Message

From: Davies, Lynne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=169EB6CBDEBB4CAF85F76390B8AB2674-LDAVIE12]
Sent: 4/9/2017 8:07:09 PM
To: Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]
Subject: ChemWaste ORU
Attachments: 17 04 09 Chem Waste ORU2 RCRA Air Emissions.docx

Hi Janette – I may have had a breakthrough, not sure… See what you think of the attached and let's chat!

Lynne Davies
Attorney-Advisor
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900, ORC -113
Seattle, WA 98101
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A.1a. THERMAL INCINERATOR FOR VOC CONTROL–FACILITY A

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EXAMPLE COMPLIANCE ASSURANCE MONITORING

Thermal Incinerator for VOC Control: Facility A - Example 1

I. Background

A. Emissions Unit

Description:	Coater 1, Coater 2, and Coater 3
Identification:	Stack No. XXX/ Ct. YYYYY
Stack designation:	Incinerator
APC Plant ID No.	XXXXX
Facility:	Facility A Anytown, USA

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	Permit
Regulated pollutant (PSEU):	VOC
Emission limit:	95 percent reduction
Monitoring requirements in permit:	Continuously monitor chamber temperature [NOTE 1]

C. Control Technology: Thermal oxidizer

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table A.1a-1.

Note that this CAM submittal is intended as an example of monitoring the operation of the incinerator and does not address capture efficiency. Capture efficiency is a critical component of the overall control efficiency of the air pollution control system, and indicators of the performance of the capture system should be incorporated into the monitoring approach. However, sufficient information was not available from this case study to include monitoring of the capture system performance.

III. Data Availability [NOTE 2]

The minimum data availability for each semiannual reporting period, defined as the number of hours for which monitoring data are available divided by the number of hours during which the process operated (times 100) will be:

Chamber temperature: 90 percent

The data availability determination will not include periods of control device start up and shut down. For an hour to be considered a valid hour of monitoring data, a minimum of 45 minutes of data must be available.

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TABLE A.1a-1. MONITORING APPROACH

	Indicator No. 1	Indicator No. 2
I. Indicator	Chamber temperature	Work practice
Measurement Approach	The chamber temperature is monitored with a thermocouple.	Inspection and maintenance of the burner; observation of the burner flame.
II. Indicator Range	An excursion is defined as temperature readings less than 1500°F; excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as failure to perform annual inspection or daily flame observation.
QIP Threshold[a]	No more than six excursions below the indicator range in any semi-annual reporting period.	Not applicable
III. Performance Criteria A. Data Representativeness[b]	The sensor is located in the incinerator chamber as an integral part of the incinerator design. The minimum tolerance of the thermocouple is ±4°F or ±0.75% (of temperature measured in degrees Celius), whichever is greater. The minimum chart recorder sensitivity (minor division) is 20°F.	Not applicable
B. Verification of Operational Status	Not applicable	Not applicable
C. QA/QC Practices and Criteria[b]	Accuracy of the thermocouple will be verified by a second, or redundant, thermocouple probe inserted into the incinerator chamber with a hand held meter. This validation check will be conducted at least annually. The acceptance criterion is ±30°F.	Not applicable
D. Monitoring Frequency	Measured continuously.	Annual inspection of the burner; daily observation of the burner flame.
Data Collection Procedure	Recorded continuously on a circular chart recorder.	Record results of annual inspections and daily observations.
Averaging Period	No average is taken.	Not applicable

[a]The QIP is an optional tool for States; QIP thresholds are not required in the CAM submittal.

[b]Values listed for accuracy specifications are specific to this example and are not intended to provide the criteria for this type of measurement device in general.

Note: Capture efficiency is a critical component of the overall control efficiency of the air pollution control system, and indicators of the performance of the capture system should be incorporated into the monitoring approach. However, sufficient information was not available from this case study to include monitoring of the capture system performance.

MONITORING APPROACH JUSTIFICATION

I. Background

This is a coating facility that performs polyester film coating and paper liner coating with solvent based coatings. Three coaters are operated at the facility. Emissions from the three coaters are vented to the thermal incinerator. Emissions from mixing, coating, and drying operations are vented to this incinerator; some mixing vessels can also be vented to other oxidizers. A total of 27 sources are connected to the thermal incinerator.

II. Rationale for Selection of Performance Indicators

The incinerator chamber temperature was selected because it is indicative of the thermal incinerator operation (combustion occurring within the chamber). If the chamber temperature decreases significantly, complete combustion may not occur.

It has been shown that the control efficiency achieved by a thermal incinerator is a function of its operating temperature, or outlet temperature. By maintaining the operating temperature at or above a minimum, a level of control efficiency can be expected to be achieved. Attachment 1 presents information from the literature on incinerator control efficiency as a function of temperature.

The work practice comprised of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency. In addition, a daily observation of the burner flame selected to monitor proper operation of the burner (blue flame) is appropriate.

[Sufficient information regarding bypass of the control device is not available. The damper on the bypass line, or purge line, on each coater must be closed during coating process operation to ensure that the vent stream is routed to the thermal incinerator.]

III. Rationale for Selection of Indicator Ranges

The selected indicator range for the incinerator chamber temperature is "greater than 1500°F at all times." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. Furthermore, if the duration of a temperature excursion exceeds 10 minutes, the coating line operation will be curtailed. All excursions will be documented and reported. The selected QIP threshold level is six excursions per semiannual reporting period [see NOTE 3]. This level is less than 0.05 percent of the process operating time (based on 2,800 operating hours). If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented. This QIP threshold is supported by 6-months of monitoring data following the performance test.

The air pollution control permit issued by the State agency specifies that the incinerator must be designed to operate with a minimum operating temperature of 1500°F measured at the center of the incinerator chamber. Attachment 1 indicates that a thermal incinerator is expected to achieve 95 percent or greater destruction efficiency (DRE) at this temperature. The permit requirement is 95 percent DRE. The incinerator employs a temperature controller that maintains the desired chamber temperature by using a natural gas-fired auxiliary burner; the temperature controller is set to maintain a temperature of at least 1500°F.

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Review of historical monitoring data for a 6-month period (July-December 1993) indicates that 1500°F can be maintained on a routine basis with some excursions. The historical monitoring data for temperature indicate that normal loading to the incinerator will result in chamber temperatures of 1500°F and higher loadings to the device will result in periods of higher operating temperatures for short durations, such as during the performance test. The historical monitoring data indicate that the indicator range was exceeded seven times in the 6-month period; two of the excursions were momentary.

The performance test confirms acceptable performance of the incinerator; the incinerator achieved the required DRE of 95 percent. During the performance test, the incinerator was operating with a temperature of at least 1500°F (in the range of 1540° to 1800°F). During the performance tests the incinerator temperature was generally nearer 1700°F than 1500°F. The higher temperatures during the performance test occurred because the facility was operated near the maximum production rate with higher VOC loadings to challenge the incinerator with maximum VOC loading. The higher operating temperatures during the performance test are not the result of a change in operation of the incinerator (i.e., changing the burner set point temperature).

The performance test of the thermal incinerator was conducted in October 1993 using EPA Reference Method 25. Three test runs (1 hour each) were conducted with 11 out of 27 sources operating and venting to the incinerator; this number of operating sources is considered normal. During the performance test, the chamber temperature was measured continuously and recorded on a circular chart (Attachment 2).

The total hydrocarbon (THC) emission limit is 154 pounds per hour (lb/hr); this limit was met. The facility's operating permit requires 95 percent reduction from the thermal incinerator. During the performance test, the thermal incinerator achieved a destruction efficiency of greater than 95 percent for all three runs (95.4, 95.5, and 97.8); average DRE for the three test runs is 96.2 percent).

The production rate during the performance test was representative of highest VOC loading to the incinerator. During the performance test, the VOC input calculated from coating usage and content was XXX lb/hr [facility requested coating usage not be presented]. By comparison, for the 6 month period for which monitoring data were reviewed, the average VOC loading to the system when all three coaters were operating (calculated as the sum of the average VOC input rate, lb/hr, of each coater) was 80 percent of the amount during the performance test.

NOTE 1: CO monitoring also is a requirement in the facility's permit; however, for the purposes of this example CAM Plan, CO monitoring was not selected as an indicator. See CAM plan No. A.1b.

NOTE 2: Submittal of proposed data availability is optional; it is not a requirement of a CAM submittal.

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NOTE 3: Submittal of a QIP threshold is optional; it is not a requirement of a CAM submittal.

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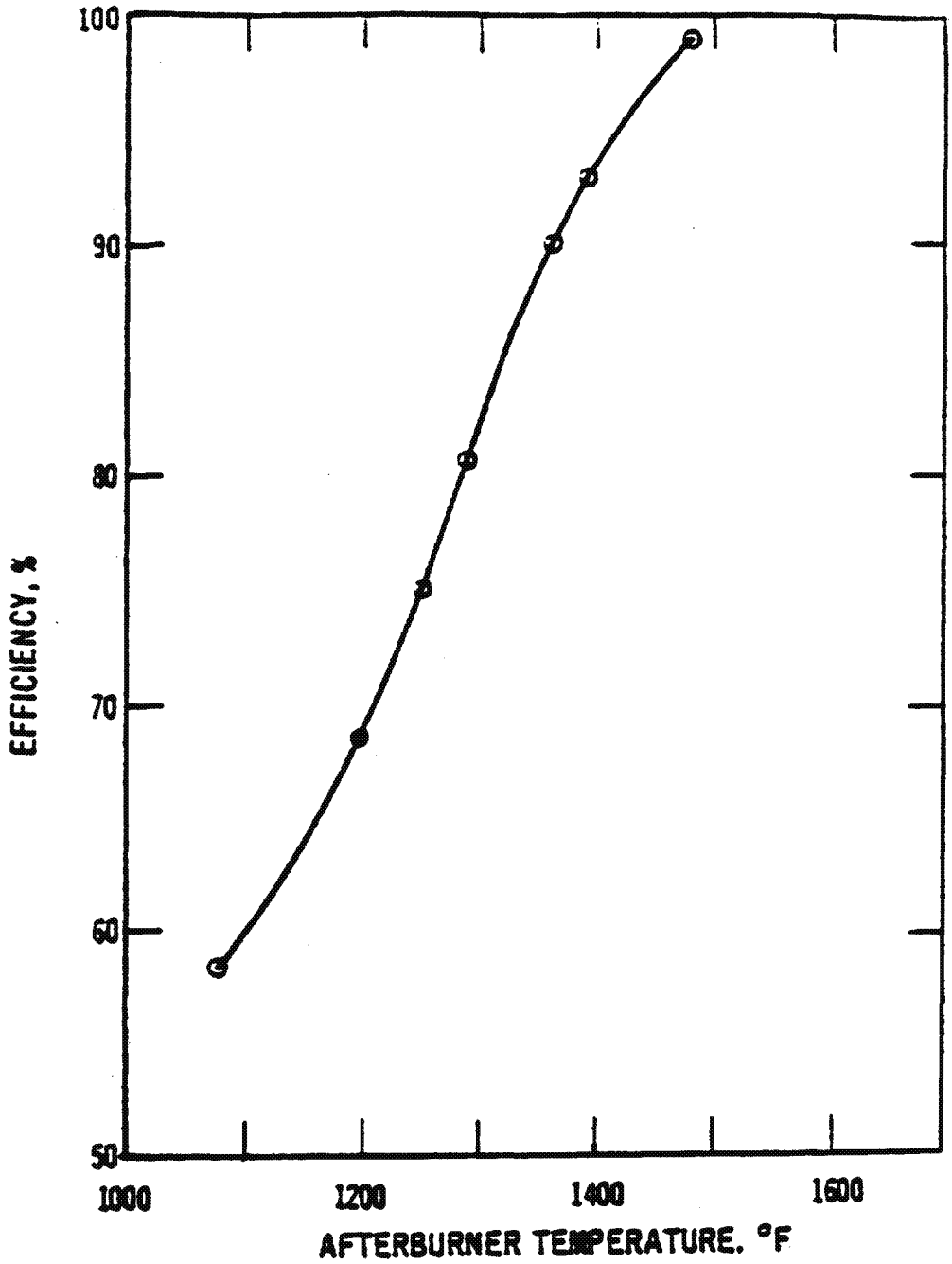

Attachment 1. Direct-flame afterburner efficiency as a function of temperature.
Air Pollution Engineering Manual, Chapter 5 - Control Equipment for Gases and Vapors.

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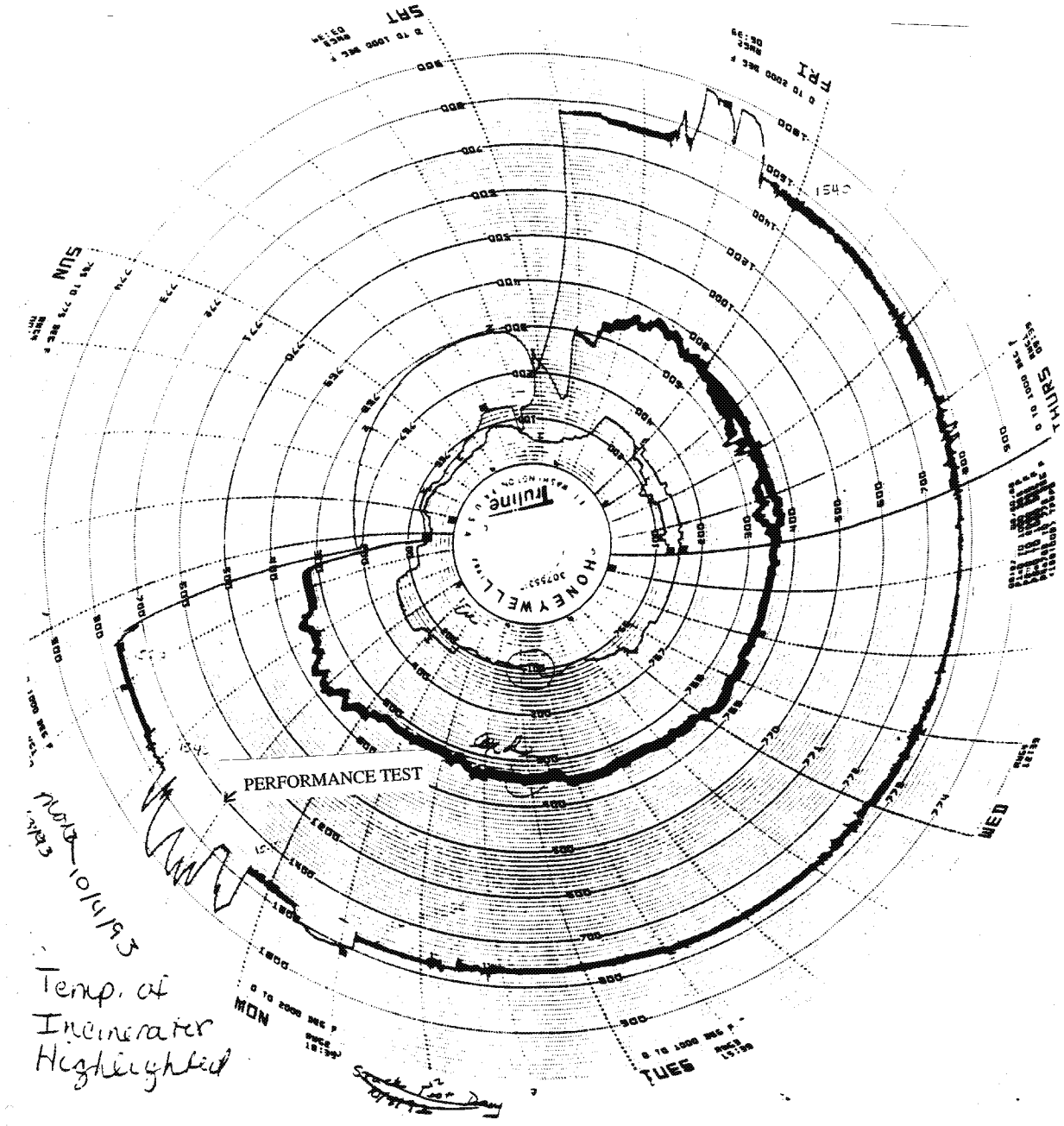

Attachment 2. Temperature chart during October 1993 performance test.

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A.1b. THERMAL INCINERATOR FOR VOC CONTROL–FACILITY A

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EXAMPLE COMPLIANCE ASSURANCE MONITORING

Thermal Incinerator for VOC Control: Facility A - Example 1b

I. Background

A. Emissions Unit

Description:	Coater 1, Coater 2, and Coater 3
Identification:	Stack No. XXX/ Ct. YYYYY
Stack designation:	Incinerator
APC Plant ID No.	XXXXX
Facility:	Facility A Anytown, USA

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	Permit
Regulated pollutant (PSEU):	VOC
Emission limit:	95 percent reduction
Monitoring requirements in permit:	Continuously monitor chamber temperature Continuously monitor CO concentration

C. Control Technology: Thermal oxidizer

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table A.1b-1.

Note that this CAM submittal is intended as an example of monitoring the operation of the incinerator and does not address capture efficiency. Capture efficiency is a critical component of the overall control efficiency of the air pollution control system, and indicators of the performance of the capture system should be incorporated into the monitoring approach. However, sufficient information was not available from this case study to include monitoring of the capture system performance.

III. Data Availability [NOTE 1]

The minimum data availability for each semiannual reporting period, defined as the number of hours for which monitoring data are available divided by the number of hours during which the process operated (times 100) will be:

Chamber temperature:	90 percent
Outlet CO concentration:	95 percent

The data availability determination does not include periods of control device start up and shut down. For an hour to be considered a valid hour of monitoring data, a minimum of 45 minutes of data must be available.

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TABLE A.1b-1. MONITORING APPROACH

	Indicator No. 1	Indicator No. 2
I. Indicator	Chamber temperature	Outlet CO concentration
Measurement Approach	The chamber temperature is monitored with a thermocouple.	The CO concentration is measured with a CEMS meeting 40 CFR 60 Appendix B, Performance Specifications.
II. Indicator Range	An excursion is defined as temperature readings less than 1500°F; excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a 1-hr average greater than 50 ppm (emission limit); excursions trigger an inspection, corrective action, and a reporting requirement.
QIP Threshold[a]	No more than six excursions below the indicator range in any semiannual reporting period.	No more than 14 excursions above the indicator range in any semiannual reporting period.
III. Performance Criteria A. Data Representativeness[b]	The sensor is located in the incinerator chamber as an integral part of the incinerator design. The minimum tolerance of the thermocouple is ±4°F or ±0.75% (of temperature measured in degrees Celius), whichever is greater. The minimum chart recorder sensitivity (minor division) is 20°F.	The system meets 40 CFR 60 Appendix B, Performance Specification 4 criteria.
B. Verification of Operational Status	Not applicable	Not applicable
C. QA/QC Practices and Criteria[b]	Accuracy of the thermocouple will be verified by a second, or redundant, thermocouple probe inserted into the incinerator chamber with a hand held meter. This validation check will be conducted at least annually. The acceptance criterion is ±30°F.	Calibration drift will be automatically checked every 24 hours by zero air and span gas.
D. Monitoring Frequency	Measured continuously.	CO concentration is measured continuously.
Data Collection Procedure	Recorded continuously on a circular chart recorder.	The average of six 10-second readings are recorded once per minute by the DAS (electronic record).
Averaging Period	No average is taken.	1-hour average of 60 1-minute readings.

[a]The QIP is an optional tool for States; QIP thresholds are not required in the CAM submittal.
[b]Values listed for accuracy specifications are specific to this example and are not intended to provide the criteria for this type of measurement device in general.
Note: Capture efficiency is a critical component of the overall control efficiency of the air pollution control system, and indicators of the performance of the capture system should be incorporated into the monitoring approach. However, sufficient information was not available from this case study to include monitoring of the capture system performance.

MONITORING APPROACH JUSTIFICATION

I. Background

This facility performs polyester film coating and paper liner coating with solvent based coatings. Three coaters are operated. Emissions from the three coaters are vented to the thermal incinerator. Emissions from mixing, coating, and drying operations are vented to this incinerator; some mixing vessels can also be vented to other oxidizers. A total of 27 sources are connected to the thermal incinerator.

II. Rationale for Selection of Performance Indicators

The incinerator chamber temperature was selected because it is indicative of the thermal incinerator operation (combustion occurring within the chamber). If the chamber temperature decreases significantly, complete combustion may not occur.

It has been shown that the control efficiency achieved by a thermal incinerator is a function of its operating temperature, or outlet temperature. By maintaining the operating temperature at or above a minimum, a level of control efficiency can be expected to be achieved. Attachment 1 presents information from the literature on incinerator control efficiency as a function of temperature.

The CO concentration at the outlet of the thermal incinerator is an indicator of incomplete combustion. Significant increases in CO indicate that combustion efficiency has decreased and corrective action should be taken.

[Sufficient information regarding bypass of the control device is not available. The damper on the bypass line, or purge line, on each coater must be closed during coating process operation to ensure that the vent stream is routed to the thermal incinerator.]

III. Rationale for Selection of Indicator Ranges

A. Thermal Incinerator Temperature

The selected indicator range for the incinerator chamber temperature is "greater than 1500°F at all times." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. Furthermore, if the duration of a temperature excursion exceeds 10 minutes, the coating line operation will be curtailed. All excursions will be documented and reported. The selected QIP threshold level is six excursions per semiannual reporting period (see NOTE 2). This level is less than 0.05 percent of the process operating time (based on 2,800 operating hours). If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented. This QIP is supported by 6 months of monitoring data following the performance test.

The air pollution control permit issued by the State agency specifies that the incinerator must be designed to operate with a minimum operating temperature of 1500°F measured at the center of the incinerator chamber. Attachment 1 indicates that a thermal incinerator is expected to achieve 95 percent or greater destruction efficiency (DRE) at this temperature. The permit requirement is 95 percent DRE. The incinerator employs a temperature controller that maintains the desired chamber temperature by

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using a natural gas-fired auxiliary burner; the temperature controller is set to maintain a temperature of at least 1500°F.

Review of historical monitoring data for a 6-month period (July to December 1993) indicates that 1500°F can be maintained on a routine basis with some excursions. The historical monitoring data for temperature indicate that normal loading to the incinerator will result in chamber temperatures of 1500°F and higher loadings to the device will result in periods of higher operating temperatures for short durations, such as during the performance test. The historical monitoring data indicate that the indicator range was exceeded seven times in the 6-month period; two of the excursions were momentary.

The performance test confirms acceptable performance of the incinerator; the incinerator achieved the required DRE of 95 percent. During the performance test, the incinerator was operating with a temperature of at least 1500°F (in the range of 1540° to 1800°F). During the performance tests the incinerator temperature was generally nearer 1700°F than 1500°F. The higher temperatures during the performance test occurred because the facility was operated near the maximum production rate with higher VOC loadings to challenge the incinerator with maximum VOC loading. The higher operating temperatures during the performance test are not the result of a change in operation of the incinerator (i.e., changing the burner set point temperature).

The performance test of the thermal incinerator was conducted in October 1993 using EPA Reference Method 25. Three test runs (1 hour each) were conducted with 11 out of 27 sources operating and venting to the incinerator; this number of operating sources is considered normal. During the performance test, the chamber temperature was measured continuously and recorded on a circular chart (Attachment 2).

The THC emission limit is 154 pounds per hour (lb/hr); this limit was met during the test. The facility's operating permit requires 95 percent reduction from the thermal incinerator. During the performance test, the thermal incinerator achieved a destruction efficiency of greater than 95 percent for all three runs (95.4, 95.5, and 97.8); the average DRE for the three test runs is 96.2 percent. The average outlet CO concentration for each of the three performance test runs was 2.3, 10.2, and 1.6 ppmvd.

The production rate during the performance test was representative of highest VOC loading to the incinerator. During the performance test, the VOC input calculated from coating usage and content was XXX lb/hr [facility requested coating usage not be presented]. By comparison, for the 6-month period for which monitoring data were reviewed, the average VOC loading to the system when all three coaters were operating (calculated as the sum of the average VOC input rate, lb/hr, of each coater) was 80 percent of the amount during the performance test.

B. Outlet CO Concentrations

The selected indicator range for the 1-hour average CO concentration is "less than 50 ppmvd, as measured." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. The selected QIP threshold level is 14 excursions per semiannual reporting period. This level is less than 0.5 percent of the process operating time (based on 2,800 operating hours). If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented. This QIP is supported by 3 months of monitoring data following the performance test.

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Review of historical monitoring data for a 3-month period (September through December 1993) indicates that the 50 ppmvd CO concentration limit can be maintained on a routine basis with some excursions. The historical monitoring data indicate that the indicator range was exceeded eight times in the 3-month period. Based upon these historical data, the threshold for excursions is no more than 14 excursions above 50 ppmvd in a 6-month period (i.e., 7 excursions per quarter).

The performance test conducted in October 1993 is discussed above in section III.A. The CO concentrations were well under the 50 ppmvd limit (measured CO) for all three runs during the test.

NOTE 1: Submittal of proposed data availability is optional; it is not a requirement of a CAM submittal.

NOTE 2: Submittal of a QIP Threshold is optional; it is not a requirement of a CAM submittal.

