feed Silos will have dust collector #50 controlling the emissions.

The emission calculations for all the dust collection systems in this new project has been correctly presented by General Portland, Inc. As far as New Source Review (NSR) is concerned the calculated emission rates exempt the facility.

General Portland, Inc. has agreed to the following operating parameters which will allow an exemption from NSR.

CLINKER UNLOADING

<u>Dust Collector</u>	<u>Hours of Operation / hr/yr</u>	<u>Emission Rate, TPY</u>
# 26	720	0.93
# 27	**1440	3.34
* # 28	**1440	1.11
		<u>5.38</u>

\*Only 6000 ACFM accounted for at this point. The source was an existing source for years until it was recently modified.

\*\*Since Phase II was scrapped, it became impossible to unload clinker @ 1000 TPH. Presently, the maximum unloading rate is 500 TPH, therefore requiring a change of the already permitted 720 hr/yr to 1440 hr/yr.

CEMENT UNLOADING

<u>Dust Collector</u>	<u>Hours of Operation / hr/yr</u>	<u>Emission Rate, TPY</u>
# 27	1733	4.01
# 28	1733	1.34
# 42	1733	1.78
# 43	1733	2.23
# 44	1733	1.18
# 45	1733	1.18
# 46	3000	0.58
# 47	3160	0.61
# 48	3160	0.61
# 49	3160	0.61
# 50	1500	0.77
# 51	2100	1.89
# 52	2100	1.89
		<u>18.68</u>

The total emissions are as follows:

Total Emissions from Clinker Unloading =	5.38 TPY
Total Emissions from Cement Unloading =	<u>18.68 TPY</u>
Total TSP Emissions	24.06 TPY

Since total calc. TSP emissions < 25 TPY

Therefore, exempted from New Source Review.