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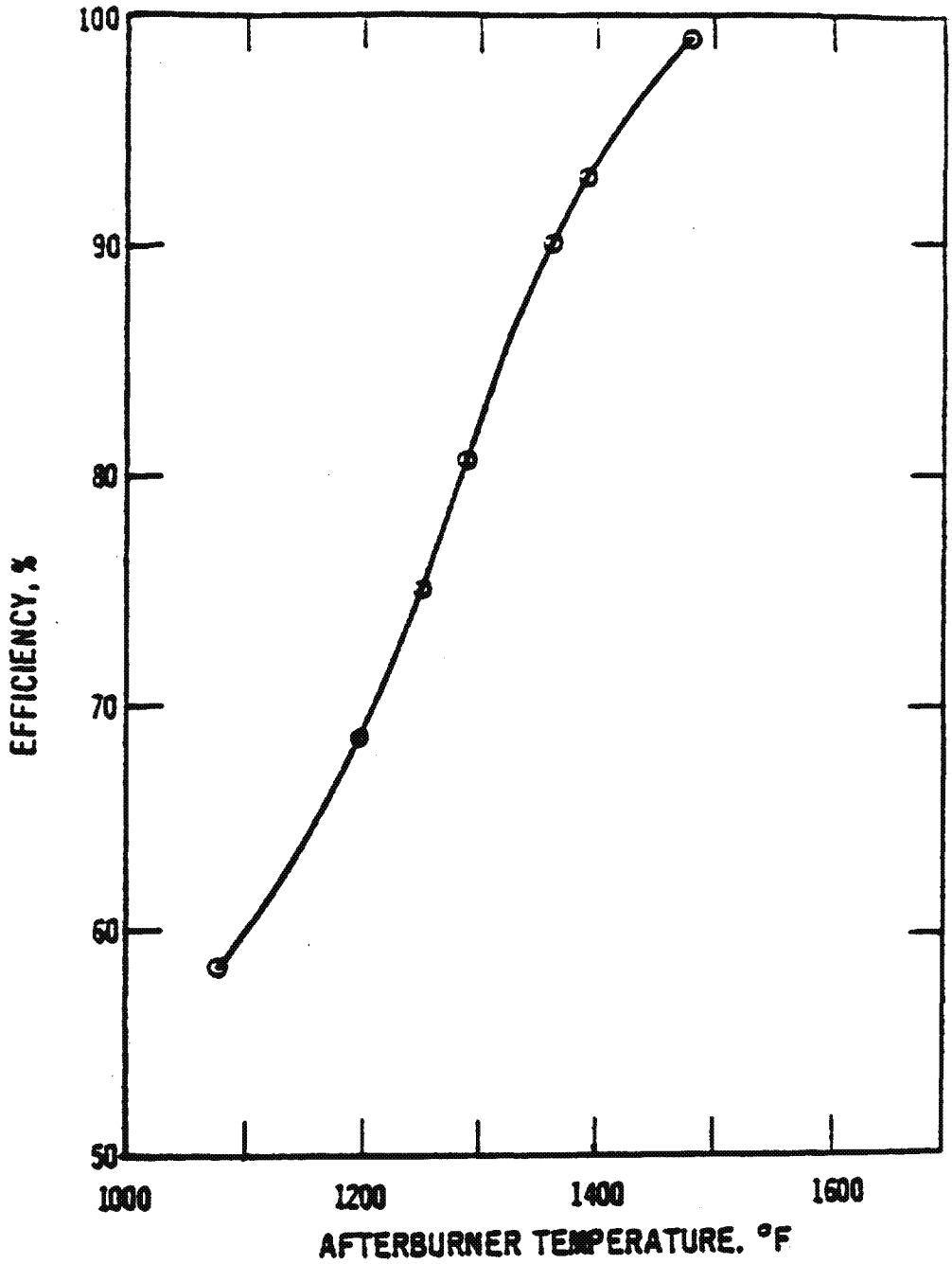

Attachment 1. Direct-flame afterburner efficiency as a function of temperature.
Air Pollution Engineering Manual, Chapter 5 - Control Equipment for Gases and Vapors.

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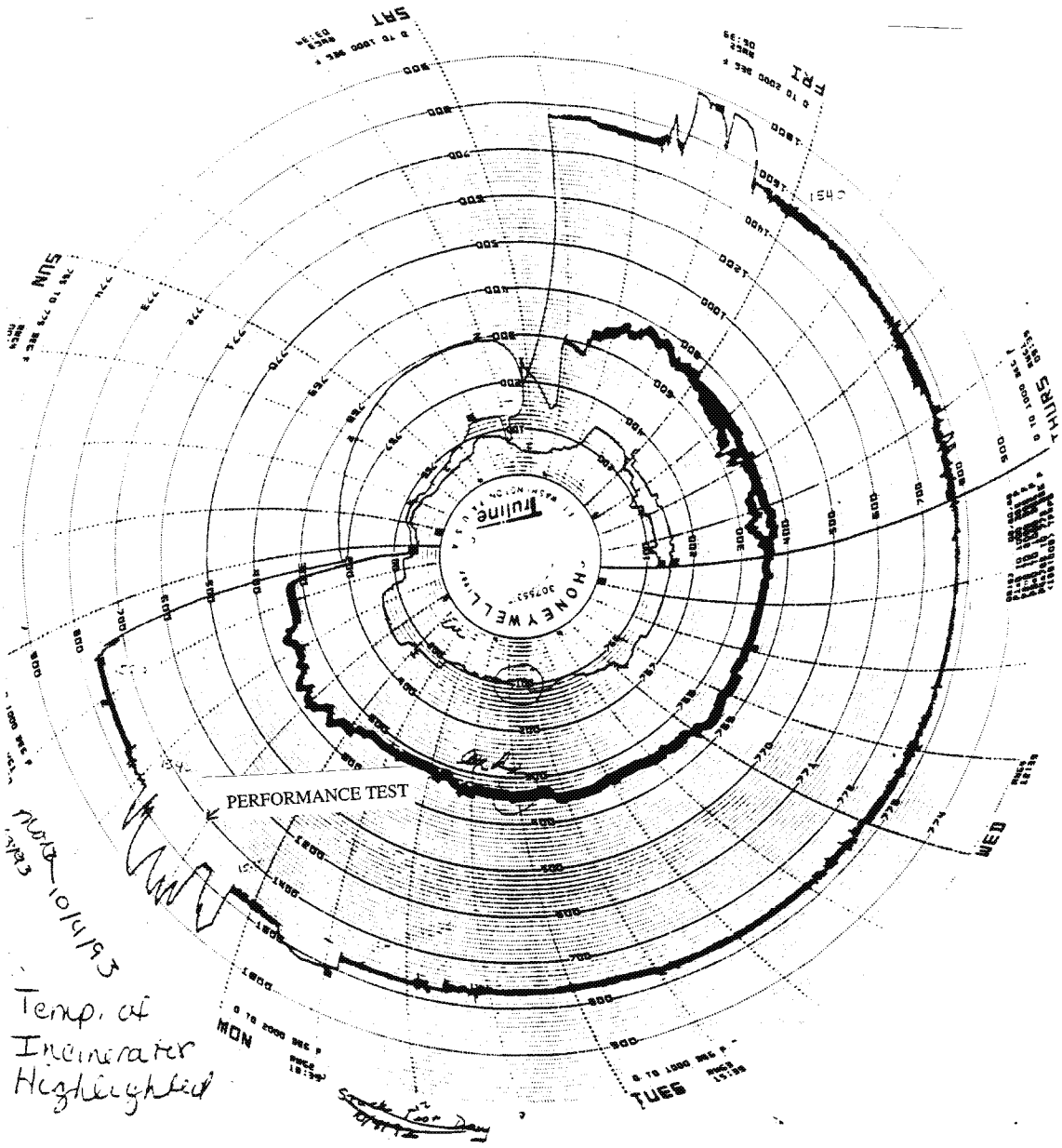

Attachment 2. Temperature chart during October 1993 performance test.

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D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health
and Environmental Control

Part 70 Air Quality Permit

Giant Cement Company
Post Office Box 218
Harleyville, South Carolina 29448
(permit updated 6/8/06)

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5) and 48-1-110(a), and the 1976 Code of Laws of South Carolina, as amended, Regulation 61-62, the above named permittee is hereby granted permission to discharge air contaminants into the ambient air. The Bureau of Air Quality authorizes the operation of this facility and its applicable equipment specified herein in accordance with valid construction permits, and the plans, specifications, and other information submitted in the Title V permit application dated September 3, 2002 and the PSD construction permit application dated June 24, 2002.

This permit is subject to and conditioned upon the terms, limitations, standards, and schedules contained in or specified on the 213 pages, with the accompanying attachments, of this permit.

Permit Number:	**TV-0900-0002**	**Effective Date:**	**April 1, 2003**
Issue Date:	**February 11, 2003**	**Expiration Date:**	**March 31, 2008**

Director, Engineering Services Division
Bureau of Air Quality

RECORD OF REVISIONS			
Revision Number	**Final Revision Date**	**Type of Revision (AA, MM, SM)**	**Description of Change (Specific Parts, Sections, and Tables Revised or Added)**
1	7/22/03	AA	Plant modification associated with construction permit 0900-0002-DO.
2	7/22/03	AA	Extended permit life to 5 years
3	8/14/03	AA	Corrected typographical errors found on pages 21, 32, 68, 69, 81, 94, 117, 152, 157, 185, 195, 202 and 205
4	9/3/04	MM	Added the requirements of SC Regulation 61-62.99 and addressed other facility requests.
5	6/8/06		Updated equipment due to minor changes associated with the construction of the new kiln system and associated equipment. Updated the current equipment being removed from service.

AA = Administrative Amendment
MM = Minor Modification
SM = Significant Modification

Send copies of all revisions to Permit File, Main File, Regional EQC Office, US EPA, and Environmental Contact.

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PART 1.0 GENERAL INFORMATION

A. APPLICABLE PERMIT DATES

ISSUE DATE:	February 11, 2003
EFFECTIVE DATE:	April 1, 2003
EXPIRATION DATE:	March 31, 2008
RENEWAL APPLICATION DUE:	September 30, 2007

B. FACILITY INFORMATION

ENVIRONMENTAL CONTACT:	Mr. Clint Roberts
CONTACT TELEPHONE NUMBER:	803-496-5033
CONTACT FAX NUMBER:	803-496-2195
INTERNET E-MAIL ADDRESS:	croberts@grr-giant.com
FACILITY LOCATION:	654 Judge Street, SC Route 453 and I-26
COUNTY:	Dorchester
SIC CODE(S):	3241
NAICS CODE(S):	327310
AFS CODE:	4503500002

C. FACILITY ADDRESS

FACILITY NAME:	Giant Cement Company
ADDRESS:	Post Office Box 218
CITY, STATE, ZIP CODE:	Harleyville, South Carolina 29448

D. FACILITY BILLING ADDRESS

FACILITY BILLING NAME:	Giant Cement Company
ADDRESS:	Post Office Box 218
CITY, STATE, ZIP CODE:	Harleyville, South Carolina 29448

PART 2.0 APPLICABILITY [SC Regulation 61-62.70.3(a)]

The following sources are subject to permitting requirements of Part 70:

1. Any major source;

2. Any source, including an area source, subject to a standard, limitation, or other requirement under Section 111 of the Clean Air Act (Act);

3. Any source, including an area source, subject to a standard or other requirement under Section 112 of the Act, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under Section 112(r) of the Act;

4. Any affected source under the Title IV Acid Rain Program;

5. Any source in a source category designated by the Administrator of the US Environmental Protection Agency (US EPA) (Administrator) pursuant to this Section; and

6. Any source listed in SC Regulation 61-62.70.3(a) that is exempt from the requirement to obtain a permit under SC Regulation 61-62.70.3(b) may opt to apply for a permit under this Part 70 program.

The following source categories are exempted from the obligation to obtain a Part 70 permit, but are not exempted from other SC Department of Health and Environmental Control (Department) and US EPA requirements [SC Regulation 61-62.70.3(b)(4)]:

1. All sources and source categories that would be required to obtain a permit solely because they are subject to 40CFR60, Subpart AAA - Standards of Performance for New Residential Wood Heaters; and

2. All sources and source categories that would be required to obtain a permit solely because they are subject to 40 CFR 61, Subpart M - National Emission Standard for Hazardous Air Pollutants for Asbestos, Section 61.145, Standard for Demolition and Renovation.

Any person that operates or proposes to operate a particular source or installation may submit a request in writing that the Department makes a determination as to whether a particular source or installation is subject to the permit requirements of this regulation. The request must contain such information as is believed sufficient for the Department to make the requested determination. [SC Regulation 61-62.70.3(e)]

PART 3.0 GENERAL CONDITIONS

This section describes conditions and provisions applicable to all Part 70 sources. Specific source category conditions and requirements are contained in Part 5.0 of this permit. (Revised 05/21/99)

A. PERMIT ISSUANCE [SC Regulation 61-62.70.7(a)(1)]

A permit, permit modification, or renewal may be issued only if the following conditions have been met:

1. The Department has received a complete application for a permit, permit modification, or permit renewal;

2. Except for modifications qualifying for minor permit modification procedures under SC Regulation 61-62.70.7(e)(2) and (3), the Department has complied with the requirements for public participation under SC Regulation 61-62.70.7(h);

3. The Department has complied with the requirements for notifying and responding to affected States under SC Regulation 61-62.70.8(b);

4. The conditions of the permit provide for compliance with all applicable requirements and the requirements of Part 70; and

5. The Administrator has received a copy of the proposed permit and any notices required under SC Regulation 61-62.70.8(a) and (b), and has not objected to issuance of the permit under SC Regulation 61-62.70.8(c) within the required time frame.

A Title V operating permit does not excuse any facility from the preconstruction permitting requirements under SC Regulation 61-62.1.

B. PERMIT EXPIRATION AND RENEWAL [SC Regulation 61-62.70.7(c)] (Revised 11/13/98)

Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with SC Regulation 61-62.70.5(a)(1)(iii), 62.70.5(a)(2)(iv), and 62.70.7(b). In this case, the permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the permit including any permit shield that may be granted pursuant to SC Regulation 61-62.70.6(f) shall remain in effect until the renewal permit has been issued or denied.

Permits being renewed are subject to the same procedural requirements, including those for public participation, affected State and US EPA review, that apply to initial permit issuance.

C. SEVERABILITY [SC Regulation 61-62.70.6(a)(5)]

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

D. FEE ASSESSMENT AND PAYMENT [SC Regulation 61-62.70.6(a)(7)]

The owners or operators of Part 70 sources shall pay fees to the Department consistent with the fee schedule approved pursuant to South Carolina Regulation 62.70.9.

E. SUBMITTAL OF INFORMATION [SC Regulation 61-62.70.6(a)(6)(v)]

The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request, in writing, to determine whether cause exists for modifying, revoking, reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. The Department may also request that the permittee furnish such records directly to the Administrator along with a claim of confidentiality.

F. PUBLIC PARTICIPATION [SC Regulation 61-62.70.7(h)]

Except for modifications qualifying for minor permit modification procedures, all permit proceedings, including initial permit issuance, significant modifications, and renewals, shall provide adequate procedures for public notice including offering an opportunity for public comment and hearing on the draft permit. These procedures shall meet all requirements of SC Regulation 61-62.70.7(h).

G. PERMIT REOPENING [SC Regulation 61-62.70.7(f)] (Revised 05/21/99)

This permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to a major Part 70 source for which three or more years remain on the original term of the permit. Such revisions shall be made not later than eighteen (18) months following promulgation of relevant standards or regulations unless the regulation specifically provides for a longer compliance period. No such reopening is 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 has been extended pursuant to SC Regulation 61-62.70.7(c)(1)(ii).

2. Additional requirements, including excess emission requirements, become applicable to an affected source under the acid rain program. Excess emissions offset plans shall be deemed to be incorporated into this permit upon approval by the Administrator.

3. The Department or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Administrator or the Department determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

In addition, the permit may be modified, revoked, reopened, and reissued, or terminated for cause by the Department. 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. [SC Regulation 61-62.70.6(a)(6)(iii)]

Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be as expeditious as practicable. Reopenings shall not be initiated before a notice of such intent is provided to the Part 70 source by the Department at least thirty (30) days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

H. TEMPORARY SOURCES [SC Regulation 61-62.70.6(e)]

In accordance with SC Regulation 61-62.70.6(e), the Department may issue a single permit authorizing emissions from similar operations by the same source owner or operator at multiple temporary locations. The operation must be temporary and involve at least one change in location during the term of the permit. No sources subject to Title IV of the Act shall be permitted as a temporary source.

I. EMERGENCY PROVISIONS [SC Regulation 61-62.70.6(g)(3)] (Revised 05/21/99)

In the case of an emergency, as defined in SC Regulation 61-62.70.6(g), the permittee shall verify an affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

2. The permitted facility was at the time being properly operated; and

3. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.;

Additionally, the permittee shall submit verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by written notifications within thirty (30) days. This notice fulfills the requirement of SC Regulation 61-62.70.6(a)(3)(iii)(B). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This provision is in addition to any emergency or upset provision contained in any applicable requirement. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

J. PROPERTY RIGHTS [SC Regulation 61-62.70.6(a)(6)(iv)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

K. ECONOMIC INCENTIVES, MARKETABLE PERMITS, EMISSION TRADING [SC Regulation 61-62.70.6(a)(8)]

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.

L. TITLE IV SOURCES [SC Regulation 61-62.70.6(a)(4)]

The permittee is prohibited from emissions exceeding any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by a source. The source may not, however, use allowances as a defense for noncompliance with any other applicable requirement. Any such allowances shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act.

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 incorporated into the permit and shall be enforceable by the Administrator. [SC Regulation 61-62.70.6(a)(1)(ii)]

M. ADMINISTRATIVE PERMIT AMENDMENTS [SC Regulation 61-62.70.7(d)(3)]

An administrative permit amendment as defined in SC Regulation 61-62.70.7(d) can be made by the Department consistent with the following:

1. The Department shall take no more than sixty (60) days from receipt of a request for an administrative permit amendment to take final action on such request, and may incorporate such changes without providing notice to the public or affected States provided that it designates any such permit revisions as having been made pursuant to this paragraph.

2. The Department shall submit a copy of the revised permit to the Administrator.

3. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request, except transfer/ownership which must comply with SC Regulation 61-62.1, Section II(E).

N. MINOR PERMIT MODIFICATIONS [SC Regulation 61-62.70.7(e)(2)]

Minor permit modifications can be made by the Department in accordance with SC Regulation 61-62.70.7(e)(2)(i). An application requesting the use of minor permit modification procedures shall meet the requirements of SC Regulation 61-62.70.5(c) and shall include items as specified in SC Regulation 61-62.70.7(e)(2)(ii).

The Department may modify the procedure outlined in SC Regulation 61-62.70.7(e)(2) to process groups of a source's applications for certain modifications eligible for minor permit modification processing. Group processing of minor permit applications will proceed as outlined in SC Regulation 61-62.70.7(e)(3).

O. SIGNIFICANT MODIFICATION PROCEDURES [SC Regulation 61-62.70.7(e)(4)]

Significant permit modification procedures shall be used for applications requesting permit modifications listed in SC Regulation 61-62.70.7(e)(4)(i). Significant permit modifications shall meet all requirements of this Part 70, including those for applications, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal.

P. DUTY TO COMPLY [SC Regulation 61-62.70.6(a)(6)(i)]

The permittee must comply with all of the conditions of this permit. Any permit noncompliance constitutes a violation of the SC Pollution Control Act and/or the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of permit renewal application.

Q. INSPECTION AND ENTRY [SC Regulation 61-62.70.6(c)(2)]

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following:

1. Enter upon the permittee's premises where a Part 70 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 any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

4. As authorized by the Act and/or the SC Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

R. COMPLIANCE REQUIREMENTS [SC Regulation 61-62.70.6(c)(5)] (Revised 05/21/99)

Consistent with SC Regulation 61-62.70.6(a)(3), this permit contains compliance certification, testing, monitoring, reporting, and record keeping requirements sufficient to assure compliance with the terms and conditions of this permit. Any document (including reports) shall contain a certification by a responsible official or designee that meets the requirements of SC Regulation 61-62.70.5(d).

The responsible official or designee shall certify, annually, compliance with the conditions of this permit. The compliance certification shall include the following:

1. The identification of each term or condition of the permit that is the basis of the certification.

2. The identification of the methods or means used for determining the compliance status with each term and condition during the certification period, and whether such methods or means provide continuous or intermittent data.

3. The status of compliance with the terms and conditions of the permit for the period covered by the certification.

4. Such other facts as the Department may require to determine the compliance status of the source.

5. All compliance certifications shall be submitted to the Administrator as well as to the Department.

The annual compliance certification shall be sent to the Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control - Bureau of Air Quality (SC DHEC - BAQ) at the following addresses:

US EPA, Region 4
Air Enforcement Branch
61 Forsyth Street
Atlanta, GA 30303

SC DHEC - BAQ
Technical Management Section
2600 Bull Street
Columbia, SC 29201

S. SCHEDULE OF COMPLIANCE [SC Regulation 61-62.70.5(c)(8)] (Revised 5/21/99)

The permittee shall submit a compliance schedule that contains the following for all Part 70 sources that are not in compliance with all applicable rules:

1. A description of the source's compliance status and where appropriate a compliance schedule with respect to all applicable requirements as follows:

(a) For applicable requirements with which the source is in compliance, a statement that during the permit term the source will continue to comply with such requirements.

(b) For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis, unless a more detailed schedule is expressly required by the applicable requirement.

(c) A schedule of compliance for sources that are not in compliance with all applicable requirements at the time of permit issuance. This schedule shall include a narrative description of how the source will achieve compliance, a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with all applicable requirements. This compliance schedule shall be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

2. A schedule for submission of certified progress reports no less frequently than every six (6) months for sources required to have a schedule of compliance to remedy a violation. Progress reports shall meet the requirements of SC Regulation 61-62.70.6(c)(4)(i) and (ii).

3. The compliance plan content requirements specified in this paragraph shall apply and be included in the acid rain portion of a compliance plan for an affected source, except as specifically superseded by regulations promulgated under Title IV of the act with regard to the schedule and method(s) the source will use to achieve compliance with acid rain emissions limitations.

T. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE
[SC Regulation 61-62.70.6(a)(6)(ii)]

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 this permit.

U. OPERATIONAL FLEXIBILITY [SC Regulation 61-62.70.7(e)(5)]

In accordance with SC Regulation 61-62.70.7(e)(5), a permitted facility is authorized to make changes within their facility without requiring a permit revision, if the changes are not modifications under Title I of the Act and the changes do not exceed the emissions allowable under this permit. The permitted facility shall provide the Administrator and the Department written notification as required by SC Regulation 61-62.70.7(e)(5) at least seven (7) days prior to such changes.

PART 4.0 FACILITY WIDE REQUIREMENTS

A. LIMITATIONS, STANDARDS, AND OTHER REQUIREMENTS

Table 4.1 contains summaries of facility wide limitations, standards, and other requirements.

TABLE 4.1 EMISSION LIMITS AND STANDARDS

Pollutant	Limit/Standard	Regulation	State Only Requirement	Condition Number
State New Source Review	As Specified in Attachment A	SC 61-62.1, Section II (A)	Yes	4.B.2 4.B.3
Toxic Air Pollutants	As Specified in Attachment A	SC 62.5, Std No. 8	Yes	4.B.3
Hazardous Air Pollution	Comply with Regulation	SC 61-62.4	No	N/A
Open Burning	Comply With Regulation	SC 61-62.2	No	N/A
Fugitive Emissions	Comply With Regulation	SC 61-62.6, Sec III	No	N/A
Ozone Depleting Substances	Specific To Subpart	40CFR82, Subpart F	No	4.B.7
Asbestos	Specific To Subpart	40CFR61.145	No	4.B.8

The maximum allowable emission limits above are derived from the various Federal and State regulations that govern the operation of this type of facility. All applicable facility wide emission limits and corresponding regulations are listed above. Additional operating requirements which may be more stringent than those above are contained in Part 5.0, Part 6.0, and Part 7.0 of this permit.

B. FACILITY WIDE CONDITIONS

Condition Number	Condition
4.B.1	In accordance with SC Regulation 61-62.1, Section II, the permittee must comply with all applicable statutes and regulations of the United States and the State of South Carolina. This permit does not relieve the permittee from compliance with applicable local laws, ordinances, and regulations.

Condition Number	Condition
4.B.2	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.
4.B.3	The owner/operator shall maintain this facility in compliance with the pollutant limitations in Part 4, Part 5, Part 6, Part 7, and/or the emission rates as listed in Attachment A of this Part 70 operating permit, whichever is more restrictive. This is a State Only enforceable requirement. Should the facility wish to increase the emission rates listed in Attachment A, it may do so by the administrative process specified in condition 4.B.2
4.B.4	A list of equipment which are considered insignificant pursuant to SC Regulation 61-62.70.5(c) has been submitted with your Title V application and reviewed by our staff. The list, including source descriptions and citation for exemption, is summarized in Attachment B of the permit. Attachment B excludes those activities identified in Part A of the insignificant activities list. Written notification to the Bureau of Air Quality is required for the addition of any new equipment which may meet the definition of insignificant or exempt as described above, excluding those sources listed in Part A of the insignificant activities list. (Revised 11/13/98)
4.B.5	In accordance with SC Regulation 61-62.1 Section II, (C)(3), for all sources not required to have continuous emissions monitors, in the event of any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the local Environmental Quality Control (EQC) District office within twenty-four (24) hours after the beginning of the occurrence. The permittee shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ). The report shall contain as a minimum, the following: the identity of the emission unit and associated equipment where excess emissions occurred, the magnitude of excess emissions, the time and duration of excess emissions, the steps taken to remedy the malfunction and to prevent a recurrence, documentation that control equipment and processes were at all times maintained and operated, to the maximum extent practicable, in a manner that was consistent with good practice for minimizing emissions. Such a report shall in no way serve to excuse, otherwise justify, or in any manner affect any potential liability or enforcement action resulting from the occurrence. This defines the Department's definition of prompt in its relation to the degree of reporting as specified by SC Regulation 61-62.70.6(a)(3)(iii)(b).
4.B.6	The owners or operators of Part 70 sources shall complete and submit emissions inventories as required consistent with the schedule approved pursuant to SC Regulation 61-62.1, Section III. This requirement notwithstanding, an emissions inventory may be required at any time in order to determine the compliance status of any facility.

Condition Number	Condition
4.B.7	The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40CFR82, Subpart F, Protection of Stratospheric Ozone, Recycling and Emissions Reduction, except as provided for motor vehicle air conditioners (MVAC's) in Subpart B. If the permittee performs a service on motor (fleet) vehicles that involves ozone-depleting substance refrigerant in MVAC's, the permittee is subject to all applicable requirements of 40CFR82, Subpart B, Servicing of MVAC's.
4.B.8	The permittee shall comply with the standards of performance for asbestos abatement operations pursuant to 40CFR61.145 and SC Regulation 61-86.1, including, but not limited to, requirements governing training, licensing, notification, work practice, cleanup, and disposal.

PART 5.0 EMISSION UNIT REQUIREMENTS

A. EMISSION UNIT DESCRIPTION

Tables 5.1 and 5.2 are a description of emission units located at this facility.

TABLE 5.1 CURRENT EMISSION UNIT DESCRIPTIONS		
Current Unit ID	**Current Unit Description**	**Current Control Device Description**
C-01	Quarry/Marl Handling Equipment	None (Wet Process)
C-02	**Marl Drying System Equipment (VOID)**	**Baghouse and Wet Scrubber (VOID)**
C-03	Coal/Coke Crushing and Processing Equipment	Baghouses
C-04	Waste Fuel Processing and Storage Equipment	Baghouse Vapor Incinerator (Existing Kilns) Carbon Adsorber
C-05	Cement Clinker Production Equipment	Baghouses
C-06	Kiln Ancillary Feed Equipment	None
C-07	Clinker Handling and Storage Equipment	Baghouses
C-08	Dust Handling and Storage Equipment	Baghouses
C-09	Gypsum Processing Equipment	None
C-10	Clinker Finish Mill Equipment	Baghouses
C-11	Cement Storage and Bulk Loading Equipment	Baghouses
C-12	Cement Packing Equipment	Baghouses
C-13	Steam Boiler	None
C-14	Slurry Storage Equipment	None (Wet Process)
C-15	Raw Mill Equipment	None (Wet Process)

TABLE 5.2 FUTURE EMISSION UNIT DESCRIPTIONS		
Future Unit ID	**Future Unit Description**	**Future Control Device Description**
F-01	Quarry/Marl Handling Equipment	None
F-02	Coal/Coke Crushing Equipment	Baghouses
F-03	Waste Fuel Processing and Storage Equipment	Baghouse Vapor Incinerator (New Kiln System) Carbon Adsorption System
F-04	Cement Clinker Production Equipment	Baghouses
F-05	Clinker Handling and Storage Equipment	Baghouses
F-06	Dust Handling and Storage Equipment	Baghouses
F-07	Gypsum Processing Equipment	Baghouses
F-08	Clinker Finish Mill Equipment	Baghouses
F-09	Cement Storage and Bulk Loading Equipment	Baghouses
F-10	Cement Packing Equipment	Baghouses
F-11	Steam Boiler	None
F-12	New Material Transfer and Storage Equipment	Baghouses

B. CONTROL DEVICE DESCRIPTIONS

Tables 5.3 through 5.11 are a description of control devices located at this facility.

TABLE 5.3 CURRENT UNIT ID C-02 (CURRENT MARL DRYING SYSTEM EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
D-10	**Peabody Model 9'6D x 13'9H Wet Scrubber (VOID)**	1952	PM	**8/05**
D-15	**Norblo Model 216A Baghouse (VOID)**	1952	PM	**8/05**

TABLE 5.4 CURRENT UNIT ID C-03 (CURRENT COAL/COKE CRUSHING EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
CH-38W	C. E. Raymond Model Baghouse	1981	PM	In Service
CH-38E	C. E. Raymond Model Baghouse	1981	PM	In Service
CH-140	Pulse Jet Cleaning Baghouse Chicago Model 3255D-2	Unknown	PM	In Service

TABLE 5.5 CURRENT UNIT ID C-04 (CURRENT WASTE FUEL PROCESSING AND STORAGE EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
K-250	Vapor Incinerator Existing Kiln No.2 (F.L. Smidth, 11'3 x 425')	1951	VOC, HAP	In Service
K-350	Vapor Incinerator Existing Kiln No.3 (F.L. Smidth, 11'3 x 425')	1956	VOC, HAP	In Service
K-434	**Vapor Incinerator (VOID) Existing Kiln No.4 (F.L. Smidth, 11'3 x 425')**	1961	VOC, HAP	**3/05**
KF-1	**Vapor Incinerator (VOID) Existing Kiln No.5 (Fuller 12'6 x 425')**	1973	VOC, HAP	**1/05**
STACU	2 Barnabey Sutcliffe 1-Ton Carbon Adsorber Units (Used as a back-up to the Vapor Incinerators)	1998	VOC, HAP	In Service

TABLE 5.6 CURRENT UNIT ID C-05 (CURRENT CEMENT CLINKER PRODUCTION EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
DCK-200	Kiln No.2 Baghouse Fuller Model 10BTS61 (7500 x 10)	1999	PM	In Service
DCK-300	Kiln No.3 Baghouse Fuller Model 10BTS61 (7500 x 10)	1972	PM	In Service
K-480	**Kiln No.4 Baghouse Fuller Model (7500 x 10) (VOID)**	1987	PM	**3/05**
DCE-38	**Kiln No.5 Baghouse Fuller Model (7500 x 10) (VOID)**	1996	PM	**1/05**
K-268	Clinker Cooler No.2 Pulse Jet Cleaning Baghouse Fuller Model 640S12	1990	PM	In Service
K-368	Clinker Cooler No.3 Pulse Jet Cleaning Baghouse Fuller Model 128-7-11728	1990	PM	In Service
K-451	**Clinker Cooler No.4 Baghouse Fuller Model 78-7-5684 (VOID)**	1989	PM	**3/05**
DCF-16	**Clinker Cooler No.5 Baghouse Mikro Model 36S10-45 (VOID)**	1973	PM	**1/05**

TABLE 5.7 CURRENT UNIT ID C-07 (CURRENT CLINKER HANDLING AND STORAGE EQUIPMENT CONTROL DEVICES				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
K-67	Staclean Model 212-12-A Baghouse	Unknown	PM	In Service
K-19	Norblo Model 6b-2 ams Baghouse	1961	PM	In Service
F-527	Staclean Model 81-12-A Baghouse	Unknown	PM	In Service
K-13	Air Filtration Systems Model 1212 Baghouse	1956	PM	In Service
K-80	Air Filtration Systems Model 1010 Baghouse	Unknown	PM	In Service

TABLE 5.8 CURRENT UNIT ID C-08 (CURRENT DUST HANDLING AND STORAGE EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
K-155	Air Pulse Cleaning Baghouse Fuller Model 640S12	1956	PM	In Service
DCK-200	Kiln No.2 Baghouse Fuller Model 10BTS61 (7500 x 10)	1999	PM	In Service
DCK-300	Kiln No.3 Baghouse Fuller Model 10BTS61 (7500 x 10)	1972	PM	In Service
K-480	**Kiln No.4 Baghouse Fuller Model (7500 x 10) (VOID)**	1987	PM	**3/05**
DCE-38	**Kiln No.5 Baghouse Fuller Model (7500 x 10) (VOID)**	1996	PM	**1/05**
512-BF-01	Air Pulse Cleaning Baghouse Mikro Model 36S1045	1986	PM	In Service

TABLE 5.9 CURRENT UNIT ID C-10 (CURRENT CLINKER FINISH MILL EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
F-123	**Pulse Jet Cleaning Baghouse Norblo Model 216A (VOID)**	1948	PM	**12/04**
F-317	**Pulse Jet Cleaning Baghouse Staclean Model 121-10-A (VOID)**	1956	PM	**12/04**
F-540	**Pulse Jet Cleaning Baghouse Staclean Model 300-10-A (VOID)**	1956	PM	**10/05**
F-609A	Pulse Jet Cleaning Baghouse Staclean Model 2X340-12-B	1960	PM	In Service
FG-733A	Mikro Model 420S10TRH Baghouse	1984	PM	In Service
F-628	Mikro Model 30S8-20 Baghouse	1984	PM	In Service
FG-78	Mikro Model 30S8-20 Baghouse	1984	PM	In Service

TABLE 5.10 CURRENT UNIT ID C-11 (CURRENT CEMENT STORAGE AND BULK LOADING EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
P-165-2 P-165-6 P-165-8	Staclean Model 36-10-B Baghouse	Unknown	PM	In Service
P-320	Mac Model #28 Baghouse	1961	PM	In Service
P-330	Mac Model #28 Baghouse	1961	PM	In Service
P-201	Norblo Model 216MA Baghouse	1958	PM	In Service
P-335	Buel Model HE-91C Baghouse	1979	PM	In Service

TABLE 5.11 CURRENT UNIT ID C-12 (CURRENT CEMENT PACKING EQUIPMENT CONTROL DEVICES)				
Current Control Device ID	**Current Control Device Description**	**Install Date**	**Pollutant Controlled**	**Removed From Service Date**
P-132	Pulse Jet Cleaning Baghouse Staclean Model 121-10-A	1978	PM	In Service
P-133	Pulse Jet Cleaning Baghouse Staclean Model 121-10-A	1978	PM	In Service

Tables 5.12 through 5.21 list descriptions of the future air pollution control devices to be located at this facility after plant modifications are complete.

TABLE 5.12 FUTURE UNIT ID F-02 (FUTURE COAL/COKE CRUSHING EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
CH-38W	C.E. Raymond Model Baghouse	1981	PM
CH-38E	C.E. Raymond Model Baghouse	1981	PM
461-BF-20	Amerex Baghouse Model RPC-10-52 D4	2003-2005	PM
461-BF-21	Amerex Baghouse Model RPC-10-52 D4	2003-2005	PM

TABLE 5.13 FUTURE UNIT ID F-03 (FUTURE WASTE FUEL PROCESSING AND STORAGE EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
CH-140	Pulse Jet Cleaning Baghouse Chicago Model 3255D-2	Unknown	PM
STACU	2 Barnabey Sutcliffe 1-Ton Carbon Adsorber Units (Used as a back-up in case the New Vapor Incinerator is out of service)	1998	VOC, HAP
321 421 431	New Vapor Incinerator (New Kiln System) (In-Line Kiln/Raw Mill System)	2003-2005	VOC, HAP

TABLE 5.14 FUTURE UNIT ID F-04 (FUTURE CEMENT CLINKER PRODUCTION EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
331-BF-19	Solios Baghouse Model TGT (8 Compartment)	2003-2005	PM
451-BF-15	Fuller Baghouse Model 7500 (10 Unit)	2003-2005	PM

TABLE 5.15 FUTURE UNIT ID F-05 (FUTURE CLINKER HANDLING AND STORAGE EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
K-67	Staclean Model 144-12-A Baghouse	Unknown	PM
F-527	Staclean Model 81-12-A Baghouse	Unknown	PM
K-80	Air Filtration Systems Model 1010 Baghouse	Unknown	PM
471-BF-21	Amerex Baghouse Model RPC-10-52 D4	2003-2005	PM
471-BF-19	Amerex Baghouse Model RP-10-110 D6 (11 x 10)	2003-2005	PM

TABLE 5.16 FUTURE UNIT ID F-06 (FUTURE DUST HANDLING AND STORAGE EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
451-BF-15	Fuller Baghouse Model 7500 (10 Unit)	2003-2005	PM
512-BF-01	Air Pulse Cleaning Baghouse Mikro Model 36S1045	1968	PM

TABLE 5.17 FUTURE UNIT ID F-07 (FUTURE GYPSUM PROCESSING EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
513-BF-16	Amerex Baghouse Model RP-10-72 D6 (9 x 8)	2003-2005	PM
513-BF-17	Amerex Baghouse Model RP-10-36 D6 (6 x 6)	2003-2005	PM

TABLE 5.18 FUTURE UNIT ID F-08 (FUTURE CLINKER FINISH MILL EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
F-628	Mikro Model 30S8-20 Baghouse	1984	PM
F-609A	Pulse Jet Cleaning Baghouse Staclean Model 2X340-12-B	1960	PM
FG-733A	Mikro Model 420S10TRH Baghouse	1984	PM
FG-78	Mikro Model 30S8-20 Baghouse	1984	PM
533-BF-16	Amerex Baghouse Model RP-12-495 D6 (15 x 33)	2003-2005	PM
533-BF-18	(2) Amerex Baghouse Model RP-12-795 D6 (15 x 51)	2003-2005	PM
533-BF-23	Amerex Baghouse Model RP-10-72 D6 (9 x 8)	2003-2005	PM

TABLE 5.19 FUTURE UNIT ID F-09 (FUTURE CEMENT STORAGE AND BULK LOADING EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
P-165-2 P-165-6 P-165-8	Staclean Model 36-10-B Baghouse	Unknown	PM
P-320	Mac Model #28 Baghouse	1961	PM
P-330	Mac Model #28 Baghouse	1961	PM
P-201	Norblo Model 216MA Baghouse	1958	PM
P-335	Buel Model HE-91C Baghouse	1979	PM

TABLE 5.20 FUTURE UNIT ID F-10 (FUTURE CEMENT PACKING EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
P-132	Pulse Jet Cleaning Baghouse Staclean Model 121-10-A	1978	PM
P-133	Pulse Jet Cleaning Baghouse Staclean Model 121-10-A	1978	PM

TABLE 5.21 FUTURE UNIT ID F-12 (FUTURE NEW MATERIALTRANSFER AND STORAGE EQUIPMENT CONTROL DEVICES)			
Future Control Device ID	**Future Control Device Description**	**Install Date**	**Pollutant Controlled**
341-BF-03	Amerex Baghouse Model RP-10-36 D6 (6 x 6)	2003-2005	PM
351-BF-78	Amerex Baghouse Model RP-10-42 D6 (7 x 6)	2003-2005	PM
341-BF-14	Amerex Baghouse Model RP-10-36 D6 (6 x 6)	2003-2005	PM
351-BF-02	Amerex Baghouse Model RP-10-56 D6 (8 x 7)	2003-2005	PM
351-BF-22	Amerex Baghouse Model RP-10-72 D6 (9 x 8)	2003-2005	PM
235-BF-34	Amerex Baghouse Model RP-10-72 D6 (9 x 8) BV	2003-2005	PM
245-BF-41	Amerex Baghouse Model RP-10-25 D6 (5 x 5)	2003-2005	PM

C. EQUIPMENT DESCRIPTIONS

A description of the equipment located at this facility is provided in the following tables:

TABLE 5.22 CURRENT UNIT ID C-01 (CURRENT QUARRY/MARL HANDLING EQUIPMENT)							
Current Giant ID	**Install Date**	**Current Equipment Description**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Exhaust Point ID**	**Removed From Service Date**
Q-112	1998	Quarry Crusher (Reduces marl size)	1,500 tph	None	None	Q-112	In Service
Q-104 Q-105 Q-106	1997 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-104 Q-105 Q-106	In Service
Q-113	1999	Quarry Marl Conveyor Belt	1,500 tph	None	None	Q-113	In Service
Q-108 Q-109 Q-110	1998 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-108 Q-109 Q-110	In Service

TABLE 5.23 CURRENT UNIT ID C-01 (CURRENT QUARRY/MARL HANDLING EQUIPMENT)							
Current Giant ID	**Install Date**	**Current Equipment Description**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Exhaust Point ID**	**Removed From Service Date**
Q-210 Q-211 Q-212 Q-212A	1997 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-210 Q-211 Q-212 Q-212A	In Service
Q-114	1997	Back-up Quarry Crusher (Reduces marl size)	1,500 tph	None	None	Q-114	In Service

TABLE 5.24 CURRENT UNIT ID C-02 (CURRENT MARL DRYING SYSTEM EQUIPMENT)								
Current Giant ID	**Install Date**	**Current Equipment Description**	**Design Capacity**	**Permitted Fuels**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
D-3	**1956**	**Raw Marl Dryer (VOID)**	60 tph	N/A	Wet Scrubber	D-10	20	**8/05**
D-13 D-14	**1956 Each**	**Marl Dryer Conveyor Belts (VOID)**	60 tph Each	N/A	Baghouse	D-15	19	**8/05**
D-16	**1956**	**Marl Dryer Vibrating Screen (VOID)**	60 tph	N/A	Baghouse	D-15	19	**8/05**

TABLE 5.25 CURRENT UNIT ID C-03 (CURRENT COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
CH-33E	East Coal Mill (Processes raw coal and coke) (Feeds Kiln No.4 and No.5)	1982	22 tph 528 tpd	Baghouse	CH-38E	11	In Service
CH-33W	West Coal Mill (Processes raw coal and coke) (Feeds Kiln No.2 and No.3)	1982	22 tph 528 tpd	Baghouse	CH-38W	12	In Service
CH-3	2 Coal Feeders (Feeds Coal Conveyor)	1981	150 tph 3,600 tpd	None	None	CH-3	In Service
CH-4	2 Coal Hoppers (Feeds Coal Conveyor Belt CH-5)	1982	150 tph 3,600 tpd	None	None	CH-4	In Service
CH-5	Coal Conveyor Belt CH-5	1981	150 tph 3,600 tpd	None	None	CH-5	In Service
CH-7	Coal Radial Stacker	1981	400 tph 9,600 tpd	None	None	CH-7	In Service
CH-8	Coal Transfer Hopper (Used during coal unloading) (Feeds Coal Conveyor Belt CH-13)	1981	150 tph 3,600 tpd	None	None	CH-8	In Service

TABLE 5.26 CURRENT UNIT ID C-03 (CURRENT COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
CH-13	Coal Conveyor Belt CH-13 (Conveys Coal to Coal Storage Silo CH-16)	1981	150 tph 3,600 tpd	None	None	CH-13	In Service
CH-16	Coal Storage Silo	1983	3,500 tons	None	None	CH-16	In Service
CH-27	Coal Conveyor Belt CH-27 (Conveys Coal from Coal Storage Silo CH-16 to East Coal Mill CH-33E and West Coal Mill CH-33W)	1981	200 tph 4,800 tpd	None	None	CH-27	In Service
CH-127	Carbon Black Storage Bin	1982	50 tph	Baghouse	CH-140	30	In Service

TABLE 5.27 CURRENT UNIT ID C-04 (CURRENT WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Design Capacity**	**Install Date**	**Current Control Device Description**	**Current Control Device ID**	**Current Exhaust Point ID**	**Removed From Service Date**
GR-1	Hazardous Waste Storage Building (Totally enclosed handling and storage unit for Solid Hazardous Waste Fuels)	2000 yd^3	1995	Vapor Incinerator	K-250 K-350	05 06	In Service
K-701	**Pug Mill (VOID)**	17.6 tph	1989	Vapor Incinerator	K-250 K-350	05 06	**12/04**
K-702	Vibrating Screen (Screens solid waste/raw material)	17.6 tph	1989	Vapor Incinerator	K-250 K-350	05 06	In Service
K-703	Shredder (Reduces solid fuel size for conveying)	20 tph	1996	Vapor Incinerator	K-250 K-350	05 06	In Service
K-750B	7 Screw Conveyors (Conveys solid fuel to Solid Fuel Storage Tank System (K-761and K-762))	7.5 tph	1996	Vapor Incinerator	K-250 K-350	05 06	In Service
K-761	Solid Fuel Storage Tank System (Stores solid fuel)	7.5 tph	1990	Vapor Incinerator	K-250 K-350	05 06	In Sevice
K-762	**Solid Fuel Storage Tank System (VOID)**	7.5 tph	1990	Vapor Incinerator	K-250 K-350	05 06	**5/05**
K-750A	12 Screw Conveyors (Conveys solid fuel from Solid Fuel Storage Tank System (K-761 and K-762) to Kilns No.2 and No.3)	7.5 tph	1996	Vapor Incinerator	K-250 K-350	05 06	In Service
K-755	Kiln No.2/No.3 Solid Fuel Metering Bin	7.5 tph	1996	Vapor Incinerator	K-250 K-350	05 06	In Service
K-775	**Kiln No.4/No.5 Solid Fuel Metering Bin (VOID)**	7.5 tph	1994	Vapor Incinerator	K-250 K-350	05 06	**3/05**
FC-1 to FC-12	**12 Screw Conveyors (VOID)**	7.5 tph	1994	Vapor Incinerator	K-250 K-350	05 06	**3/05**

TABLE 5.28 CURRENT UNIT ID C-04 (CURRENT WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Design Capacity**	**Install Date**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-666	1 Liquid Waste Fuel Storage Tank	52,000 gallon	1994	Vapor Incinerator and Carbon Adsorption (Backup)	K-250, K-350 STACU	05 06 48	In Service
K-801 K-802 K-803	3 Liquid Waste Fuel Storage Tanks (Steel with Vertical Fixed Roof)	80,000 gallon Each	2001 Each	Vapor Incinerator and Carbon Adsorption (Backup)	K-250, K-350 STACU	05 06 48	In Service

TABLE 5.29 CURRENT UNIT ID C-05 (CURRENT CEMENT CLINKER PRODUCTION EQUIPMENT)								
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Permitted Fuels**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-250	Existing Kiln No.2 F.L. Smidth Model 11'3'' x 425' (Produces clinker)	1951	70 tph slurry	See Condition 6.B.24(fff)	Baghouse	DCK-200	06	In Service
K-350	Existing Kiln No.3 F.L. Smidth Model 11'3'' x 425' (Produces clinker)	1956	70 tph slurry	See Condition 6.B.24(fff)	Baghouse	DCK-300	06	In Service
K-434	**Existing Kiln No.4 (VOID)**	1961	70 tph slurry	N/A	Baghouse	K-480	05	**3/05**
KF-1	**Existing Kiln No.5 (VOID)**	1973	85 tph slurry	N/A	Baghouse	DCE-38	06	**1/05**
K-270	Existing Clinker Cooler No.2 (Cools clinker)	1951	49 tph (Based on 70% of Slurry Feed Rates)	N/A	Pulse Jet Cleaning Baghouse	K-268	07	In Service
K-370	Existing Clinker Cooler No.3 (Cools clinker)	1956	49 tph (Based on 70% of Slurry Feed Rates)	N/A	Pulse Jet Cleaning Baghouse	K-368	08	In Service
K-407	**Existing Clinker Cooler No.4 (VOID)**	1956	49 tph (Based on 70% of Slurry Feed Rates)	N/A	Baghouse	K-451	09	**3/05**
KF-9	**Existing Clinker Cooler No.5 (VOID)**	1973	59.5 tph (Based on 70% of Slurry Feed Rates)	N/A	Baghouse	DCF-16	10	**1/05**

TABLE 5.30 CURRENT UNIT ID C-06 (CURRENT KILN ANCILLARY FEED EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
RMH-5	**Kiln No.5 Raw Material Hopper (VOID)**	1998	5.0 tph	None	None	RMH-5	**1/05**
RMC-5	**Kiln No.5 Raw Material Conveyor (VOID)**	1998	5.0 tph	None	None	RMC-5	**1/05**
BUK-5	**Kiln No.5 Raw Material Conveyor (VOID)**	1998	5.0 tph	None	None	BUK-5	**1/05**

TABLE 5.31 CURRENT UNIT ID C-07 (CURRENT CLINKER HANDLING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-1	Drag Conveyor K-1 (Conveys clinker from Clinker Coolers No.2 and No.3 to Elevator No.1 (K-3) and No.2 (K-4))	1951	100 tph	Baghouse	K-13	27	In Service
K-3	Elevator No.1 (West Elevator to Elevator No.3 (K-7) or B Belt Conveyor K-17)	1957	100 tph	Baghouse	K-13	27	In Service
K-4	Elevator No.2 (East Elevator to Elevator No.4 (K-8) or B Belt Conveyor K-17)	1957	100 tph	Baghouse	K-13	27	In Service
K-7	Elevator No.3 (West Elevator to Drag Conveyor K-11 or Clinker Storage Silo K-36)	1957	100 tph	Baghouse	K-13	27	In Service
K-8	Elevator No.4 (East Elevator to Drag Conveyor K-9 or Drag Conveyor K-11 or Clinker Storage Silo K-36)	1957	100 tph	Baghouse	K-13	27	In Service
K-17	B Belt Conveyor (Conveys Clinker to C Belt Conveyor K-18)	1959	100 tph	Baghouse	K-19	25	In Service
K-18	**C Belt Conveyor (VOID)**	1962	100 tph	Baghouse	K-19	25	**12/04**

TABLE 5.32 CURRENT UNIT ID C-07 (CURRENT CLINKER HANDLING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-605	**Clinker Reclaim Conveyor Belt K-605 (VOID)**	1944	20 tph	None	None	K-605	**1/05**
K-607	**Clinker Reclaim Conveyor Belt K-607 (VOID)**	1944	20 tph	None	None	K-607	**1/05**
K-609	**Clinker Reclaim Conveyor Belt K-609 (VOID)**	1944	20 tph	None	None	K-609	**1/05**
K-603	**Clinker Reclaim Elevator K-603 (VOID)**	1944	20 tph	None	None	K-603	**1/05**
K-608	**Clinker Reclaim Elevator K-608 (VOID)**	1944	20 tph	None	None	K-608	**1/05**
K-9	Drag Conveyor K-9 (Conveys Clinker to Drag Conveyor K-10 and Clinker Storage Silo K-37)	1951	100 tph	Baghouse	F-527	37	In Service
K-10	Drag Conveyor K-10 (Conveys Clinker to Clinker Storage Silo K-38)	1951	100 tph	Baghouse	F-527	37	In Service
K-11	Drag Conveyor K-11 (Conveys Clinker to Clinker Storage Silo K-35)	1951	100 tph	Baghouse	F-527	37	In Service
K-33 K-34	**2 Clinker Storage Tanks (VOID)**	1947 Each	64 tph Each	Baghouse	F-527	37	**12/04**
K-35 K-36 K-37 K-38	4 Clinker Storage Silos (Clinker storage north of Finish Mill No.5)	1957 Each	64 tph Each	Baghouse	F-527	37	In Service
K-49	Clinker Storage Tower	1956	64 tph	Baghouse	F-527	37	In Service
K-66	Clinker Elevator (Conveys clinker to Drag Conveyor K-11 Clinker Storage Silo K-36, Drag Conveyor K-10 and Clinker Storage Silo K-37)	1956	25 tph	Baghouse	F-527	37	In Service
F-501	Clinker Feeder (Feeds clinker under Clinker Bin No.6)	1956	50 tph	Baghouse	F-527	37	In Service
F-502	**Clinker Feeder (VOID)**	1956	50 tph	Baghouse	F-527	37	**12/04**

TABLE 5.33 CURRENT UNIT ID C-07 (CURRENT CLINKER HANDLING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
F-503	Clinker Feeder (Feeds clinker under Clinker Bin No.7)	1956	50 tph	Baghouse	F-527	37	In Service
F-504	Clinker Feeder (Feeds clinker under Clinker Bin No.8)	1956	50 tph	Baghouse	F-527	37	In Service
F-506	**Clinker Feeder (VOID)**	1956	50 tph	Baghouse	F-527	37	**12/04**
F-528	Dust Screw Conveyor F-528 (Returns clinker dust from F-527 to Finish Mill No.5)	1956	10 tph	Baghouse	F-527	37	In Service
K-65	A-Conveyor Belt (Conveys clinker to Clinker Elevator K-66)	1959	100 tph	Baghouse	F-527 K-67	26 37	In Service
K-51	**Drag Conveyor K-51 (VOID)**	1960	100 tph	Baghouse	K-67	26	**3/05**
K-53	**Drag Conveyor K-53 (VOID)**	1960	100 tph	Baghouse	K-67	26	**3/05**
K-54	Elevator No.5 (Conveys clinker to Drag Conveyor K-58, A-Conveyor Belt K-65 and the Clinker Shed)	1956	100 tph	Baghouse	K-67	26	In Service
K-55	Elevator No.6 (Conveys Clinker to Drag Conveyor K-58 Clinker Shed)	1956	100 tph	Baghouse	K-67	26	In Service
K-58	Drag Conveyor K-58 (Conveys clinker to Conveyor Belt K-79)	1994	100 tph	Baghouse	K-67	26	In Service
K-77	Elevator No.9 (Conveys Clinker at the west wall to Finish Mill No.6 and No.7)	1986	64 tph	Baghouse	K-80	29	In Service
K-78	Drag Conveyor K-78 (Conveys Clinker to Finish Mill No.6 Bin F-620, Finish Mill No.7 Bin FG-71 or the Clinker Shed)	1959	100 tph	Baghouse	K-80	29	In Service
K-79	Conveyor Belt K-79 (Conveys Clinker to Drag Conveyor K-78)	1956	64 tph	Baghouses	K-67 K-80	26 29	In Service
F-620	Finish Mill No.6 Bin (Discharges to Conveyor Belt F-602)	1960	65 tph	None	None	F-620	In Service
FG-71	Finish Mill No.7 Bin (Discharges to Conveyor Belt FG-73)	1972	65 tph	None	None	FG-71	In Service
K-602	**Clinker Reclaim Crusher (VOID)**	1944	20 tph	None	None	K-602	**1/05**

TABLE 5.34 CURRENT UNIT ID C-08 (CURRENT DUST HANDLING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-152	Dust Tank K-152 (Dust loading from Kiln No.2/No.3)	1944	20 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
F-122	**Screw Conveyor F-122 (VOID)**	1951	15 tph	Air Pulse Cleaning Baghouse	K-155	28	**12/04**
F-124	**Screw Conveyor (VOID)**	1956	15 tph	Air Pulse Cleaning Baghouse	K-155	28	**12/04**
K-290	Kiln No.2 Dust Insufflation Pump (Dust recycle from Kiln No.2)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
K-293	Kiln No.2 Dust Insufflation Feeder (Dust recycle from Kiln No.2)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
K-294	Kiln No.2 Dust Insufflation Feeder (Dust recycle from Kiln No.2)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
K-390	Kiln No.3 Dust Insufflation Pump (Dust recycle from Kiln No.3)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
K-393	Kiln No.3 Dust Insufflation Feeder (Dust recycle from Kiln No.3)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
K-394	Kiln No.3 Dust Insufflation Feeder (Dust recycle from Kiln No.3)	1998	12 tph	Air Pulse Cleaning Baghouse	K-155	28	In Service
DCE-76	Kiln No.4/No.5 Dust Storage Bin	1995	55 tons	Kiln No.4 and Kiln No.5 Baghouse	K-480 DCE-38	05	In Service
DBK-4	**Kiln No.4 Dust Overflow Bin (VOID)**	1961	75 tons	Kiln No.4 and Kiln No.5 Baghouse	K-480 DCE-38	05	**3/05**

TABLE 5.35 CURRENT UNIT ID C-08 (CURRENT DUST HANDLING AND STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
DBK-5	Kiln No.5 Dust Overflow Bin	1973	75 tons	Kiln No.4 and Kiln No.5 Baghouse	K-480 DCE-38	05	In Service
512-BN-01	Finish Mill No.7 Fringe Bin	1986	100 tons	Air Pulse Cleaning Baghouse	512-BF-01	512-BF-01	In Service
F-682	Finish Mill No.6 Feeder	1962	52 tph	Air Pulse Cleaning Baghouse	512-BF-01	24	In Service
F-683	Finish Mill No.7 Feeder	1973	65 tph	Air Pulse Cleaning Baghouse	512-BF-01	24	In Service
PM-SL	**Pug Mill Silo (VOID)**	2000	150 tph	None	None	PM-SL	**3/05**
PM-23	Kiln No.2/No.3 Pug Mill (Conditions cement Kiln dust)	1998	150 tph	None	None	PM-23	In Service
451-PM-18	Kiln No.4/No.5 Pug Mill (Conditions cement Kiln dust)	1998	150 tph	None	None	451-PM-18	In Service
DCK-220	Kiln No.2/No.3 Excess Dust Storage Bin	1972	3,000 ft^3	Kiln No.2 and Kiln No.3 Baghouse	DCK-200 DCK-300	06	In Service
DBK-2	Kiln No.2 Dust Overflow Bin	1951	75 tons	Kiln No.2 and Kiln No.3 Baghouse	DCK-200 DCK-300	06	In Service
DBK-3	Kiln No.3 Dust Overflow Bin	1955	75 tons	Kiln No.2 and Kiln No.3 Baghouse	DCK-200 DCK-300	06	In Service

TABLE 5.36 CURRENT UNIT ID C-09 (CURRENT GYPSUM PROCESSING EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Exhaust Point ID**	**Removed From Service Date**
FG-760	Gypsum Conveyor FG-760	1997	50 tph	None	None	FG-760	In Service
FG-761	Gypsum Hopper	1997	50 tph	None	None	FG-761	In Service
FG-761A	Screw Feeder FG-761A (Feeds Gypsum Conveyor FG-760)	1999	50 tph	None	None	FG-761A	In Service
FG-762	Gypsum Drag Conveyor FG-762	1997	50 tph	None	None	FG-762	In Service
F-505	**Clinker/Gypsum Feeder F-505 (VOID)**	1956	10 tph	None	None	F-505	**12/04**
G-53	Gypsum Conveyor Belt G-53	1997	200 tph	None	None	G-53	In Service
K-40	**Gypsum Storage Silo (VOID)**	1957	100 tph	None	None	K-40	**12/04**
F-621	Gypsum Hopper	Unknown	50 tph	None	None	F-621	In Service
FG-75	Gypsum Bin	Unknown	50 tph	None	None	FG-75	In Service

TABLE 5.37 CURRENT UNIT ID C-10 (CURRENT CLINKER FINISH MILL EQUIPMENT DESCRIPTIONS)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
F-601	Gypsum Conveyor Belt F-601	1961	3.12 tph	Baghouse	F-628	15	In Service
F-602	Conveyor Belt F-602 (Conveys Clinker to Drag Conveyor F-603)	1961	43.3 tph	Baghouse	F-628	15	In Service
F-603	Drag Conveyor F-603 (Conveys clinker to Finish Mill No.6)	1961	65 tph	Baghouse	F-628	15	In Service
FG-73	Conveyor Belt FG-73 (Clinker Spill Screw Conveyor to Drag Conveyor FG-79)	1972	61.1 tph	Baghouse	FG-78	16	In Service
FG-73A	Conveyor Belt FG-73A (Spill Screw to Drag Conveyor FG-79)	1972	61.1 tph	Baghouse	FG-78	16	In Service
FG-77	Conveyor Belt FG-77 (Gypsum Weigh Feeder Belt to Drag Conveyor FG-79)	1972	3.9 tph	Baghouse	FG-78	16	In Service
FG-77A	Conveyor Belt FG-77A Gypsum Spill Screw Conveyor (Conveys gypsum to Drag Conveyor FG-79)	1972	3.9 tph	Baghouse	FG-78	16	In Service
FG-79	Drag Conveyor FG-79 (Conveys clinker to Finish Mill No.7)	1973	65 tph	Baghouse	FG-78	16	In Service

TABLE 5.38 CURRENT UNIT ID C-10 (CURRENT CLINKER FINISH MILL EQUIPMENT DESCRIPTIONS)							
Current Giant ID	**Current Equipment Description**	**Install (Modify) Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
F-106	**Finish Mill No.1 System (VOID)**	1948	27.5 tph	Pulse Jet Cleaning Baghouse	F-123	21	**12/04**
F-108	**Finish Mill No.2 System (VOID)**	1948	27.5 tph	Pulse Jet Cleaning Baghouse	F-123	21	**12/04**
F-305	**Finish Mill No.3 System (VOID)**	1956	27.5 tph	Pulse Jet Cleaning Baghouse	F-317	22	**12/04**
F-308	**Finish Mill No.4 (VOID)**	1956	27.5 tph	Pulse Jet Cleaning Baghouse	F-317	22	**12/04**
F-311	**Air Slide F-311 (VOID)**	1954 (2004)	100 tph	Pulse Jet Cleaning Baghouse	F-317	22	**12/04**
F-312	**No.3 Air Separator (VOID)**	1954	100 tph	Pulse Jet Cleaning Baghouse	F-317	22	**12/04**
F-508	**Finish Mill No.5 (VOID)**	1956	31.5 tph	Pulse Jet Cleaning Baghouse	F-540	23	**12/04**
F-512	**Air Separator F-512 (VOID)**	1956	200 tph	Pulse Jet Cleaning Baghouse	F-540	23	**12/04**
F-519	**Air Slide F-519 (VOID)**	1956	200 tph	Pulse Jet Cleaning Baghouse	F-540	23	**12/04**
F-524	**Spill Bin (VOID)**	1956	200 tph	Pulse Jet Cleaning Baghouse	F-540	23	**12/04**
F-604	Finish Mill No.6 (Mills clinker product)	1961	52 tph	Pulse Jet Cleaning Baghouse	F-609A	13	In Service
F-608	Air Separator F-608 (Separate product into course and fines)	1961	300 tph	Pulse Jet Cleaning Baghouse	F-609A	13	In Service
FG-656	Cement Cooler (Cools cement)	1961	300 tph	Pulse Jet Cleaning Baghouse	F-609A	13	In Service
FG-714	Finish Mill No.7 (Mills clinker product)	1973	65 tph	Baghouse	FG-733A	14	In Service
FG-726	Cement Cooler (Cools cement)	1973	400 tph	Baghouse	FG-733A	14	In Service
FG-732	Air Separator (Separates cement)	1973	400 tph	Baghouse	FG-733A	14	In Service

TABLE 5.39 CURRENT UNIT ID C-11 (CURRENT CEMENT STORAGE AND BULK LOADING EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
P-150	Silo Bank No.1 (Silos No.1 through 13) 13 Bagging Cement Storage Silos	1948	68 tph	Baghouse	P-165-2 P-165-6 P-165-8	36 35 34	In Service
P-321	West Cement Bulk Loading	1989	375 tph	Baghouse	P-320	32	In Service
P-331	East Cement Bulk Loading	1989	375 tph	Baghouse	P-330	33	In Service
P-341	Silo Bank No.2 (Silos No.14 through 23) 10 Bulk Load Cement Storage Silos	1956	220 tph	Baghouse	P-201	17	In Service
P-342	Silo Bank No.3 (Silos No.24 through 37) 14 Bulk Load Cement Storage Silos	1959	220 tph	Baghouse	P-335	18	In Service

TABLE 5.40 CURRENT UNIT ID C-12 (CURRENT CEMENT PACKING EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
P-401	Ventomatic 12-Spout Packing Machine (Package cement product)	2001	200 tph	Pulse Jet Cleaning Baghouse	P-132 P-133	02 01	In Service

TABLE 5.41 CURRENT UNIT ID C-13 (CURRENT STEAM BOILER)								
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Permitted Fuels**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
K-655	Boiler (Supplies steam where needed)	1987	2.1E+06 Btu/hr	See Permit	None	None	K-655	In Service

TABLE 5.42 CURRENT UNIT ID C-14 (CURRENT SLURRY STORAGE EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
RE-4 RE-5 RE-6 RE-7 RE-8	5 Slurry Storage Tanks (Slurry storage tanks 14 through 18)	1973	500,000 gallon Each	None	None	N/A	In Service
K-103	Kiln No.2/No.3 Feed Tank	1951	90,000 gallon	None	None	N/A	In Service
K-202-T	Kiln No.2 Feed Tank	1956	90,000 gallon	None	None	N/A	In Service
K-302-T	Kiln No.3 Feed Tank	1961	90,000 gallon	None	None	N/A	In Service
K-472-T	**Kiln No.4 Feed Tank (VOID)**	1973	90,000 gallon	None	None	N/A	**3/05**
RE-24-T	**Kiln No.5 Feed Tank (VOID)**	1973	90,000 gallon	None	None	N/A	**1/05**
R-701 R-702 R-703 R-704 R-705 R-706 R-707 R-708 R-709	**9 Steel Slurry Storage Tanks (VOID)**	1945	45,000 gallon Each	None	None	N/A	**1/05**
R-710 R-711 R-712 R-713	**4 Concrete Slurry Storage Tanks (VOID)**	1957	90,000 gallon Each	None	None	N/A	**1/05**
R-902	**Slurry Storage Basin (VOID)**	1956	543,110 gallon	None	None	N/A	**1/05**

TABLE 5.43 CURRENT UNIT ID C-15 (CURRENT RAW MILL EQUIPMENT)							
Current Giant ID	**Current Equipment Description**	**Install Date**	**Design Capacity**	**Current Control Device Description**	**Current Control Device ID**	**Current Stack ID**	**Removed From Service Date**
R-107	Raw Mill No.1 (Mills raw materials into slurry)	1952	250 tph	None	None	R-107	In Service
R-207	Raw Mill No.2 (Mills raw materials into slurry)	1952	250 tph	None	None	R-207	In Service
R-307	Raw Mill No.3 (Mills raw materials into slurry)	1956	250 tph	None	None	R-307	In Service
RD-16	Raw Mill No.4 (Mills raw materials into slurry)	1972	400 tph	None	None	RD-16	In Service

Tables 5.44 through 5.61 list descriptions of the future equipment to be located at this facility after plant modifications are complete.

TABLE 5.44 FUTURE UNIT ID F-01 (FUTURE QUARRY/MARL HANDLING EQUIPMENT)						
Future Giant ID	**Install Date**	**Future Equipment Description**	**Design Capacity**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
Q-112	1998	Quarry Crusher (Reduces marl size)	1,500 tph	None	None	Q-112
Q-104 Q-105 Q-106	1997 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-104 Q-105 Q-106
Q-113	1999	Quarry Marl Conveyor Belt	1,500 tph	None	None	Q-113
Q-108 Q-109 Q-110	1998 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-108 Q-109 Q-110
Q-210 Q-211 Q-212 Q-212A	1997 Each	Quarry Marl Conveyor Belts	1,500 tph Each	None	None	Q-210 Q-211 Q-212 Q-212A
Q-114	1997	Back-up Quarry Crusher (Reduces marl size)	1,500 tph	None	None	Q-114
221-AF-01	2006	Apron Feeder	1,500 tph	None	None	221-AF-01
221-DH-01	2006	Dump Hopper	1,500 tph	None	None	221-DH-01
221-RC-01	2006	Roller Crusher	1,500 tph	None	None	221-RC-01
221-BC-01	2006	Belt Conveyor	1,500 tph	None	None	221-BC-01

TABLE 5.45 FUTURE UNIT ID F-02 (FUTURE COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph/tpd)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
CH-33E	East Coal Mill Processes Raw Coal and Coke	1982	22/528	Baghouse	CH-38E	11
CH-33W	West Coal Mill Processes Raw Coal and Coke	1982	22/528	Baghouse	CH-38W	12
CH-3	2 Coal Feeders (Feeds Coal Conveyor)	1981	150/3,600	None	None	CH-3
CH-4	2 Coal Hoppers (Feeds Coal Conveyor Belt CH-5)	1982	150/3,600	None	None	CH-4

TABLE 5.46 FUTURE UNIT ID F-02 (FUTURE COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph/tpd)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
CH-5	Coal Conveyor Belt CH-5	1981	150/3,600	None	None	CH-5
CH-7	Coal Radial Stacker	1981	400/9,600	None	None	CH-7
CH-8	Coal Transfer Hopper Coal Unloading (Feeds Coal Conveyor Belt CH-13)	1981	150/3,600	None	None	CH-8
CH-13	Coal Conveyor Belt CH-13 (Conveys Coal to Coal Storage Silo CH-16)	1981	150/3,600	None	None	CH-13
CH-16	Coal Storage Silo	1983	3,500 tons	None	None	CH-16
CH-27	Coal Conveyor Belt CH-27 (Conveys coal from Coal Storage Silo CH-16 to East and West Coal Mill (CH-33E, CH-33W))	1981	200/4,800	None	None	CH-27
CH-127	Carbon Black Storage Bin	1982	50 tph	Baghouse	CH-140	30
461-BN-31 461-BL-53	Coal Bin/Pump	2003-2005	12/40	Baghouse	S3-20	461-BF-20
461-BN-42 461-BL-51	Coal Bin/Pump	2003-2005	12/40	Baghouse	S3-21	461-BF-21
461-AH-01	Coal Mill Heater	2003-2005	5000 ft^3/hr	Baghouse	CH-38E CH-38W	11, 12

TABLE 5.47 FUTURE UNIT ID F-03 (FUTURE WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Design Capacity**	**Install (Modify) Date**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
GR-1	Hazardous Waste Storage Building (Totally enclosed handling and storage unit for solid hazardous waste fuels)	2000 yd^3	1995	Vapor Incinerator and Carbon Adsorption System	321-RM-11 321-SR-12 421 431 STACU	331-ES-21

TABLE 5.48 FUTURE UNIT ID F-03 (FUTURE WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Design Capacity**	**Install (Modify) Date**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
K-702	Vibrating Screen (Screens solid waste/raw material)	17.6 tph	1989	Vapor Incinerator	321 421 431	331-ES-21
K-703	Shredder (Reduces solid fuel size for conveying)	20 tph	1996	Vapor Incinerator	321 421 431	331-ES-21
K-666	1 Liquid Waste Fuel Storage Tank	52,000 gallon	1994	Vapor Incinerator and Carbon Adsorption System	321 421 431 STACU	331-ES-21
K-801 K-802 K-803	3 Liquid Waste Fuel Storage Tanks (Steel with Vertical Fixed Roof)	80,000 gallon Each	2001	Vapor Incinerator and Carbon Adsorption System	321 421 431 STACU	331-ES-21

TABLE 5.49 FUTURE UNIT ID F-04 (FUTURE CEMENT CLINKER PRODUCTION EQUIPMENT)							
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity**	**Permitted Fuels**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
321 421 431	New Kiln System In-Line Kiln/Raw Mill System (Replacement Kiln system for the 4 existing wet process Kilns)	2003-2005	154.2 tph 3,700 tpd	See Condition 6.B.24(fff)	Baghouse	331-BF-19	331-ES-21
441-CC-01	New Clinker Cooler	2003-2005	See Above	None	Baghouse	331-BF-19	331-ES-21
321-AH-02	Auxiliary Raw Mill Heater	2003-2005	70E+06 Btu/hr	Natural Gas	Baghouse	331-BF-19	331-ES-21
451	Alkali Bypass	2003-2005	15% of the New Kiln System exit gas flow on a mass basis	N/A	Baghouse	451-BF-15	331-ES-21

TABLE 5.50 FUTURE UNIT ID F-05 (FUTURE CLINKER HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
K-65	A-Belt Conveyor	1959	100	Baghouse	F-527, K-67	37, 26
F-620	No.6 FM bin F-620	1960	65	Baghouse	None	F-620
K-54	Elevator No.5	1956	100	Baghouse	K-67	26
K-55	Elevator No.6	1956	100	Baghouse	K-67	26
K-58	Conveyor K-58	1994	100	Baghouse	K-67	26
K-77	Elevator No.9	1986	64	Baghouse	K-80	29
K-78	Drag Conveyor K-78	1959	100	Baghouse	K-80	29
K-79	Conveyor K-79	1956	64	Baghouse	K-80	29
471-VF-08	Hopper 471-VF-08	2003-2005	225	None	None	471-VF-08
513-CV-11	Hopper 513-CV-11	2003-2005	225	None	None	513-CV-11
471-DB-01	Conveyor 471-DB-01	2003-2005	225	Baghouse	471-BF-21	471-BF-21
471-DB-03	Conveyor 471-DB-03	2003-2005	225	Baghouse	471-BF-21	471-BF-21
471-BC-09	Conveyor 471-DB-09	2003-2005	225	Baghouse	471-BF-21	471-BF-21

TABLE 5.51 FUTURE UNIT ID F-05 (FUTURE CLINKER HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
471-BC-05	Conveyor 471-BC-05	2003-2005	225	Baghouse	471-BF-19	471-BF-19
513-BC-13	Conveyor 513-BC-13	2003-2005	225	Baghouse	471-BF-19	471-BF-19
513-SI-10	Clinker Silo 513-SI-10	2003-2005	100	Baghouse	471-BF-19	471-BF-19
K-9	Drag Conveyor K-9	1951	100	Baghouse	F-527	37
K-10	Drag Conveyor K-10	1951	100	Baghouse	F-527	37
K-11	Belt Conveyor K-11	1951	100	Baghouse	F-527	37
K-35	No.4 FM Bin	1957	64	Baghouse	F-527	37
K-36	No.5 FM Bin	1957	64	Baghouse	F-527	37

TABLE 5.52 FUTURE UNIT ID F-05 (FUTURE CLINKER HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
K-37	Storage Silo K-37	1957	64	Baghouse	F-527	37
K-38	Storage Silo K-38	1957	64	Baghouse	F-527	37
K-49	Storage Tower K-49	1956	64	Baghouse	F-527	37
K-66	Elevator K-66	1956	25	Baghouse	F-527	37
F-501	Feeder F-501	1956	50	Baghouse	F-527	37
F-502	Feeder F-502	1956	50	Baghouse	F-527	37
F-503	Feeder F-503	1956	50	Baghouse	F-527	37
F-504	Feeder F-504	1956	50	Baghouse	F-527	37
F-506	Feeder F-506	1956	50	Baghouse	F-527	37
F-528	Conveyor F-528	1956	10	Baghouse	F-527	37
FG-71	No.7 FM Bin	1972	65	None	None	FG-71

TABLE 5.53 FUTURE UNIT ID F-06 (FUTURE DUST HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
DCE-76	Kiln 4/5 Dust Bin	1995	55	Baghouse	451-BF-15	331-ES-21
512-BN-01	Finish Mill 7 Fringe Bin	1986	30	Baghouse	512-BF-01	24
F-682	Finish Mill No.6 Feeder	1962	52	Baghouse	512-BF-01	24
F-683	Finish Mill No.7 Feeder	1973	65	Baghouse	512-BF-01	24
451-PM-18	Kiln No.1 Bypass Pugmill	1998	150	None	None	451-PM-18

TABLE 5.54 FUTURE UNIT ID F-07 (FUTURE GYPSUM PROCESSING EQUIPMENT)						
Future Giant ID	Future Equipment Description	Install (Modify) Date	Design Capacity (tph)	Future Control Device Description	Future Control Device ID	Future Exhaust Point ID
FG-760	Conveyor FG-760	1997	50	None	None	FG-760
FG-761	Gypsum Hopper FG-761	1997	50	None	None	FG-761
FG-761A	Screw Feeder FG-761A	1999	50	None	None	FG-761A
FG-762	Drag Conveyor FG-762	1997	50	None	None	FG-762
G-53	Conveyor/Hopper G-53	1997	75	None	None	G-53
F-621	Gypsum Hopper F-621	Unknown	50	None	None	F-621
FG-75	Gypsum Bin FG-75	Unknown	50	None	None	FG-75
513-BN-06	Gypsum Bin 513-BN-06	2003-2005	50	Baghouse	513-BF-17	513-BF-17
513-BN-03	Limestone Bin 513-BN-03	2003-2005	100	Baghouse	513-BF-17	513-BF-17
513-WF-02	Conveyor 513-WF-02	2003-2005	120	Baghouse	513-BF-16	513-BF-16
513-WF-05	Conveyor 513-WF-05	2003-2005	60	Baghouse	513-BF-16	513-BF-16
513-WF-08	Conveyor 513-WF-08	2003-2005	10	Baghouse	513-BF-16	513-BF-16
513-BC-09	Conveyor 513-BC-09	2003-2005	103	Baghouse	513-BF-16	513-BF-16
513-DH-01	Dump Hopper 513-DH-01	2005	10	None	None	513-DH-01
513-SC-01	Conveyor 513-SC-01	2005	10	None	None	513-SC-01
513-BC-01	Conveyor 513-BC-01	2005	10	None	None	513-BC-01

TABLE 5.55 FUTURE UNIIT ID F-08 (FUTURE CLINKER FINISH MILL EQUIPMENT)						
Future Giant ID	Future Equipment Description	Install (Modify) Date	Design Capacity (tph)	Future Control Device Description	Future Control Device ID	Future Exhaust Point ID
F-601	Conveyor F-601	1961	3.12	Baghouse	F-628	15
F-602	Conveyor F-602	1961	43.38	Baghouse	F-628	15
F-603	Drag Conveyor F-603	1961	65	Baghouse	F-628	15

TABLE 5.56 FUTURE UNIIT ID F-08 (FUTURE CLINKER FINISH MILL EQUIPMENT)						
Future Giant ID	Future Equipment Description	Install (Modify) Date	Design Capacity (tph)	Future Control Device Description	Future Control Device ID	Future Exhaust Point ID
FG-73	Conveyor FG-73	1972	61.1	Baghouse	FG-78	16
FG-73A	Conveyor FG-73A	1972	61.1	Baghouse	FG-78	16
FG-77	Gypsum Weigh Feeder FG-77	1972	3.9	Baghouse	FG-78	16
FG-77A	Gypsum Spill Screw FG-77A	1972	3.9	Baghouse	FG-78	16
FG-79	Drag Conveyor FG-79	1973	65	Baghouse	FG-78	16
F-604	Finish Mill No.6	1961	52	Baghouse	F-609A	13
F-608	Air Separator	1961	300	Baghouse	F-609A	13
FG-656	Cement Cooler	1961	300	Baghouse	F-609A	13
FG-714	Finish Mill No.7	1973	65	Baghouse	FG-733A	14
FG-726	Cement Cooler	1973	400	Baghouse	FG-733A	14
FG-732	Air Separator	1973	400	Baghouse	FG-733A	14
533-BM-06	Finish Mill 533-BM-06	2003-2005	343	Baghouse	533-BF-16 533-BF-18	533-ES-16
533-AS-14	Air Gravity Conveyor 533-AS-14	2003-2005	240	Baghouse	533-BF-16 533-BF-18	533-ES-16
533-SR-13	High Efficiency Separator 533-SR-13	2003-2005	343	Baghouse	533-BF-16 533-BF-18	533-ES-16
543-AS-01	Air Gravity Conveyor 543-AS-01	2003-2005	328	Baghouse	533-BF-23	533-BF-23
533-AS-10	Air Gravity Conveyor 533-AS-10	2003-2005	150	Baghouse	533-BF-23	533-BF-23
533-AS-20	Air Gravity Conveyor 533-AS-20	2003-2005	150	Baghouse	533-BF-23	533-BF-23
533-AS-25	Air Gravity Conveyor 533-AS-20	2003-2005	60	Baghouse	533-BF-23	533-BF-23
533-BE-11	Bucket Elevator 533-BE-11	2003-2005	343	Baghouse	533-BF-23	533-BF-23
543-BE-70	Bucket Elevator 533-BE-70	2003-2005	150	Baghouse	533-BF-23	533-BF-23
613-AS-03	Air Gravity Conveyor 613-AS-03	2003-2005	175	Baghouse	533-BF-23	533-BF-23

TABLE 5.57 FUTURE UNIT ID F-09 (FUTURE CEMENT STORAGE AND BULK LOADING EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
P-150	Silo Bank No.1	1948	68	Baghouse	P-165-2,6,8	34,35,36
P-341	Silo Bank No.2	1956	220	Baghouse	P-201	17
P-342	Silo Bank No.3	1959	220	Baghouse	P-335	18
543-AS-02	Air Gravity Conveyor 543-AS-02	2003-2005	175	Baghouse	P-335	18
543-AS-03	Air Gravity Conveyor 543-AS-03	2003-2005	175	Baghouse	P-335	18
543-AS-04	Air Gravity Conveyor 543-AS-04	2003-2005	175	Baghouse	P-335	18
543-AS-05	Air Gravity Conveyor 543-AS-05	2003-2005	175	Baghouse	P-335	18
543-AS-06	Air Gravity Conveyor 543-AS-06	2003-2005	175	Baghouse	P-335	18
543-AS-07	Air Gravity Conveyor 543-AS-07	2003-2005	175	Baghouse	P-335	18
543-BE-70	Bucket Elevator 543-BE-70	2003-2005	175	Baghouse	P-335	18
P-321	Railcar Bulk Loading	1989	375	Baghouse	F-320	32
P-331	Truck Bulk Loading	1989	375	Baghouse	F-330	33

TABLE 5.58 FUTURE UNIT ID F-10 (FUTURE CEMENT PACKING EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install Date**	**Design Capacity**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
P-401	Ventomatic 12-Spout Packing Machine (Package cement product)	2001	200 tph	Pulse Jet Cleaning Baghouse	P-132 P-133	02 01

TABLE 5.59 FUTURE UNIT ID F-11 (FUTURE STEAM BOILER)							
Current Giant ID	**Future Equipment Description**	**Install Date**	**Design Capacity**	**Permitted Fuels**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
K-655	Boiler (Supplies steam where needed)	1987	2.1E+06 Btu/hr	See Condition 6.B.14(a)	None	None	K-655

TABLE 5.60 FUTURE UNIT ID F-12 (FUTURE NEW MATERIAL TRANSFER AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
311-BN-01	Storage Bin 311-BN-01	2003-2005	200	None	None	311-BN-01
311-BN-02	Storage Bin 311-BN-02	2003-2005	120	None	None	311-BN-02
311-BN-03	Storage Bin 311-BN-03	2003-2005	100	None	None	311-BN-03
311-WF-06	Conveyor 311-WF-06	2003-2005	30	None	None	311-WF-06
311-WF-08	Conveyor 311-WF-08	2003-2005	45	None	None	311-WF-08
311-WF-10	Conveyor 311-WF-10	2003-2005	5	None	None	311-WF-10
311-BC-13	Conveyor 311-BC-13	2003-2005	400	None	None	311-BC-13
311-BC-14	Conveyor 311-BC-14	2003-2005	400	None	None	311-BC-14
311-CV-26	Hopper 311-CV-26	2003-2005	250	None	None	311-CV-26
311-BC-27	Conveyor 311-BC-27	2003-2005	250	None	None	311-BC-27
311-BC-28	Conveyor 311-BC-28	2003-2005	250	None	None	311-BC-28
311-CV-30	Conveyor 311-CV-30	2003-2005	350	None	None	311-CV-30
341-AS-01	Air Gravity Conveyor 341-AS-01	2003-2005	320	Baghouse	341-BF-03	341-BF-03
341-AS-02	Air Gravity Conveyor 341-AS-02	2003-2005	320	Baghouse	341-BF-03 or 351-BF-02	341-BF-03 or 351-BF-02
351-BN-70	Dust Bin 351-BN-70	2003-2005	160	Baghouse	351-BF-78	351-BF-78
351-BE-76	Bucket Elevator 351-BE-76	2003-2005	160	Baghouse	351-BF-78	351-BF-78
331-SC-22	Screw Conveyor 331-SC-22	2003-2005	160	Baghouse	351-BF-78	351-BF-78
351-SC-31	Screw Conveyor 351-SC-31	2003-2005	160	Baghouse	351-BF-78	351-BF-78
341-BE-05	Bucket Elevator 341-BE-05	2003-2005	325	Baghouse	341-BF-14	341-BF-14
341-AS-07	Air Gravity Conveyor 341-AS-07	2003-2005	330	Baghouse	341-BF-14	341-BF-14
341-AS-07AS3	Air Gravity Conveyor 341-AS-07AS3	2003-2005	330	Baghouse	341-BF-14	341-BF-14
341-AS-07AS4	Air Gravity Conveyor 341-AS-07AS4	2003-2005	330	Baghouse	341-BF-14	341-BF-14

TABLE 5.61 FUTURE UNIT ID F-12 (FUTURE NEW MATERIAL TRANSFER AND STORAGE EQUIPMENT)						
Future Giant ID	**Future Equipment Description**	**Install (Modify) Date**	**Design Capacity (tph)**	**Future Control Device Description**	**Future Control Device ID**	**Future Exhaust Point ID**
341-SI-10SI1 341-SI-10SI2 341-SI-10SI3 341-SI-10SI4 341-SI-10SI5 341-SI-10SI6	Raw Meal Silo No.1 Raw Meal Silo No.2 Raw Meal Silo No.3 Raw Meal Silo No.4 Raw Meal Silo No.5 Raw Meal Silo No.6	2003-2005	1,000 (each)	Baghouse	341-BF-14	341-BF-14
341-SI-10SI7 341-SI-10SI8	Interstice Silo No.7 Interstice Silo No.8	2003-2005	400 (each)	Baghouse	341-BF-14	341-BF-14
341-AS-16AS1	Air Gravity Conveyor 341-AS-16AS1	2003-2005	143	Baghouse	351-BF-02	351-BF-02
341-AS-16AS2	Air Gravity Conveyor 341-AS-16AS2	2003-2005	143	Baghouse	351-BF-02	351-BF-02
351-AS-01	Air Gravity Conveyor 351-AS-01	2003-2005	300	Baghouse	351-BF-02	351-BF-02
351-BE-10	Bucket Elevator 351-BE-10	2003-2005	375	Baghouse	351-BF-02	351-BF-02
351-SC-75	Screw Conveyor 351-SC-75	2003-2005	20	Baghouse	351-BF-02	351-BF-02
351-AS-11	Air Gravity Conveyor 351-AS-11	2003-2005	375	Baghouse	351-BF-22	351-BF-22
351-BN-12	Storage Bin 351-BN-12	2003-2005	55	Baghouse	351-BF-22	351-BF-22
351-AS-14	Air Gravity Conveyor 351-AS-14	2003-2005	285	Baghouse	351-BF-22	351-BF-22
235-BN-35	Weigh Bin 235-BN-35	2003-2005	25	Baghouse	245-BF-41	245-BF-41
245-SP-45	Screw Pump Hopper 245-SP-45	2003-2005	25	Baghouse	245-BF-41	245-BF-41
351-AL-15	Aeropol	2003-2005	285	Baghouse	341-BF-14 351-BF-22	341-BF-14 351-BF-22
235-BN-30	Fly Ash Silo	2003-2005	6,000	Baghouse	235-BF-34	235-BF-34

D. EMISSION LIMITS AND STANDARDS

Tables 5.62 through 5.76 contains summaries of emission unit emission limits and standards for the current equipment.

TABLE 5.62 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-01 QUARRY/MARL HANDLING EQUIPMENT)						
ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
Q-112 Q-114	FUGITIVE EMISSIONS from Quarry Crusher Back-up Quarry Crusher	15% Opacity	Method 9 and 40CFR60.675(c) 40CFR60.11(b)	40CFR60.672(c)	No	5.E.1(a)
Q-104 Q-105 Q-106 Q-113 Q-108 Q-109 Q-110 Q-210 Q-211 Q-212 Q-212A	FUGITIVE EMISSIONS from Quarry Conveyor Belt Transfer Points	No Visible Emissions from Each conveyor transfer point when conveying saturated materials	Method 22	40CFR60.672(h)	No	5.E.1(b)
Q-104 Q-105 Q-106 Q-113 Q-108 Q-109 Q-110 Q-210 Q-211 Q-212 Q-212A	FUGITIVE EMISSIONS from Quarry Conveyor Belt Transfer Points	10% Opacity from Each conveyor transfer point when conveying unsaturated materials	Method 9 and 40CFR60.675(c) 40CFR60.11(b)	40CFR60.672(b)	No	5.E.1(b)

TABLE 5.63 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-03 COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
CH-33E CH-33W CH-3 CH-4 CH-7 CH-8 CH-16 CH-127	VISIBLE EMISSIONS from East Coal Mill CH-33E West Coal Mill CH-33W 2 Coal Feeders CH-3 2 Coal Hoppers CH-4 Coal Radial Stacker CH-7 Coal Transfer Hopper CH-8 Coal Storage Silo CH-16 Carbon Black Storage Bin	See Condition	Method 9	40CFR60.252(c) and 40CFR63.1348	No	5.E.2(a)
CH-5 CH-13 CH-27	CONVEYOR TRANSFER POINT VISIBLE EMISSIONS from Coal Conveyor Belt CH-5 Coal Conveyor Belt CH-13 Coal Conveyor Belt CH-27	20% Opacity From Each Transfer Point	Method 9	40CFR60.252(c)	No	5.E.2(b)

TABLE 5.64 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-04 WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-750B K-750A	CONVEYOR TRANSFER POINT VISIBLE EMISSIONS from 7 Screw Conveyors (K-750B) 12 Screw Conveyors (K-750A)	20% Opacity From Each Transfer Point	Method 9	SC Regulation 62.5 Standard 4 Section IX(B)	No	5.E.3(a)
GR-1 K-701 K-702 K-703 K-761 K-755	VISIBLE EMISSIONS from Hazardous Waste Storage Building Pug Mill K-701 Vibrating Screen K-702 Shredder K-703 Solid Fuel Tank System K-761 Kiln No.2/No.3 Solid Fuel Metering Bin	20% Opacity Each	Method 9	SC Regulation 62.5 Standard 4 Section IX(B)	No	5.E.3(b)
STACU	Carbon Adsorption System Performance Specifications	See Condition	See Condition	40CFR63.693(d)(1)	No	5.E.3(c)

TABLE 5.65 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-250 K-350	Vapor Incinerator (Existing Kilns) Performance Specifications	See Condition	See Condition	40CFR61.349(a)(2) and 40CFR63.693(f)(1)	No	5.E.4(a)
K-250 K-350	Hydrochloric Acid and Chlorine Gas Emissions from Existing Kiln No.2 Existing Kiln No.3	130.0 ppm @ 7.0% O_2 (Combined HCl, Cl_2) Each Kiln	Method 26A or Method 320 or Method 321	40CFR63.1204(a)(6)	No	5.E.4(b)
K-250 K-350	PM EMISSIONS from Existing Kiln No.2 Existing Kiln No.3	0.30 lb/ton dry feed Each Kiln	Method 5	40CFR63.1204(a)(7)	No	5.E.4(c)
K-270 K-370	VISIBLE EMISSIONS from Clinker Cooler No.2 Clinker Cooler No.3	10% Opacity Each Clinker Cooler	COMS	40CFR63.1345(a)(2)	No	5.E.4(d)
K-250 K-350	Benzene-Containing Waste Treatment Process Performance Specifications	See Condition	Method 25	40CFR61.348(a)	No	5.E.4(e)
K-250 K-350	VISIBLE EMISSIONS from Existing Kiln No.2 Existing Kiln No.3	20% Opacity Each Kiln	COMS	SC Regulation 62.5 Standard 4 Section IX(B) and 40CFR63.1204(a)(7)	No	5.E.4(f)
K-250 K-350	Existing Kiln DRE	See Condition	See Condition	SC Regulation 61-62.5 Standard 3 Section III(L)(2) and 40CFR63.1204(c)(1)	No	5.E.4(g)
K-270 K-370	PM EMISSIONS from Clinker Cooler No.2 Clinker Cooler No.3	0.10/lb ton dry feed Each Clinker Cooler	Method 5	40CFR63.1345(a)(1)	No	5.E.4(h)

TABLE 5.66 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-250 K-350	Existing Kiln Carbon Monoxide and Hydrocarbon Emissions	See Condition	CEMS	40CFR63.1204(a)(5)	No	5.E.4(i)
K-250 K-350	Existing Kiln Dioxin/Furan Emissions	See Condition	Method 23 or Method 23A	40CFR63.1204(a)(1)	No	5.E.4(j)
K-250 K-350	Existing Kiln Arsenic, Beryllium and Chromium Emissions	56.0 µg/dscm @ 7.0% O_2 (Combined As, Cr, Be)	Method 29	40CFR63.1204(a)(4)	No	5.E.4(k)
K-250 K-350	Existing Kiln Mercury Emissions	See Condition	Method 29	40CFR63.1204(a)(2)	No	5.E.4(l)
K-250 K-350	Existing Kiln Nickel Emissions	6.00E-3 lb Ni/106 Btu THI	Method 29	SC Regulation 61.62.5 Standard 3 Section III Table III	No	5.E.4(m)
K-250 K-350 K-434 KF-1	Existing Kiln Lead and Cadmium Emissions	330.0 µg/dscm @ 7.0% O2 (Combined Pb, Cd)	Method 29	40CFR63.1204(a)(3)	No	5.E.4(n)
K-250 K-350	Existing Kiln Alternative Emission Standards	See Condition	N/A	40CFR63.1206(b)(10)	No	5.E.4(o)

TABLE 5.67 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-07 CLINKER HANDLING AND STORAGE EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-58 K-77	TRANSFER POINT VISIBLE EMISSIONS from Drag Conveyor K-58 Elevator No.9 (K-77)	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.5(a)

TABLE 5.68 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-07 CLINKER HANDLING AND STORAGE EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-35 K-36 K-37 K-38 K-49 F-620 K-602	VISIBLE EMISSIONS from 4 Clinker Storage Silos Clinker Storage Tower Finish Mill No.6 Bin Clinker Reclaim Crusher	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.5(b)
FG-71	VISIBLE EMISSIONS from Finish Mill No.7 Bin	10% Opacity	Method 9	40CFR63.1348	No	5.E.5(c)
K-1 K-3 K-4 K-7 K-8 K-9 K-10 K-11 K-17 K-18 K-65 K-66 K-78 K-79 F-501 F-502 F-503 F-504 F-506 F-528 K-54 K-55	TRANSFER POINT VISIBLE EMISSIONS from Drag Conveyor K-1 Elevator No.1 (K-3) Elevator No.2 (K-4) Elevator No.3 (K-7) Elevator No.4 (K-8) Drag Conveyor K-9 Drag Conveyor K-10 Drag Conveyor K-11 A-Conveyor Belt K-65 Clinker Elevator K-66 Clinker Feeder F-501 Clinker Feeder F-502 Clinker Feeder F-503 Clinker Feeder F-504 Clinker Feeder F-506 Dust Screw Conveyor F-528 B Belt Conveyor K-17 C Belt Conveyor K-18 Elevator No.5 (K-54) Elevator No.6 (K-55) Drag Conveyor K-78 Conveyor Belt K-79	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.5(d)

TABLE 5.69 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-08 DUST HANDLING AND STORAGE EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-293 K-294 K-393 K-394 F-683	TRANSFER POINT VISIBLE EMISSIONS from Kiln No.2 Dust Insufflation Feeder K-293 Kiln No.2 Dust Insufflation Feeder K-294 Kiln No.3 Dust Insufflation Feeder K-393 Kiln No.3 Dust Insufflation Feeder K-394 Finish Mill No.7 Feeder F-683	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.6(a)
K-152 DBK-2 DBK-3 DCE-76	VISIBLE EMISSIONS from Dust Tank Kiln No.2 Dust Overflow Bin Kiln No.3 Dust Overflow Bin Kiln No.4/No.5 Dust Storage Bin	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.6(b)
F-682	TRANSFER POINT VISIBLE EMISSIONS from Finish Mill No.6 Feeder F-682	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.6(c)
K-290 K-390 DCK-220 DBK-5 512-BN-01 PM-23 PM-45	VISIBLE EMISSIONS from Kiln No.2 Dust Insufflation Pump Kiln No.3 Dust Insufflation Pump Kiln No.2/No.3 Dust Storage Bin Kiln No.5 Dust Overflow Bin Finish Mill No.7 Fringe Bin Kiln No.2/No.3 Pug Mill Kiln No.4/No.5 Pug Mill	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.6(d)

TABLE 5.70 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-09 GYPSUM PROCESSING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
FG-761 F-621 FG-75	VISIBLE EMISSIONS from Gypsum Hopper FG-761 Gypsum Hopper F-621 Gypsum Bin	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.7(a)
FG-760 FG-761A FG-762 G-53	TRANSFER POINT VISIBLE EMISSIONS from Gypsum Conveyor FG-760 Screw Feeder FG-761A Gypsum Drag Conveyor FG-762 Gypsum Conveyor Belt G-53	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.7(b)

TABLE 5.71 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-10 CLINKER FINISH MILL EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
F-604 F-608 FG-656 FG-732 FG-726	VISIBLE EMISSIONS from Finish Mill No.6 Air Separator F-608 Cement Cooler FG-656 Air Separator FG-732 Cement Cooler FG-726	10% Opacity Each	Method 9	40CFR63.1347 and 40CFR63.1348	No	5.E.8(a)
F-601 F-602 F-603 FG-73 FG-73A FG-77 FG-77A FG-79	CONVEYOR TRANSFER POINT VISIBLE EMISSIONS from Gypsum Conveyor Belt F-601 Conveyor Belt F-602 Drag Conveyor F-603 Conveyor Belt FG-73 Conveyor Belt FG-73A Conveyor Belt FG-77 Conveyor Belt FG-77A Drag Conveyor FG-79	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.8(b)
FG-714	VISIBLE EMISSIONS from Finish Mill No.7	10% Opacity	Method 9	40CFR63.1347	No	5.E.8(c)

TABLE 5.72 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-11 CEMENT STORAGE AND BULK LOADING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
P-321 P-331 P-150 P-341 P-342	VISIBLE EMISSIONS from West Cement Bulk Loading East Cement Bulk Loading Silo Bank No.1 Silo Bank No.2 Silo Bank No.3	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.9(a)

TABLE 5.73 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-12 CEMENT PACKING EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
P-401	VISIBLE EMISSIONS from 12-Spout Packing Machine	10% Opacity	Method 9	40CFR63.1348	No	5.E.10(a)

TABLE 5.74 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-13 STEAM BOILER)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-655	VISIBLE EMISSIONS from Boiler	20% Opacity	Method 9	SC Regulation 62.5 Standard 1 Section I	No	5.E.11(a)
K-655	PM EMISSIONS from Boiler	0.6 lb/10^6 Btu	Method 5 or Equivalent	SC Regulation 62.5 Standard 1 Section II	No	5.E.11(a)
K-655	SO_2 EMISSIONS from Boiler	3.5 lb/10^6 Btu	Method 6	SC Regulation 62.5 Standard 1 Section III	No	5.E.11(a)

TABLE 5.75 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-14 SLURRY STORAGE EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
RE-4 RE-5 RE-6 RE-7 RE-8 K-103 K-202-T K-302-T	VISIBLE EMISSIONS from Kiln No.5 Feed Tank (RE-24-T) 5 Slurry Storage Tanks (RE-4 to RE-8) Kiln No.2/No.3 Feed Tank K-103 Kiln No.2 Feed Tank (K-202-T) Kiln No.3 Feed Tank (K-302-T)	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.12(a)

TABLE 5.76 CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-15 RAW MILL EQUIPMENT)						
Current Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
R-107 R-207 R-307 RD-16	VISIBLE EMISSIONS from Raw Mill No.1 Raw Mill No.2 Raw Mill No.3 Raw Mill No.4	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.13(a)

Tables 5.77 through 5.93 contain summaries of emission limits and standards for the future emission units.

TABLE 5.77 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-01 QUARRY/MARL HANDLING EQUIPMENT						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
Q-112 Q-114 221-RC-01	FUGITIVE EMISSIONS from Quarry Crusher Back-up Quarry Crusher Roller Crusher	15% Opacity Each	Method 9 and 40CFR60.675(c) 40CFR60.11(b)	40CFR60.672(c)	No	5.E.14(a)
Q-104 Q-105 Q-106 Q-113 Q-108 Q-109 Q-110 Q-210 Q-211 Q-212 Q-212A 221-AF-01 221-BC-01	FUGITIVE EMISSIONS from Quarry Conveyor Belt Transfer Points	No Visible Emissions from Each conveyor transfer point when conveying saturated materials or 10% Opacity from each conveyor transfer point when conveying unsaturated materials	Method 22 Method 9 and 40CFR60.675(c) 40CFR60.11(b)	40CFR60.672(h) 40CFR60.672(b)	No	5.E.14(b)
221-DH-01	FUGITIVE EMISSIONS from Dump Hopper	10% Opacity	Method 9 and 40CFR60.675(c) 40CFR60.11(b)	40CFR60.672(b)	No	5.E.14(c)

TABLE 5.78 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-02 COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
CH-33E CH-33W CH-3 CH-4 CH-7 CH-8 CH-16 CH-127 461-BN-31 461-BL-53 461-BN-42 461-BL-51	VISIBLE EMISSIONS from East Coal Mill CH-33E West Coal Mill CH-33W 2 Coal Feeders CH-3 2 Coal Hoppers CH-4 Coal Radial Stacker CH-7 Coal Transfer Hopper CH-8 Coal Storage Silo CH-16 Carbon Black Storage Bin Coal Bin/Pump (461-BN-31, 461-BL-53) Coal Bin/Pump (461-BN-42, 461-BL-51) Coal Mill Heater	See Condition	Method 9	40CFR60.252(a)(2) 40CFR60.252(c) and 40CFR63.1348	No	5.E.15(a)

TABLE 5.79 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-02 COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
CH-5 CH-13 CH-27	CONVEYOR TRANSFER POINT VISIBLE EMISSIONS from Coal Conveyor Belt CH-5 Coal Conveyor Belt CH-13 Coal Conveyor Belt CH-27	20% Opacity From Each Transfer Point	Method 9	40CFR60.252(c)	No	5.E.17(b)

TABLE 5.80 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-03 WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
GR-1 K-702 K-703	VISIBLE EMISSIONS from Hazardous Waste Storage Building Vibrating Screen K-702 Shredder K-703	20% Opacity Each	Method 9	SC Regulation 62.5 Standard 4 Section IX(B)	No	5.E.18(a)
STACU	Carbon Adsorption System Performance Specifications	See Condition	BAQ Approved Method	40CFR63.693(d)(1)	No	5.E.18(b)

TABLE 5.81 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
321 421 431	New Vapor Incinerator Performance Specifications	See Condition	BAQ Approved Method	40CFR61.349(a)(2) and 40CFR63.693(f)(1)	No	5.E.19(a)
321 421 431	New Kiln System Mercury Emissions	See Condition	Method 29	40CFR63.1204(b)(2)	No	5.E.19(b)
321 421 431	New Kiln System Dioxin/Furan Emissions	See Condition	Method 23 or Method 23A	40CFR63.1204(b)(1)	No	5.E.19(c)
321 421 431	New Kiln System Combined Arsenic, Beryllium and Chromium Emissions	54.0 µg/dscm @ 7.0% O_2	Method 29	40CFR63.1204(b)(4)	No	5.E.19(d)
321 421 431	New Kiln System Nickel Emissions	6.0E-03 lb/10^6 Btu THI While burning any waste other than virgin fuels	Method 29	SC Regulation 61-62.5 Standard 3 Section III Table III	Yes	5.E.19(e)
321 421 431	New Kiln System Combined Lead and Cadmium Emissions	180.0 µg/dscm @ 7.0% O_2	Method 29	40CFR63.1204(b)(3)	No	5.E.19(f)

TABLE 5.82 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
321 421 431	New Kiln System Hydrochloric Acid and Chlorine Gas Emissions	86.0 ppm @ 7.0% O_2 (HCl Equivalents, dry basis)	Method 26A or Method 320 or Method 321	40CFR63.1204(b)(6)	No	5.E.19(g)
321 421 431	VISIBLE EMISSIONS from New Kiln System New Clinker Cooler	See Condition	COMS	40CFR63.1204(b)(7) and 40CFR63.1345(a)(1)	No	5.E.19(h)
321 421 431	COMBINED PM EMISSIONS from New Kiln System New Clinker Cooler	See Condition	Method 5	SC Regulation 61-62.5 Standard 4 Section IV(A) and 40CFR63.1204(b)(7) 40CFR63.1345(a)(1)	No	5.E.19(i)
321 421 431	New Kiln System Carbon Monoxide and Hydrocarbon Emissions	See Condition	CEMS	SC Regulation 61-62.5 Standard 7 and 40CFR63.1204(b)(5)	No	5.E.19(j)
321 421 431	New Kiln System Alternative Emission Standards	See Condition	N/A	40CFR63.1206(b)(10)	No	5.E.19(k)
321 421 431	Benzene-Containing Waste Treatment Process Performance Specifications	See Condition	BAQ Approved Method	40CFR61.348(a)	No	5.E.19(l)
321 421 431	New Kiln System DRE	See Condition	See Condition	40CFR63.1204(c)(1)	No	5.E.19(m)
321 421 431	Emission Limits for the Feeding of Hazardous Waste to the New Kiln System at a Location Other than the End Where Products are Normally Discharged and Where Fuels are Normally Fired	See Condition	N/A	40CFR63.1206(b)(13)(i)(B)	No	5.E.19(n)

TABLE 5.83 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-05 CLINKER HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-35 K-36 K-37 K-38 K-49 F-620 FG-71 471-VF-08 513-CV-11 513-SI-10	VISIBLE EMISSIONS from No.4 FM Bin No.5 FM Bin Storage Silo K-37 Storage Silo K-38 Storage Tower K-49 No.6 FM Bin F-620 No.7 FM Bin FG-71 Hopper 471-VF-08 Hopper 513-CV-11 Clinker Silo 513-SI-10	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.20(a)
K-9 K-10 K-11 K-66 F-501 F-502 F-503 F-504 F-506 F-528 K-65 K-54 K-55 K-58 K-77 K-78 K-79 471-DB-01 471-DB-03 471-BC-09 471-BC-05 513-BC-13	TRANSFER POINT VISIBLE EMISSIONS from Drag Conveyor K-9 Drag Conveyor K-10 Belt Conveyor K-11 Elevator K-66 Feeder F-501 Feeder F-502 Feeder F-503 Feeder F-504 Feeder F-506 Conveyor F-528 A-Belt Conveyor Elevator No.5 Elevator No.6 Conveyor K-58 Elevator No.9 Drag Conveyor K-78 Conveyor K-79 Conveyor 471-DB-01 Conveyor 471-DB-03 Conveyor 471-BC-09 Conveyor 471-BC-05 Conveyor 513-BC-13	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.20(b)

TABLE 5.84 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-06 DUST HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
DCE-76 512-BN-01 PM-45	VISIBLE EMISSIONS from Kiln 4/5 Dust Bin Finish Mill 7 Fringe Bin Pugmill	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.21(a)

TABLE 5.85 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-06 DUST HANDLING AND STORAGE EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
F-682 F-683	TRANSFER POINT VISIBLE EMISSIONS from Finish Mill No.6 Feeder Finish Mill No.7 Feeder	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.21(b)

TABLE 5.86 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-07 GYPSUM PROCESSING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
FG-761 G-53 F-621 FG-75 513-BN-06 513-BN-03 513-DH-01	VISIBLE EMISSIONS from Gypsum Hopper FG-761 Conveyor/Hopper G-53 Gypsum Hopper F-621 Gypsum Bin FG-75 Gypsum Bin 513-BN-06 Limestone Bin 513-BN-03 Dump Hopper 513-DH-01	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.22(a)
FG-760 FG-761A FG-762 513-WF-02 513-WF-05 513-WF-08 513-BC-09 513-BC-01 513-SC-01	TRANSFER POINT VISIBLE EMISSIONS from Conveyor FG-760 Screw Feeder FG-761A Drag Conveyor FG-762 Conveyor 513-WF-02 Conveyor 513-WF-05 Conveyor 513-WF-08 Conveyor 513-BC-09 Conveyor 513-BC-01 Conveyor 513-SC-09	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.22(b)

TABLE 5.87 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-08 CLINKER FINISH MILL EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
F-604 F-608 FG-656 FG-714 FG-726 FG-732 533-BM-06 533-SR-13	VISIBLE EMISSIONS from Finish Mill No.6 (F-604) Air Separator F-608 Cement Cooler FG-656 Finish Mill No.7 (FG-714) Cement Cooler FG-726 Air Separator FG-732 Finish Mill 533-BM-06 High Efficiency Separator	See Condition	Method 9	40CFR63.1347 and 40CFR63.1348	No	5.E.23(a)
F-601 F-602 F-603 FG-73 FG-73A FG-77 FG-77A FG-79 533-AS-14 533-AS-10 533-AS-20 533-AS-25 533-BE-11	TRANSFER POINT VISIBLE EMISSIONS from Conveyor F-601 Conveyor F-602 Drag Conveyor F-603 Conveyor FG-73 Conveyor FG-73A Gypsum Weigh Feeder FG-77 Gypsum Spill Screw FG-77A Drag Conveyor FG-79 Air Gravity Conveyor 533-AS-14 Air Gravity Conveyor 533-AS-10 Air Gravity Conveyor 533-AS-20 Air Gravity Conveyor 533-AS-25 Bucket Elevator 533-BE-11	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.23(b)

TABLE 5.88 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-09 CEMENT STORAGE AND BULK LOADING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
P-150 P-341 P-342 P-321 P-331	VISIBLE EMISSIONS from Silo Bank No.1 Silo Bank No.2 Silo Bank No.3 Railcar Bulk Loading Truck Bulk Loading	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.24(a)

TABLE 5.89 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-09 CEMENT STORAGE AND BULK LOADING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
543-AS-01 543-AS-02 543-AS-03 543-AS-04 543-AS-05 543-AS-06 543-AS-07 543-BE-70	TRANSFER POINT VISIBLE EMISSIONS from Air Gravity Conveyor 543-AS-01 Air Gravity Conveyor 543-AS-02 Air Gravity Conveyor 543-AS-03 Air Gravity Conveyor 543-AS-04 Air Gravity Conveyor 543-AS-05 Air Gravity Conveyor 543-AS-06 Air Gravity Conveyor 543-AS-07 Bucket Elevator 543-BE-70	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.24(b)

TABLE 5.90 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-10 CEMENT PACKING EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
P-401	VISIBLE EMISSIONS from 12-Spout Packing Machine	10% Opacity	Method 9	40CFR63.1348	No	5.E.25(a)

TABLE 5.91 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-11 STEAM BOILER)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
K-655	Boiler VISIBLE EMISSIONS	20% Opacity	Method 9	SC Regulation 62.5 Standard 1 Section I	No	5.E.26(a)
K-655	Boiler PM EMISSIONS	0.6 lb/10^6 Btu	Method 5 or Equivalent	SC Regulation 62.5 Standard 1 Section II	No	5.E.26(a)
K-655	Boiler SO_2 EMISSIONS	3.5 lb/10^6 Btu	Method 6	SC Regulation 62.5 Standard 1 Section III	No	5.E.26(a)

TABLE 5.92 FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT F-12 NEW MATERIAL TRANSFER AND STORAGE EQUIPMENT)						
Future Giant ID	**Pollutant/Standard**	**Limit**	**Reference Method**	**Regulation**	**State Only**	**Condition Number**
311-BN-01 311-BN-02 311-BN-03 311-CV-26 351-BN-70 341-SI-10SI1 341-SI-10SI2 341-SI-10SI3 341-SI-10SI4 341-SI-10SI5 341-SI-10SI6 341-SI-10SI7 341-SI-10SI8 351-BN-12 235-BN-35 245-SP-45 351-AL-15 235-BN-30	VISIBLE EMISSIONS from Storage Bin 311-BN-01 Storage Bin 311-BN-02 Storage Bin 311-BN-03 Hopper 311-CV-26 Dust Bin 351-BN-70 Raw Meal Silos (Nos. 1 to 6) Interstice Silos (Nos. 7 to 8) Storage Bin 311-BN-12 Weigh Bin 235-BN-35 Screw Pump Hopper 245-SP-45 Aeropol Fly Ash Silo 235-BN-30	10% Opacity Each	Method 9	40CFR63.1348	No	5.E.27(a)
311-WF-06 311-WF-08 311-WF-10 311-BC-13 311-BC-14 311-BC-27 311-BC-28 311-CV-30 341-AS-01 341-AS-02 351-BE-76 331-SC-22 351-SC-31 341-BE-05 341-AS-07 341-AS-07AS3 341-AS-07AS4 341-AS-16AS1 341-AS-16AS2 351-AS-01 351-BE-10 351-SC-75 351-AS-11 351-AS-14 613-AS-03	TRANSFER POINT VISIBLE EMISSIONS from Conveyor 311-WF-06 Conveyor 311-WF-08 Conveyor 311-WF-10 Conveyor 311-BC-13 Conveyor 311-BC-14 Conveyor 311-BC-27 Conveyor 311-BC-28 Conveyor 311-CV-30 Air Gravity Conveyor 341-AS-01 Air Gravity Conveyor 341-AS-02 Bucket Elevator 351-BE-76 Screw Conveyor 331-SC-22 Screw Conveyor 351-SC-31 Bucket Elevator 341-BE-05 Air Gravity Conveyor 341-AS-07 Air Gravity Conveyor 341-AS-07AS3 Air Gravity Conveyor 341-AS-07AS4 Air Gravity Conveyor 341-AS-16AS1 Air Gravity Conveyor 341-AS-16AS2 Air Gravity Conveyor 351-AS-01 Bucket Elevator 351-BE-10 Screw Conveyor 351-SC-75 Air Gravity Conveyor 351-AS-11 Air Gravity Conveyor 351-AS-14 Air Gravity Conveyor 613-AS-03	10% Opacity From Each Transfer Point	Method 9	40CFR63.1348	No	5.E.27(b)

The maximum allowable emission limits above are derived from the various Federal and State regulations that govern the operation of this type of source. All applicable facility wide emission limits and corresponding regulations are listed above. Additional operating requirements, which may be more stringent than those above, are contained in Part 4.0 and Part 7.0 of this permit.

E. EMISSION UNIT CONDITIONS

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-01 QUARRY/MARL HANDLING EQUIPMENT)	
Condition Number	**Condition**
5.E.1(a)	(40CFR60.11(c) and 40CFR60.672(c)) Fugitive emissions from the Quarry Crusher (Q-112) and Back-up Quarry Crusher (Q-114) shall each not exhibit an opacity that exceeds 15% as determined by 40CFR60 Appendix A Method 9 and the procedures of 40CFR60.675(c) and 40CFR60.11(b). This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.1(b)	(40CFR60.11(c), 40CFR60.672(b) and 40CFR60.676(h)) Fugitive emissions from each conveyor transfer point of each Quarry Marl Conveyor Belt (Q-104 to Q-110)(Q-210, Q-211, Q-212, Q-212A) shall not exhibit an opacity that exceeds 10% when conveying non-saturated materials as determined by 40CFR60 Appendix A Method 9 and the procedures of 40CFR60.675(c) and 40CFR60.11(b). Fugitive emissions from each conveyor transfer point of each Quarry Marl Conveyor Belt shall exhibit no visible emissions when conveying saturated materials. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-03 COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)	
Condition Number	**Condition**
5.E.2(a)	(40CFR60.11(c), 40CFR60.252(c), 40CFR63.6(h) and 40CFR63.1348) Visible emissions from the East Coal Mill (CH-33E),West Coal Mill (CH-33W), 2 Coal Feeders (CH-3), 2 Coal Hoppers (CH-4), Coal Radial Stacker (CH-7), Coal Transfer Hopper (CH-8), Coal Storage Silo (CH-16) shall each not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9. The Carbon Black Storage Bin shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.
5.E.2(b)	(40CFR60.11(c) and 40CFR60.252(c)) Visible emissions from each conveyor transfer point of Coal Conveyor Belt CH-27, Coal Conveyor Belt CH-5 and Coal Conveyor Belt CH-13 shall not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-04 WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.3(a)	(SC Regulation 62.5 Standard 4 Section IX(B)) Visible emissions from each conveyor transfer point of 7 Screw Conveyors (K-750B), 12 Screw Conveyors (K-750A) and 12 Screw Conveyors (FC-1, FC-2, FC-3, FC-4, FC-5, FC-6, FC-7, FC-8, FC-9, FC-10, FC-11, FC-12) shall not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9.
5.E.3(b)	(SC Regulation 62.5 Standard 4 Section IX(B)) Visible emissions from the Hazardous Waste Storage Building (GR-1), Pug Mill (K-701), Vibrating Screen (K-702), Shredder (K-703), Solid Fuel Storage Tank System (K-761), Kiln No.2/No.3 Solid Fuel Metering Bin (K-755) and Kiln No.4/No.5 Solid Fuel Metering Bin (K-775) shall each not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9.
5.E.3(c)	(40CFR63.693(d)(1)) When in operation, the Carbon Adsorption System shall recover 95% or more, on a weight-basis, of the TOC, less methane and ethane, contained in the vent stream entering the Carbon Adsorption System or recover 95% or more, on a weight-basis, of the total HAP listed in 40CFR63 Subpart DD Table 1 contained in the vent stream entering the Carbon Adsorption System.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)	
Condition Number	**Condition**
5.E.4(a)	<u>Existing Kiln Used as a Vapor Incinerator</u> (40CFR61.349(a)(2) and 40CFR63.693(f)(1)) When an existing Kiln (if still in operation) is used as a Vapor Incinerator to control emissions from the Waste Fuel Processing and Storage Equipment, it shall be operated to achieve one(1) of the performance options listed in paragraphs (a)(1) through (a)(3) of this condition. If Giant Cement is in compliance with the performance options as specified by paragraphs (a)(1) through (a)(3) of this condition, it also considered to be in compliance with the requirements of 40CFR61.349(a)(2) if the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy). (a)(1) Maintain the conditions in the Vapor Incinerator (Kiln) combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher. (a)(2) Destroy the TOC, less methane and ethane, contained in the vent stream entering the Vapor Incinerator (Kiln) either by 95% or more, on a weight-basis, or achieve a total incinerator outlet concentration for the TOC, less methane and ethane, of less than or equal to 20 ppmv corrected to 3% O_2, dry basis as determined by 40CFR60 Appendix A Method 25. (a)(3) Destroy the HAP listed in 40CFR63 Subpart DD Table 1 contained in the vent stream entering the Vapor Incinerator (Kiln) either by 95% or more, on a total HAP weight-basis, or achieve a total incinerator outlet concentration for the HAP of less than or equal to 20 ppmv corrected to 3% O_2, dry basis as determined by 40CFR60 Appendix A Method 25.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)	
Condition Number	**Condition**
5.E.4(b)	Existing Kiln Hydrochloric Acid and Chlorine Gas Emission Standard (40CFR63.1206(b)(1)(i)) Combined Hydrochloric Acid and Chlorine Gas emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exceed 130 ppmv corrected to 7% O_2 expressed as HCl equivalents, dry basis. This emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in a Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.4(c)	Existing Kiln PM Emission Standards (40CFR63.1204(a)(7) and 40CFR63.1206(b)(1)(i)) Particulate matter emissions from Kiln No.2 and Kiln No.3, (if each still in operation) (K-250, K-350) shall each not exceed 0.30 lb/ton of dry feed. This emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.4(d)	Existing Clinker Cooler Visible Emission Standard (40CFR63.6(h) and 40CFR63.1345(a)(2)) Visible emissions from each existing Clinker Cooler (if still in operation) (K-270, K-370) shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission limit standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.4(e)	Existing Kiln Benzene-Containing Waste Treatment Standards 40CFR61.342(a) and 40CFR61.348(a)) If the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) and when an existing Kiln (if still in operation) is used as a Benzene-Containing Waste Treatment Process, it shall be operated to achieve one(1) of the performance options listed in paragraphs (e)(1) through (e)(3) of this condition. (e)(1) Remove benzene from the waste stream to a level less than 10 ppmw on a flow-weighted annual average basis. For the purpose of complying with the requirements of this paragraph, the intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed. (e)(2) Remove benzene from the waste stream by 99% or more on a mass basis. (e)(3) Destroy benzene in the waste stream by incinerating the waste to achieve a destruction efficiency of 99% or greater for benzene.
5.E.4(f)	Existing Kiln Visible Emission Standard (SC Regulation 61-62.5 Standard 4 Section IX(B), 40CFR63.1204(a)(7) and 40CFR63.1206(b)(1)(i)) Visible emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9. This emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)	
Condition Number	**Condition**
5.E.4(g)	Existing Kiln DRE Standard (SC Standard 3 Section III(L)(2), 40CFR63.1204(c)(1), 40CFR63.1204(c)(3) and 40CFR63.1206(b)(7)) Each existing Kiln (if still in operation) shall achieve a DRE of 99.99% for each designated POHC. Giant Cement shall calculate the DRE for each POHC as specified by equation (g)(1) of this condition and treat the POHCs in the waste feed that it specifies to the extent required. Giant Cement shall specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) for each waste to be burned. Giant Cement must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information. Giant Cement must document compliance with this DRE standard only once provided that it does not modify a Kiln after the DRE performance test in a manner that could affect its ability to achieve the standard. Giant Cement may use any DRE performance test data that shows an existing Kiln achieves the required level of DRE provided that Giant Cement has not modified its design or operation in a manner that could effect its ability to achieve the DRE standard since the DRE performance test was performed and the DRE performance test data meet quality assurance objectives determined on a site-specific basis. (g)(1) DRE = [1-(Wout / Win)] x 100% Win = mass feedrate of POHC in a waste feedstream. Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.
5.E.4(h)	Existing Clinker Cooler PM Emission Standard (40CFR63.6(f) and 40CFR63,1345(a)(1)) Particulate matter emissions from each existing Clinker Cooler (if still in operation) (K-270, K-370) shall each not exceed 0.10 lb/ton dry feed. This emission standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.4(i)	Existing Kiln CO and Hydrocarbon Emission Standards (40CFR63.1204(a)(5)(ii) and 40CFR63.1206(b)(1)(i)) Giant Cement shall operate each existing Kiln (if still in operation) (K-250, K-350) to achieve one(1) of the Carbon Monoxide and/or Hydrocarbon performance specifications listed in paragraphs (i)(1) and (i)(2) of this condition. This emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation. (i)(1) Hydrocarbons in the Main Stack of each existing Kiln shall not exceed 20 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, reported as propane and corrected to 7%O_2. (i)(2) Carbon Monoxide in the Main Stack of each existing Kiln shall not exceed 100 ppmv, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7% O_2. If Giant Cement elects to comply with this Carbon Monoxide standard rather than the Hydrocarbon standard listed in paragraph (i)(1), it also must document that, during the DRE performance test runs or their equivalent, that Hydrocarbons in the main stack do not exceed 20 ppmv during those runs, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2, and reported as propane.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)	
Condition Number	**Condition**
5.E.4(j)	Existing Kiln Dioxin/Furan Emission Standard (40CFR63.1204(a)(1) and 40CFR63.1206(b)(1)(i)) Dioxin/Furan emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exceed 0.20 ng TEQ/dscm corrected to 7% O_2. Dioxin/Furan emissions from each existing Kiln may exceed 0.20 ng TEQ/dscm but no more than 0.40 ng TEQ/dscm corrected to 7%O_2 provided that the combustion gas temperature at the inlet to the initial dry PMCD is 400°F or lower based on the average of the test run average temperatures. This emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.4(k)	Existing Kiln Arsenic, Beryllium and Chromium Emission Standards (40CFR63.1204(a)(4) and 40CFR63.1206(b)(1)(i)) Combined Arsenic, Beryllium and Chromium emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exceed 56 ug/dscm corrected to 7% O_2. This new emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.4(l)	Existing Kiln Mercury Emission Standard (40CFR63.1204(a)(2) and 40CFR63.1206(b)(1)(i) and 40CFR63.1206(b)(15)) Mercury emissions from each existing Kiln (if still in operation) (K-250, K-350 shall not exceed 120.0 µg/dscm @ 7.0% O_2. In lieu of complying with this applicable Mercury standard, Giant Cement may instead elect to comply with an alternative Mercury standard consisting of Giant Cement not exceeding a hazardous waste feedrate corresponding to a MTEC of 120 µg/dscm on a twelve-hour(12) rolling average. To document compliance with this operating requirement, Giant Cement shall conduct monitoring and recordkeeping according to paragraphs (l)(1) through (l)(4) of this condition. In lieu of the requirements specified by paragraphs (l)(1) through (l)(4) of this condition, Giant Cement may identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (l)(3) is below the MTEC of 120 µg/dscm on a twelve-hour rolling average and interlock the minimum gas flowrate limit and maximum feedrate limits to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury feedrate exceeds the minimum gas flow rate or maximum feedrate of Mercury. Giant Cement shall also notify the RCRA authority in writing that it intends to comply with the alternative standard. These emission standards apply at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation. (l)(1) Monitor and record the feedrate of Mercury for each hazardous waste feedstream. (l)(2) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that has been correlated to gas flowrate) (l)(3) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted. (l)(4) Interlock the MTEC calculated in paragraph (l)(3) to the AWFCO system to stop hazardous waste burning when the MTEC exceeds 120 µg/dscm on a twelve-hour(12) rolling average.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-05 CEMENT CLINKER PRODUCING EQUIPMENT)	
Condition Number	**Condition**
5.E.4(m)	Existing Kiln Nickel Emission Standard (SC Regulation 61-62.5 Standard 3 Section III Table III) Nickel emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exceed 6.0E-03 lb/10^6 Btu THI while burning any waste other than virgin fuel.
5.E.4(n)	Existing Kiln Lead and Cadmium Emission Standards (40CFR63.1204(a)(3) and 40CFR63.1206(b)(1)(i)) Combined Lead and Cadmium emissions from each existing Kiln (if still in operation) (K-250, K-350) shall not exceed 330.0 ug/dscm corrected to 7% O_2. This new emission standard applies at all times for all existing Kiln operations except during periods of SSM provided that hazardous waste is not in an existing Kiln's combustion chamber (i.e., the hazardous waste feed to the combustor (Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.4(o)	Alternative Existing Kiln Emission Standards (40CFR63.1206(b)(10)) Giant Cement may submit a written petition to the Department and EPA recommending alternative combustor (Kiln) Semivolatile Metal, Low Volatile Metal, Mercury and/or Hydrochloric Acid/Chlorine Gas emission standards for the existing Kilns (if still in operation) (K-250, K-350) . It may petition if it cannot achieve one(1) or more of these standards while using MACT because of raw material contributions to emissions of the regulated metals or Hydrochloric Acid/Chlorine Gas or it determines that Mercury is not present at detectable levels in its raw materials. The alternative standard recommended may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or Chlorine, and/or an emission limitation. It shall also include a requirement to use MACT or better, applicable to the standard(s) for which the Giant Cement is seeking relief. The alternative standard petition submitted shall include data or information documenting that raw material contributions to emissions prevent Giant Cement from complying with the emission standard(s) even though it is using MACT for the standard(s) for which it is seeking relief. If required, it shall also include data or information documenting that Mercury is not present at detectable levels in its raw materials, that increased Chlorine feedrate associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials and that emissions of the regulated metals and Hydrochloric Acid/Chlorine gas attributable to the hazardous waste only will not exceed the emission standards. Giant Cement shall not operate pursuant to its recommended alternative standards in lieu of the emission standards specified in this permit unless the Department approves the provisions of the alternative standard petition request or establishes other alternative standards and until Giant Cement submits a revised Notification of Compliance that incorporates the revised standards. For purposes of this alternative standard provision, MACT for new hazardous waste burning cement kilns is defined as listed in paragraphs (o)(1) through (o)(4). (o)(1) For Mercury, a hazardous waste feedrate corresponding to an MTEC of 88 µg/dscm or less. (o)(2) For Semivolatile Metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a PMCD that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less. (o)(3) For Low Volatile Metals, a hazardous waste federate corresponding to an MTEC of 54,000 µg/dscm or less and use of a PMCD that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less. (o)(4) For Hydrochloric Acid/Chlorine Gas, a hazardous waste Chlorine feedrate corresponding to an MTEC of 720,000 µg/dscm or less.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-07 CLINKER HANDLING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.5(a)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each transfer point of Drag Conveyor K-58 and Elevator No.9 (K-77) shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.5(b)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from 2 Clinker Storage Tanks (K-33, K-34), 4 Clinker Storage Silos (K-35, K-36, K-37, K-38), Clinker Storage Tower K-49, Finish Mill No.6 Bin F-620 and Clinker Reclaim Crusher K-602 shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.5(c)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from the Finish Mill No.7 Bin FG-71 shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.5(d)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each transfer point of Drag Conveyor K-1, Elevator No.1 (K-3), Elevator No.2 (K-4), Elevator No.3 (K-7), Elevator No.4 (K-8), Drag Conveyor K-9, Drag Conveyor K-10, Drag Conveyor K-11, A-Conveyor Belt K-65, Clinker Elevator K-66, Clinker Feeder F-501, Clinker Feeder F-502, Clinker Feeder F-503, Clinker Feeder F-504, Clinker Feeder F-506, Dust Screw Conveyor F-528, B Belt Conveyor K-17, C Belt Conveyor K-18, Elevator No.5 (K-54), Elevator No.6 (K-55), Drag Conveyor K-78 and Conveyor Belt K-79 shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-08 DUST HANDLING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.6(a)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each transfer point of Kiln No.2 Dust Insufflation Feeder K-293, Kiln No.2 Dust Insufflation Feeder K-294, Kiln No.3 Dust Insufflation Feeder K-393 and Kiln No.3 Dust Insufflation Feeder K-394 shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.6(b)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from the Dust Tank K-152, Kiln No.2 Dust Overflow Bin DBK-2, Kiln No.3 Dust Overflow Bin DBK-3 and Kiln No.4/No.5 Dust Storage Bin DCE-76 shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except periods of startup, shutdown and malfunction.
5.E.6(c)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each transfer point of Finish Mill No.6 Feeder F-682 shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-08 DUST HANDLING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.6(d)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from the Kiln No.2 Dust Insufflation Pump K-290, Kiln No.3 Dust Insufflation Pump K-390, Kiln No.2/No.3 Excess Dust Storage Bin DCK-220, Kiln No.5 Dust Overflow Bin DBK-5, Finish Mill No.7 Fringe Bin (512-BN-01), Kiln No.2/No.3 Pug Mill (PM-23) and Kiln No.4/No.5 Pug Mill (PM-45) shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-09 GYPSUM PROCESSING EQUIPMENT)	
Condition Number	**Condition**
5.E.7(a)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from Gypsum Hopper FG-761, Gypsum Hopper F-621, Gypsum Bin and the Gypsum Storage Silo shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.7(b)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each transfer point of the Clinker/Gypsum Feeder, Gypsum Conveyor FG-760, Screw Feeder FG-761A, Gypsum Drag Conveyor FG-762 and Gypsum Conveyor Belt G-53 shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emissions standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-10 CLINKER FINISH MILL EQUIPMENT)	
Condition Number	**Condition**
5.E.8(a)	(40CFR63.6(h), 40CFR63.1347 and 40CFR63.1348) Visible emissions discharged from the mill sweep or air separator air pollution control devices of the Finish Mill No.6 F-604, Air Separator FG-732 and Air Separator F-608 shall not exhibit an opacity greater than 10%. Visible emissions from Cement Cooler FG-656 and Cement Cooler FG-726 shall each not exhibit an opacity greater than 10%. Compliance with these visible emissions standards shall determined by 40CFR60 Appendix A Method 9 and they apply at all times except periods of startup, shutdown and malfunction.
5.E.8(b)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from each conveyor transfer point of Gypsum Conveyor Belt F-601, Conveyor Belt F-602, Drag Conveyor F-603, Conveyor Belt FG-73, Conveyor Belt FG-73A, Conveyor Belt FG-77, Conveyor Belt FG-77A and Drag Conveyor FG-79 shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except periods of startup, shutdown and malfunction.
5.E.8(c)	(40CFR63.6(h) and 40CFR63.1347) Visible emissions discharged from the mill sweep or air separator air pollution control device of Finish Mill No.7 (FG-714) shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-11 CEMENT STORAGE AND BULK LOADING EQUIPMENT)	
Condition Number	**Condition**
5.E.9(a)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from West Cement Bulk Loading (P-321), East Bulk Cement Loading (P-331), Silo Bank No.1 (P-150), Silo Bank No.2 (P-341) and Silo Bank No.3 (P-342) shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-12 CEMENT PACKING EQUIPMENT)	
Condition Number	**Condition**
5.E.10(a)	(40CFR63.6(h) and 40CFR63.1348) Visible emissions from the 12-Spout Packing Machine shall not exhibit an opacity that greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-13 STEAM BOILER)	
Condition Number	**Condition**
5.E.11(a)	(SC Regulation 62.5 Standard 1 Section I, Section II and Section III) Visible emissions from the Steam Boiler shall not exhibit an opacity greater than 20%. The Boiler shall also be operated such that particulate matter emissions do not exceed 0.6 lb/10^6 Btu and sulfur dioxide emissions do not exceed 3.5 lb/10^6 Btu.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-14 SLURRY STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.12(a)	(40CFR63.6(h) and 40CFR63.1348) Until removed from service, visible emissions from Kiln No.5 Feed Tank (RE-24-T), 5 Slurry Storage Tanks (RE-4 to RE-8), Kiln No.2/No.3 Feed Tank (K-103), Kiln No.2 Feed Tank (K-202-T) and Kiln No.3 Feed Tank (K-302-T) shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

CURRENT EMISSION LIMITS AND STANDARDS (CURRENT UNIT ID C-15 RAW MILL EQUIPMENT)	
Condition Number	**Condition**
5.E.13(a)	(40CFR63.6(h) and 40CFR63.1348) Until removed from service, visible emissions from Raw Mill No.1 (R-107), Raw Mill No.2 (R-207), Raw Mill No.3 (R-307) and Raw Mill No.4 (RD-16) shall each not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-01 QUARRY/MARL HANDLING EQUIPMENT)	
Condition Number	**Condition**
5.E.14(a)	(40CFR60.11(c) and 40CFR60.672(c)) Fugitive emissions from the Quarry Crusher (Q-112) , Back-up Quarry Crusher (Q-114) and Roller Crusher (221-RC-01) shall each not exhibit an opacity that exceeds 15% as determined by 40CFR60 Appendix A Method 9 and the procedures of 40CFR60.675(c) and 40CFR60.11(b). This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.14(b)	(40CFR60.11(c), 40CFR60.672(b) and 40CFR60.676(h)) Fugitive emissions from each conveyor transfer point of each Quarry Marl Conveyor Belt (Q-104 to Q-106, Q-108 to Q-110, Q-113)(Q-210, Q-211, Q-212, Q-212A) (221-AF-01, 221-BC-01) shall not exhibit an opacity that exceeds 10% when conveying non-saturated materials as determined by 40CFR60 Appendix A Method 9 and the procedures of 40CFR60.675(c) and 40CFR60.11(b). Fugitive emissions from each conveyor transfer point of each Quarry Marl Conveyor Belt shall exhibit no visible emissions when conveying saturated materials. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.
5.E.14(c)	(40CFR60.11(c) and 40CFR60.672(b)) Fugitive emissions from the Dump Hopper shall not exhibit an opacity greater than 10% as determined by 40CFR60 Appendix A Method 9 and the procedures of 40CFR60.675(c) and 40CFR60.11(b). This visible emission standard applies at all times except during periods of startup, shutdown and malfunction

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-02 COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)	
Condition Number	**Condition**
5.E.15(a)	(40CFR60.11(c), 40CFR60.252(a)(2), 40CFR60.252(c), 40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from the East Coal Mill (CH-33E) , West Coal Mill (CH-33W), 2 Coal Feeders (CH-3), 2 Coal Hoppers (CH-4), Coal Radial Stacker (CH-7), Coal Transfer Hopper (CH-8), Coal Storage Silo (CH-16) and the Coal Mill Heater shall each not exhibit an opacity that exceeds 20% as determined by 40CFR60 Appendix A Method 9. Visible emissions from the Carbon Black Storage Bin, Coal Bin/Pump (461-BN-31, 461-BL-53) and Coal Bin/Pump (461-BN-42, 461-BL-51) shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.
5.E.15(b)	(40CFR60.11(c) and 40CFR60.252(c)) After plant modifications are complete, visible emissions from each conveyor transfer point of Coal Conveyor Belt CH-27, Coal Conveyor Belt CH-5 and Coal Conveyor Belt CH-13 shall not exhibit an opacity that exceeds 20% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-03 WASTE FUEL PROCESSING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.18(a)	(SC Regulation 62.5 Standard 4 Section IX(B)) Visible emissions from the Hazardous Waste Storage Building (GR-1), Vibrating Screen (K-702) and Shredder (K-703) shall each not exhibit an opacity greater than 20% as determined by 40CFR60 Appendix A Method 9.
5.E.18(b)	(40CFR63.693(d)(1)) After plant modifications are complete and when in operation, the Carbon Adsorption System shall recover 95% or more, on a weight-basis, of the TOC, less methane and ethane, contained in the vent stream entering the Carbon Adsorption System or recover 95% or more, on a weight-basis, of the total HAP listed in 40CFR63 Subpart DD Table 1 contained in the vent stream entering the Carbon Adsorption System.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(a)	New Kiln System Used As Vapor Incinerator (40CFR61.349(a)(2) and 40CFR63.693(f)(1)) When the New Kiln System (when placed in operation) is used as a Vapor Incinerator to control emissions from the Waste Fuel Processing and Storage Equipment, it shall be operated to achieve one(1) of the performance options listed in paragraphs (a)(1) through (a)(3) of this condition. If Giant Cement is in compliance with the performance options as specified by paragraphs (a)(1) through (a)(3) of this condition, it also considered to be in compliance with the requirements of 40CFR61.349(a)(2) if the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy). (a)(1) Maintain the conditions in the Vapor Incinerator (Kiln) combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher. (a)(2) Destroy the TOC, less methane and ethane, contained in the vent stream entering the Vapor Incinerator (Kiln) either by 95% or more, on a weight-basis, or achieve a total incinerator outlet concentration for the TOC, less methane and ethane, of less than or equal to 20 ppmv corrected to 3% O_2, dry basis as determined by 40CFR60 Appendix A Method 25. (a)(3) Destroy the HAP listed in 40CFR63 Subpart DD Table 1 contained in the vent stream entering the Vapor Incinerator (Kiln) either by 95% or more, on a total HAP weight-basis, or achieve a total incinerator outlet concentration for the HAP of less than or equal to 20 ppmv corrected to 3% O_2, dry basis as determined by 40CFR60 Appendix A Method 25.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(b)	New Kiln System Mercury Emission Standard (40CFR63.1204(b)(2) and 40CFR63.1206(b)(1) and 40CFR63.1206(b)(15)) Mercury emissions from the New Kiln System shall not exceed 120.0 µg/dscm @ 7.0% O_2. In lieu of complying with this applicable Mercury standard, Giant Cement may instead elect to comply with an alternative Mercury standard consisting of Giant Cement not exceeding a hazardous waste feedrate corresponding to a MTEC of 120 µg/dscm on a twelve-hour(12) rolling average. To document compliance with this operating requirement, Giant Cement shall conduct monitoring and recordkeeping according to paragraphs (b)(1) through (b)(4) of this condition. In lieu of the requirements specified by paragraphs (b)(1) through (b)(4) of this condition, Giant Cement may identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (b)(3) is below the MTEC of 120 µg/dscm on a twelve-hour rolling average and interlock the minimum gas flowrate limit and maximum feedrate limits to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury feedrate exceeds the minimum gas flowrate or maximum feedrate of Mercury. Giant Cement shall also notify the RCRA authority in writing that it intends to comply with the alternative standard. These emission standards apply at all times for all New Kiln System operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln System) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation. (b)(1) Monitor and record the feedrate of Mercury for each hazardous waste feedstream. (b)(2) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate) (b)(3) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted. (b)(4) Interlock the MTEC calculated in paragraph (b)(3) to the AWFCO system to stop hazardous waste burning when the MTEC exceeds 120 µg/dscm on a twelve-hour(12) rolling average.
5.E.19(c)	New Kiln System Dioxin/Furan Emission Standard (40CFR63.1204(b)(1) and 40CFR63.1206(b)(1)(i)) Dioxin/Furan emissions from the New Kiln System (when placed in operation) shall not exceed 0.20 ng TEQ/dscm corrected to 7% oxygen. Dioxin/Furan emissions from the New Kiln System may exceed 0.20 ng TEQ/dscm but no more than 0.40 ng TEQ/dscm corrected to 7% oxygen provided that the combustion gas temperature at the inlet to the initial dry PMCD is 400°F or lower based on the average of the test run average temperatures. This emission standard applies at all times for all New Kiln System operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.19(d)	New Kiln System Combined Arsenic, Beryllium and Chromium Emission Standard (40CFR63.1204(b)(4) and 40CFR63.1206(b)(1)(i)) Combined Arsenic, Beryllium and Chromium emissions from the New Kiln System (when placed in operation) shall not exceed 54.0 µg/dscm @ 7.0% O_2. This emission standard applies at all times for all New Kiln System operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln System) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(e)	New Kiln System Nickel Emission Standard (SC Regulation 61-62.5 Standard 3 Section III Table III) Nickel emissions from the New Kiln System (when placed in operation) shall not exceed 6.0E-03 lb/10^6 Btu THI while burning any waste other than virgin fuel.
5.E.19(f)	New Kiln System Combined Lead and Cadmium Emission Standard (40CFR63.1204(b)(3) and 40CFR63.1206(b)(1)(i)) Combined Lead and Cadmium emissions from the New Kiln System (when placed in operation) shall not exceed 180.0 µg/dscm @ 7.0% O_2. This emission standard applies at all times for all New Kiln System operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln System) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.19(g)	New Kiln System Combined Hydrochloric Acid and Chlorine Gas Emission Standard (40CFR63.1204(b)(6) and 40CFR63.1206(b)(1)(i)) Combined Hydrochloric Acid and Chlorine Gas emissions from the New Kiln System (when placed in operation) shall not exceed 86.0 ppm @ 7.0% O_2 Dry Basis, HCl equivalents. This emission standard applies at all times for all New Kiln operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln System) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.19(h)	New Kiln System and New Clinker Cooler Visible Emission Standard (40CFR63.1204(b)(7), 40CFR63.1345(a)(2) and 40CFR63.1206(b)(1)(i)) The New Kiln System and New Clinker Cooler (when placed in operation) will exhaust at a common emission point (Main Stack). Visible emissions from the Main Stack shall not exceed 20% opacity This emission standard applies at all times for all New Kiln System operations except during periods of SSM provided that hazardous waste is not in the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor (New Kiln System) has been cutoff for a period of time not less than the hazardous waste residence time) during those periods of operation.
5.E.19(i)	New Kiln System and New Clinker Cooler PM Emission Standards (SC Regulation 62.5 Standard 4 Section IV and 40CFR63.1345(a)(2)) Particulate matter emissions (E) from the New Kiln System (when placed in operation) shall not exceed the most restrictive particulate matter emission limit calculated from between the two(2) equations specified in paragraphs (i)(1) and (i)(2) of this condition. Particulate matter emissions (E) from the New Clinker Cooler (when placed in operation) shall not exceed the allowable particulate matter emission limit as specified in paragraph (i)(3). The total allowable particulate matter emissions from both shall be the sum of each allowable individual particulate matter emission limit since both exhaust at a common emission point (Main Stack). (i)(1) $E(lb/hr) = ((3.269E\text{-}05)(P^3)) - ((0.01049)(P^2)) + ((1.164)(P)) + 2.823$ (P in tph) (i)(2) E = 0.30 lb/ton of dry feed (i)(3) E = 0.10 lb/ton of dry feed

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(j)	New Kiln System CO and Hydrocarbon Emission Standards (SC Regulation 61-62.5 Standard 7, 40CFR63.1204(b)(5) and 40CFR63.1206(b)(6)) The New Kiln System (when placed in operation) shall be operated to achieve one(1) of the performance specifications for Carbon Monoxide and Hydrocarbon emissions as specified by paragraphs (j)(1) and (j)(2) of this condition. If Giant Cement complies with these emissions standards by documenting continuous compliance with the Carbon Monoxide standard using a CEMS and documenting compliance with the Hydrocarbon standard during the DRE performance test or its equivalent, then if a DRE performance test is acceptable as documentation of compliance with the DRE standard, Giant Cement may use the highest hourly rolling average Hydrocarbon level achieved during the DRE performance test runs to document compliance with the hydrocarbon standard. An acceptable DRE performance test is any test for which the data and results are determined to meet quality assurance objectives (on a site-specific basis) such that the results adequately demonstrate compliance with the DRE standard. If during this acceptable DRE performance test Giant Cement did not obtain hydrocarbon emissions data sufficient to document compliance with the hydrocarbon standard, it must perform, as part of the performance test, an equivalent DRE performance test to document compliance with the hydrocarbon standard. An equivalent DRE performance test shall be comprised of a minimum of three runs each with a minimum duration of one(1) hour during which the combustor (New Kiln System) is operated as close as reasonably possible to the operating parameter limits that were established based on the initial DRE performance test. The highest hourly rolling average hydrocarbon emission level achieved must be used during the equivalent DRE performance test to document compliance with the hydrocarbon standard. Giant Cement may also elect to perform a DRE performance test as part of the Comprehensive Performance Test. (j)(1) Carbon Monoxide emissions in the by-pass or midkiln gas sampling system shall not exceed 100 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis and corrected to 7% O_2. If Giant Cement elects to comply with this Carbon Monoxide emission standard rather than the Hydrocarbon emission standard specified in paragraph (j)(2), it also must document that, during the DRE performance test runs, that Hydrocarbon emissions do not exceed 10 ppmv during those runs, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% oxygen, and reported as propane. VOC emissions from the Main Stack shall not exceed 0.55 lb/ton of clinker (42 ppmv), three(3)- hour block average. (j)(2) Hydrocarbon emissions in the by-pass duct or midkiln gas sampling system shall not exceed 10 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2 and reported as propane. Carbon Monoxide emissions from the Main Stack shall not exceed 6.8 lb/ton clinker, 30 day rolling average.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(k)	Alternative New Kiln System Emission Standards (40CFR63.1206(b)(10)) Giant Cement may submit a written petition to the Department and EPA recommending alternative combustor (Kiln) Semivolatile Metal, Low Volatile Metal, Mercury and/or Hydrochloric Acid/Chlorine Gas emission standards for the New Kiln System (when placed in operation) . It may petition if it cannot achieve one(1) or more of these standards while using MACT because of raw material contributions to emissions of the regulated metals or Hydrochloric Acid/Chlorine Gas or it determines that Mercury is not present at detectable levels in its raw materials. The alternative standard recommended may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or Chlorine, and/or an emission limitation. It shall also include a requirement to use MACT or better, applicable to the standard(s) for which the Giant Cement is seeking relief. The alternative standard petition submitted shall include data or information documenting that raw material contributions to emissions prevent Giant Cement from complying with the emission standard(s) even though it is using MACT for the standard(s) for which it is seeking relief. If required, it shall also include data or information documenting that Mercury is not present at detectable levels in its raw materials, that increased Chlorine feedrate associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials and that emissions of the regulated metals and Hydrochloric Acid/Chlorine gas attributable to the hazardous waste only will not exceed the emission standards. Giant Cement shall not operate pursuant to its recommended alternative standards in lieu of the emission standards specified in this permit unless the Department approves the provisions of the alternative standard petition request or establishes other alternative standards and until Giant Cement submits a revised Notification of Compliance that incorporates the revised standards. For purposes of this alternative standard provision, MACT for new hazardous waste burning cement kilns is defined as listed in paragraphs (k)(1) through (k)(4). (k)(1) For Mercury, a hazardous waste feedrate corresponding to an MTEC of 7 µg/dscm or less. (k)(2) For Semivolatile Metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a PMCD that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less. (k)(3) For Low Volatile Metals, a hazardous waste feedrate corresponding to an MTEC of 15,000 µg/dscm or less and use of a PMCD that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less. (k)(4) For Hydrochloric Acid/Chlorine Gas, a hazardous waste Chlorine feedrate corresponding to an MTEC of 420,000 µg/dscm or less.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(l)	New Kiln System Benzene-Containing Waste Treatment Standards (40CFR61.342(a) and 40CFR61.348(a)) If the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) and when the New Kiln System (when placed in operation) is used as Benzene-Containing Waste Treatment Process, it shall be operated to achieve one(1) of the performance options listed in paragraphs (m)(1) through (m)(3) of this condition. (l)(1) Remove benzene from the waste stream to a level less than 10 ppmw on a flow-weighted annual average basis. For the purpose of complying with the requirements of this paragraph, the intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed. (l)(2) Remove benzene from the waste stream by 99% or more on a mass basis. (l)(3) Destroy benzene in the waste stream by incinerating the waste to achieve a DRE of 99% or greater for benzene.
5.E.19(m)	New Kiln System DRE Standard (SC Standard 3 Section III(L)(2), 40CFR63.1204(c)(1), 40CFR63.1204(c)(3) and 40CFR63.1206(b)(7)) The New Kiln System (when placed in operation) shall achieve a DRE of 99.99% for each designated POHC. Giant Cement shall calculate the DRE for each POHC as specified by equation (m)(1) of this condition and treat the POHCs in the waste feed that it specifies to the extent required. Giant Cement shall specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) for each waste to be burned. Giant Cement must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information. Giant Cement must document compliance with this DRE standard only once provided that it does not modify the New Kiln System after the DRE performance test in a manner that could affect its ability to achieve the standard. Giant Cement may use any DRE performance test data that shows the New Kiln System achieves the required level of DRE provided that Giant Cement has not modified the New Kiln System's design or operation in a manner that could effect its ability to achieve the DRE standard since the DRE performance test was performed and the DRE performance test data meet quality assurance objectives determined on a site-specific basis. Since Giant Cement may feed hazardous waste at a location in the New Kiln System's combustion system other than the normal flame zone, then it shall demonstrate compliance with the DRE standard during each Comprehensive Performance Test. Since Giant Cement will not have previous DRE performance test data for the New Kiln System to document conformance with the DRE standard then it must perform DRE testing during the initial Comprehensive Performance Test. (m)(1) DRE = [1-(Wout / Win)] x 100% Win = mass feedrate of POHC in a waste feedstream Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT)	
Condition Number	**Condition**
5.E.19(n)	New Kiln CO and Hydrocarbon Emission Standards for Feeding Hazardous Waste at Other Locations (40CFR63.1206(b)(13)(i)(B)) Giant Cement shall not discharge or cause combustion gases to be emitted into the atmosphere that contain either Hydrocarbons in the Main Stack in excess of 20 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2 and reported as propane or Hydrocarbons both in the by-pass duct and at a preheater tower combustion gas monitoring location in excess of 10 ppmv, at each location, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2 and reported as propane. If the only firing location of hazardous waste upstream (in terms of gas flow) of the point where combustion gases are diverted into the bypass duct is at the Kiln end where products are normally discharged, then both Hydrocarbons at the preheater tower combustion gas monitoring location must not exceed 10 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2, reported as propane and either Hydrocarbons in the by-pass duct must not exceed 10 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2, reported as propane or Carbon Monoxide must not exceed 100 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, and corrected to 7% O_2. If Giant Cement complies with the Carbon Monoxide standard of 100 ppmv in the by-pass duct, then it must also not discharge or cause combustion gases to be emitted into the atmosphere that contain Hydrocarbons in the by-pass duct in excess of 10 ppmv, over an hourly rolling average (monitored continuously with a CEMS), dry basis, corrected to 7% O_2, reported as propane, at any time during the DRE performance test runs or their equivalent.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-05 CLINKER HANDLING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.20(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from the No.4 FM bin, No.5 FM bin, Storage Silo K-37, Storage Silo K-38, Storage Tower K-49, No.6 FM bin F-620, No.7 FM bin FG-71, Hopper 471-VF-08, Hopper 513-CV-11 and Clinker Silo 513-SI-10 shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.
5.E.20(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from each transfer point of Drag Conveyor K-9, Drag Conveyor K-10, Belt Conveyor K-11, Elevator K-66, Feeder F-501, Feeder F-502, Feeder F-503, Feeder F-504, Feeder F-506, Conveyor F-528, A-Belt Conveyor, Elevators No.5, Elevator No.6, Conveyor K-58, Elevator No.9, Drag Conveyor K-78, Conveyor K-79, Conveyor 471-DB-01, Conveyor 471-DB-03, Conveyor 471-BC-09, Conveyor 471-BC-05 and Conveyor 513-BC-13 shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-06 DUST HANDLING AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.21(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from the Kiln 4/5 Dust Bin, Finish Mill No.7 Fringe Bin and Pugmill shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.
5.E.21(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from each transfer point of the Finish Mill No.6 Feeder and Finish Mill No.7 Feeder shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-07 GYPSUM PROCESSING EQUIPMENT)	
Condition Number	**Condition**
5.E.22(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from the Gypsum Hopper FG-761, Conveyor/Hopper G-53, Gypsum Hopper F-621, Gypsum Bin FG-75, Gypsum Bin 513-BN-06, Limestone Bin 513-BN-03, and the Dump Hopper 513-DH-01 shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-07 GYPSUM PROCESSING EQUIPMENT)	
Condition Number	**Condition**
5.E.22(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from each transfer point of Conveyor FG-760, Screw Feeder FG-761A, Drag Conveyor FG-762, Conveyor 513-WF-02, Conveyor 513-WF-05, Conveyor 513-WF-08, Conveyor 513-BC-09, Conveyor 513-BC-01 and Conveyor 513-SC-01 shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-08 CLINKER FINISH MILL EQUIPMENT)	
Condition Number	**Condition**
5.E.23(a)	(40CFR63.6(h), 40CFR63.1347 and 40CFR63.1348) After plant modifications are complete, visible emissions discharged from the mill sweep or air separator air pollution control device of Air Separator F-512, Finish Mill No.6 (F-604), Air Separator F-608, Finish Mill No.7 (FG-714), Air Separator FG-732, Finish Mill 533-BM-06 and the High Efficiency Separator 533-SR-13 shall not exhibit an opacity that exceeds10% as determined by 40CFR60 Appendix A Method 9. Visible emissions from Air Slide F-519, Spill Bin F-524, Cement Cooler FG-656, and Cement Cooler FG-726 shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.
5.E.23(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from each transfer point of Conveyor F-601 Conveyor F-602, Drag Conveyor F-603, Conveyor FG-73, Conveyor FG-73A, Gypsum Weigh Feeder FG-77, Gypsum Spill Screw FG-77A, Drag Conveyor FG-79, Air Gravity Conveyor 533-AS-14, Air Gravity Conveyor 533-AS-10, Air Gravity Conveyor 533-AS-20, Air Gravity Conveyor 533-AS-25 and Bucket Elevator 533-BE-11 shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-09 CEMENT STORAGE AND BULK LOADING EQUIPMENT)	
Condition Number	**Condition**
5.E.24(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from Silo Bank No.1, Silo Bank No.2, Silo Bank No.3, Railcar Bulk Loading and Truck Bulk Loading shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-09 CEMENT STORAGE AND BULK LOADING EQUIPMENT)	
Condition Number	**Condition**
5.E.24(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from Air Gravity Conveyor 543-AS-01, Air Gravity Conveyor 543-AS-02, Air Gravity Conveyor 543-AS-03, Air Gravity Conveyor 543-AS-04, Air Gravity Conveyor 543-AS-05, Air Gravity Conveyor 543-AS-06, Air Gravity Conveyor 543-AS-07, and Bucket Elevator 543-BE-70 shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-10 CEMENT PACKING EQUIPMENT)	
Condition Number	**Condition**
5.E.25(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from the 12-Spout Packing Machine shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. This visible emission standard applies at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-11 STEAM BOILER)	
Condition Number	**Condition**
5.E.26(a)	(SC Regulation 62.5 Standard 1 Section I, Section II and Section III) Visible emissions from the Steam Boiler shall not exhibit an opacity that exceeds 20%. The Boiler shall also be operated such that particulate matter emissions do not exceed 0.6 lb/10^6 Btu and sulfur dioxide emissions do not exceed 3.5 lb/10^6 Btu.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-12 NEW MATERIAL TRANSFER AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.27(a)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from Storage Bin 311-BN-01, Storage Bin 311-BN-02, Storage Bin 311-BN-03, Hopper 311-CV-26, Dust Bin 351-BN-70, Raw Meal Silos (Nos. 1 to 6), Interstice Silos (Nos. 7 and 8), Storage Bin 351-BN-12, Weigh Bin 235-BN-35, Screw Pump Hopper 245-SP-45, Aeropol, and Fly Ash Silo 235-BN-30 shall each not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

FUTURE EMISSION LIMITS AND STANDARDS (FUTURE UNIT ID F-12 NEW MATERIAL TRANSFER AND STORAGE EQUIPMENT)	
Condition Number	**Condition**
5.E.27(b)	(40CFR63.6(h) and 40CFR63.1348) After plant modifications are complete, visible emissions from each transfer point Conveyor 311-WF-06, Conveyor 311-WF-08, Conveyor 311-WF-10, Conveyor 311-BC-13, Conveyor 311-BC-14, Conveyor 311-BC-27, Conveyor 311-BC-28, Conveyor 311-CV-30, Air Gravity Conveyor 341-AS-01, Air Gravity Conveyor 341-AS-02, Bucket Elevator 351-BE-76, Screw Conveyor 331-SC-22, Screw Conveyor 351-SC-31, Bucket Elevator 341-BE-05, Air Gravity Conveyor 341-AS-07, Air Gravity Conveyor 341-AS-07AS3, Air Gravity Conveyor 341-AS-07AS4, Air Gravity Conveyor 341-AS-16AS1, Air Gravity Conveyor 341-AS-16AS2, Air Gravity Conveyor 351-AS-01, Bucket Elevator 351-BE-10, Screw Conveyor 351-SC-75, Air Gravity Conveyor 351-AS-11, Air Gravity Conveyor 351-AS-14, and Air Gravity Conveyor 613-AS-03 shall not exhibit an opacity that exceeds 10% as determined by 40CFR60 Appendix A Method 9. These visible emission standards apply at all times except during periods of startup, shutdown and malfunction.

PART 6.0 MONITORING AND REPORTING REQUIREMENTS

[SC Regulation 61-62.1, Section II]; [SC Regulation 61-62.70.6(a)(3)(i)(B)]

A. MONITORING AND REPORTING

Tables 6.1 through 6.49 contain summaries of the monitoring and reporting required of this facility.

TABLE 6.1 MONITORING AND REPORTING (FACILITY OPERATING RECORD REQUIREMENTS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-05	F-04	40CFR63 Subpart EEE Facility Operating Record Requirements	N/A	See Condition	N/A	N/A	6.B.1(a)

TABLE 6.2 MONITORING AND REPORTING (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-05	F-04	40CFR63 Subpart EEE SSM Plan Requirements	N/A	See Condition	N/A	N/A	6.B.2(a)

TABLE 6.3 MONITORING AND REPORTING (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-04 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-05 F-06 F-07 F-08 F-09 F-10 F-12	40CFR63 Subpart DD and 40CFR63 Subpart LLL SSM Plan Requirements	N/A	See Condition	N/A	N/A	6.B.2(b)
C-05	F-04	Development and Department Approval of 40CFR63 Subpart EEE SSM Plan	N/A	Submit Plan for Approval	N/A	N/A	6.B.2(c)
C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Operation and Maintenance of Sources Subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE and 40CFR63 Subpart LLL During SSM	N/A	See Condition	See Condition	See Condition	6.B.2(d)
C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Records of Corrective Actions Taken During Periods of SSM When Such Actions Are Consistent with the Procedures Specified in an Affected Source's SSM Plan	N/A	Recordkeeping	N/A	N/A	6.B.2(e)

TABLE 6.4 MONITORING AND REPORTING (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Records of Corrective Actions Taken During Periods of SSM when Such Actions are Not Consistent with the Procedures Specified in an Affected Source's SSM Plan	N/A	Recordkeeping	N/A	N/A	6.B.2(f)
C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Records of the SSM Plan(s) Required by 40CFR63 Subpart DD and 40CFR63 Subpart LLL	N/A	Recordkeeping	N/A	N/A	6.B.2(g)
C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Revisions to a SSM Plan	N/A	See Condition	N/A	N/A	6.B.2(h)
C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	SSM Records for Process Equipment	N/A	Recordkeeping	N/A	N/A	6.B.2(i)

TABLE 6.5 MONITORING AND REPORTING (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Immediate SSM Reports	N/A	Submit Report	N/A	See Condition	6.B.2(j)
C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Periodic SSM Reports	N/A	Submit Report	N/A	See Condition	6.B.2(k)
C-05	F-04	Kiln Operations Under The 40CFR63 Startup, Shutdown and Malfunction Plan	N/A	See Condition	N/A	N/A	6.B.2(l)
C-05	F-04	Compliance With AWFCO Requirements When Burning Hazardous Waste During Startups and Shutdowns	N/A	See Condition	N/A	N/A	6.B.2(m)
C-05	F-04	Excessive Exceedances During Kiln Malfunctions	N/A	See Condition	See Condition	See Condition	6.B.2(n)

TABLE 6.6 MONITORING AND REPORTING (CONTINUOUS MONITORING SYSTEMS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	CMS Requirements for Combining of Effluents	N/A	See Condition	N/A	N/A	6.B.3(a)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Reporting Requirements for Multiple CMS	N/A	See Condition	N/A	See Condition	6.B.3(b)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	CMS Operation and Maintenance	N/A	See Condition	N/A	N/A	6.B.3(c)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	CMS Installation	N/A	See Condition	N/A	N/A	6.B.3(d)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Minimum Procedures for COMS	N/A	See Condition	N/A	N/A	6.B.3(e)
K-250 K-350 K-270 K-370	321-RM-11 321-SR-12 421 431 441-CC-01	Records of CMS Zero (Low-Level) and High-Level Calibration Drifts for CMS except CPMS	N/A	See Condition	Daily	N/A	6.B.3(f)
K-250 K-350	321 421 431 441-CC-01	CPMS System Response Checks	N/A	See Condition	Daily	N/A	6.B.3(g)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of All CMS Calibration Checks	N/A	Recordkeeping	N/A	N/A	6.B.3(h)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of All Adjustments and Maintenance Performed on CMS	N/A	Recordkeeping	N/A	N/A	6.B.3(i)

TABLE 6.7 MONITORING AND REPORTING (CONTINUOUS MONITORING SYSTEMS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	CMS Quality Control Program	N/A	See Condition	N/A	N/A	6.B.3(j)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of CMS Malfunction or Inoperative Periods	N/A	Recordkeeping	N/A	N/A	6.B.3(k)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Out of Control CMS	N/A	See Condition	N/A	N/A	6.B.3(l)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of All Required CMS Measurements	N/A	Recordkeeping	N/A	N/A	6.B.3(m)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of the Date and Time that Identify Inoperative CMS Periods	N/A	Recordkeeping	N/A	N/A	6.B.3(n)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of the Date and Time that Identify Out of Control CMS Periods	N/A	Recordkeeping	N/A	N/A	6.B.3(o)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of Total Process Operating Time During the Reporting Period	N/A	Recordkeeping	N/A	N/A	6.B.3(p)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of the Specific Identification of Each Period of Excess Emissions and Parameter Monitoring Exceedances	N/A	Recordkeeping	N/A	N/A	6.B.3(q)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of CMS Malfunctions, Corrective Actions and Repairs	N/A	Recordkeeping	N/A	N/A	6.B.3(r)

TABLE 6.8 MONITORING AND REPORTING (CONTINUOUS MONITORING SYSTEMS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Emission Data Units of Measurement	N/A	See Condition	N/A	N/A	6.B.3(s)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Use of Monitoring Data Recorded During Periods of Unavoidable CMS Breakdowns, Out-of-Control Periods, Repairs, Maintenance Periods, Calibration Checks and Zero (Low-Level) and High-Level Adjustments	N/A	See Condition	N/A	N/A	6.B.3(t)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of All CMS Measurements Needed to Demonstrate Compliance With a Relevant Standard	N/A	Recordkeeping	N/A	N/A	6.B.3(u)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Reduction of COMS and CEMS Data	N/A	See Condition	N/A	N/A	6.B.3(v)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Recording of CMS Data	N/A	See Condition	N/A	N/A	6.B.3(w)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Content and Submittal Dates for Excess Emissions and CMS Performance Reports	N/A	See Condition	N/A	See Condition	6.B.3(x)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Records of Procedures that are Part of a CMS Quality Control Program	N/A	Recordkeeping	N/A	N/A	6.B.3(y)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Summary Report Content Requirements	N/A	See Condition	N/A	N/A	6.B.3(z)

TABLE 6.9 MONITORING AND REPORTING (CONTINUOUS MONITORING SYSTEMS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Submission of Only the Summary Report	N/A	See Condition	N/A	N/A	6.B.3(aa)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Reduction in the Frequency of Submitting Excess Emissions and CMS Performance and/or Summary Reports	N/A	See Condition	N/A	N/A	6.B.3(bb)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Submission of Both the Summary Report and the Excess Emissions and CMS Performance Report	N/A	See Condition	N/A	N/A	6.B.33(cc)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Excess Emissions and CMS Performance Reports and/or Summary Reports	N/A	Submit Reports	N/A	See Condition	6.B.3(dd)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Resumption of the Normal Frequency of Submitting Excess Emissions and CMS Performance and/or Summary Reports	N/A	See Condition	N/A	N/A	6.B.3(ee)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Request to Reduce Frequency of Excess Emissions and CMS Performance Reports	N/A	See Condition	N/A	N/A	6.B.3(ff)

TABLE 6.10 MONITORING AND REPORTING (AIR POLLUTION CONTROL EQUIPMENT)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Air Pollution Control and Monitoring Equipment Maintenance Records	N/A	Recordkeeping	N/A	N/A	6.B.4(a)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Operation and Maintenance of Air Pollution Control Equipment	N/A	See Condition	See Condition	N/A	6.B.4(b)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Records of the Occurrence and Duration of Air Pollution Control and Monitoring Equipment	N/A	Recordkeeping	N/A	N/A	6.B.4(c)

TABLE 6.11 MONITORING AND REPORTING (REGULATION APPLICABILITY DETERMINATIONS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-01 C-02 C-03 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-01 F-02 F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Recordkeeping Requirement for Regulation Applicability Determinations	N/A	Recordkeeping	N/A	N/A	6.B.5(a)

TABLE 6.12 MONITORING AND REPORTING (CMS PERFORMANCE EVALUATIONS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	CMS Performance Evaluations	N/A	Conduct Performance Evaluations	N/A	N/A	6.B.6(a)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Notification of CMS Performance Evaluations	N/A	Submit Notifications	N/A	N/A	6.B.6(b)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Content of CMS Performance Evaluation Test Plan	N/A	Develop Evaluation Test Plan	N/A	N/A	6.B.6(c)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Submission of CMS Performance Evaluation Test Plan	N/A	Submit Evaluation Test Plan	N/A	N/A	6.B.6(d)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Department Approval of the CMS Performance Evaluation Test Plan	N/A	See Condition	N/A	N/A	6.B.6(e)

TABLE 6.13 MONITORING AND REPORTING (CMS PERFORMANCE EVALUATIONS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Department Failure to Approve or Disapprove a CMS Performance Evaluation Plan	N/A	See Condition	N/A	N/A	6.B.6(f)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Conduct of CMS Performance Evaluations and CMS Performance Evaluation Dates	N/A	See Condition	N/A	N/A	6.B.6(g)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Reporting of CMS Performance Evaluation Results	N/A	Submit Report	N/A	N/A	6.B.6(h)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Alternative to the CEMS Relative Accuracy Test	N/A	See Condition	N/A	N/A	6.B.6(i)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Department Rescission of Approval to use the Alternative to the CEMS Relative Accuracy Test	N/A	See Condition	N/A	N/A	6.B.8(j)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Content of Petition to use the Alternative to the CEMS Relative Accuracy Test	N/A	See Condition	N/A	N/A	6.B.6(k)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Stack Sampling Team and PM CEMS Correlation Tests	N/A	See Condition	N/A	N/A	6.B.6(l)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	PM CEMS Correlation Tests	N/A	See Condition	See Condition	N/A	6.B.6(m)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Department Approval or Disapproval of the PM CEMS Test Plan	N/A	See Condition	N/A	See Condition	6.B.6(n)
K-250 K-350 K-270 K-370	321 421 431 441-CC-01	Public Notice of Comprehensive and Confirmatory CMS Performance Evaluation Test Plans	N/A	See Condition	N/A	See Condition	6.B.6(o)

TABLE 6.14 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Initial Comprehensive Performance Test	N/A	Conduct Performance Test	See Condition	N/A	6.B.7(a)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Comprehensive Performance Test Frequency	N/A	See Condition	See Condition	N/A	6.B.7(b)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Completion of Comprehensive and Confirmatory Testing after Commencing Actual Testing	N/A	See Condition	N/A	N/A	6.B.7(c)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Confirmatory Performance Tests	N/A	Conduct Performance Test	See Condition	N/A	6.B.7(d)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Notification of PPT	N/A	See Condition	N/A	See Condition	6.B.7(e)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	PPT Plan Submissions	N/A	Submit Performance Test Plans	N/A	See Condition	6.B.7(f)

TABLE 6.15 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Comprehensive and Confirmatory Performance Test Plan Public Notice	N/A	See Condition	N/A	N/A	6.B.7(g)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Petitions for Time Extension if the Department Fails to Approve or Deny Comprehensive or Confirmatory Test Plans	N/A	See Condition	N/A	N/A	6.B.7(h)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans	N/A	See Condition	N/A	N/A	6.B.7(i)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Required Content of Confirmatory Performance Test Plan	N/A	See Condition	N/A	N/A	6.B.7(j)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Conduct of Comprehensive Confirmatory and Other Pollutant Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(k)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Kiln Chlorine Feedrate During Comprehensive Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(l)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	PMCD Cleaning Cycle During Comprehensive Performance Testing	N/A	See Condition	N/A	N/A	6.B.7(m)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Modes of Kiln Operation During Comprehensive Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(n)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Kiln Steady-State Conditions During Comprehensive Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(o)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Kiln CO (or Hydrocarbon) CEMS Emissions Levels During Confirmatory Tests	N/A	See Condition	N/A	N/A	6.B.7(p)

TABLE 6.16 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Operating Limits Established to Maintain Compliance With the Kiln Dioxin/Furan Emission Limit During Confirmatory Tests	N/A	See Condition	N/A	N/A	6.B.7(q)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Kiln Chlorine Feedrates During Confirmatory Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(r)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Alternative Kiln Operation During Confirmatory Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(s)
(K-250) (K-350)	(321-RM-11) (321-SR-12) (421) (431) (441-CC-01)	Kiln Operating Conditions During Subsequent Comprehensive Performance Testing	N/A	See Condition	N/A	N/A	6.B.7(t)
(K-250) (K-350)	(321-RM-11) (321-SR-12) (421) (431) (441-CC-01)	Time Extension for Subsequent Comprehensive and Confirmatory Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(u)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Failure of Comprehensive Performance Test	N/A	See Condition	N/A	N/A	6.B.7(v)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Failure of Confirmatory Performance Test	N/A	See Condition	N/A	N/A	6.B.7(w)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Waiver a of PPT	N/A	See Condition	N/A	N/A	6.B.7(x)

TABLE 6.17 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Failure of Other Pollutant Performance Tests	N/A	See Condition	N/A	N/A	6.B.7(y)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Determination of the Mercury, Semivolatile Metals, Low Volatile Metals or Total Chlorine or Chloride Feedrates for a Waiver of Performance Test	N/A	See Condition	N/A	N/A	6.B.7(z)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Request to Waive PPT	N/A	See Condition	N/A	N/A	6.B.7(aa)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Department Approval of the Request to Waive a PPT	N/A	See Condition	N/A	N/A	6.B.7(bb)

TABLE 6.18 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Final Written Reporting of PPT Results	N/A	See Condition	N/A	N/A	6.B.7(cc)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	PPT Method Audit Program	N/A	See Condition	N/A	N/A	6.B.7(dd)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	PPT Testing Facilities	N/A	See Condition	N/A	N/A	6.B.7(ee)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Reduction of COMS Data During a PPT	N/A	See Condition	N/A	N/A	6.B.7(ff)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Proper Operation of COMS During PPT	N/A	See Condition	N/A	N/A	6.B.7(gg)

TABLE 6.19 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Conduct of PPT and Reduction of Data	N/A	See Condition	N/A	N/A	6.B.7(hh)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Statement in Comprehensive Test Plan of Intentions to Comply with the Provisions for a Waiver of a PPT	N/A	See Condition	N/A	N/A	6.B.7(ii)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Use of COMS Data in Lieu of 40CFR60 Appendix A Method 9 Observations During a PPT	N/A	See Condition	N/A	N/A	6.B.7(jj)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Calculation of Hazardous Waste Residence Time	N/A	See Condition	N/A	N/A	6.B.7(kk)
C-02 C-04 C-06 C-05 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-03 F-04 F-05 F-06 F-07 F-08 F-09 F-10 F-12	Additional PPT	N/A	See Condition	N/A	N/A	6.B.7(ll)

TABLE 6.20 MONITORING AND REPORTING (POLLUTANT PERFORMANCE TESTING)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Required Number of Comprehensive, Confirmatory and Other PPT Runs	N/A	See Condition	N/A	N/A	6.B.7(mm)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Demonstration of Benzene-Containing Waste Treatment Process Performance	N/A	See Condition	N/A	N/A	6.B.7(nn)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Benzene-Containing Waste Treatment Process Performance Certifications	N/A	See Condition	N/A	N/A	6.B.7(oo)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Records of Benzene-Containing Waste Treatment Process Performance Demonstrations	N/A	See Condition	N/A	N/A	6.B.7(pp)
(K-270) (K-370)	N/A	PPT for Clinker Cooler PM Emissions	N/A	Conduct Performance Test	See Condition	See Condition	6.B.7(qq)
(K-250) (K-350)	N/A	Data in Lieu of Conducting the Initial Comprehensive Performance Test	N/A	See Condition	N/A	See Condition	6.B.7(rr)
C-02, C-04 C-06, C-07 C-08, C-09 C-10, C-11 C-12, C-14 C-15	F-03, F-05 F-06, F-07 F-08, F-09 F-10, F-12	Initial Pollutant Performance Test for Visible Emissions from Sources Subject to 40CFR63.1348	N/A	Conduct Performance Test	See Condition	See Condition	6.B.7(ss)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Pollutant Performance Test for Kiln NO_x Emissions	N/A	Conduct Performance Test	See Condition	See Condition	6.B.7(tt)

TABLE 6.21 MONITORING AND REPORTING (PERIODIC VISIBLE EMISSIONS MONITORING OF SOURCES SUBJECT TO 40CFR63.1348)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-05 F-06 F-07 F-08 F-09 F-10 F-12	Visible Emissions Monitoring of the Sources Subject to 40CFR63.1348 After Initial Visible Emissions Test has been Completed	N/A	See Condition	See Condition	N/A	6.B.8(a)
C-10	F-05 F-06 F-07 F-08 F-09 F-10 F-12	Visible Emissions Monitoring of a Finish Mill's Sweep and Air Separator PMCD After the Initial Visible Emissions Test has been Completed	N/A	See Condition	See Condition	N/A	6.B.8(b)

TABLE 6.22 MONITORING AND REPORTING (NOTIFICATION AND DOCUMENTATION OF COMPLIANCE)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Submittal of Notification of Compliance After Completion of Comprehensive Performance Test	N/A	See Condition	N/A	See Condition	6.B.9(a)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Submittal of Notification of Compliance After Completion of Confirmatory Test	N/A	See Condition	N/A	See Condition	6.B.9(b)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Notification of Compliance Status Content Requirements	N/A	See Condition	N/A	See Condition	6.B.9(c)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Failure to Submit a Timely Notification of Compliance	N/A	See Condition	N/A	N/A	6.B.9(d)

TABLE 6.23 MONITORING AND REPORTING (NOTIFICATION AND DOCUMENTATION OF COMPLIANCE)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Interim Burning of Hazardous Waste Prior to Submitting a Notification of Compliance	N/A	See Condition	N/A	N/A	6.B.9(e)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	40CFR63 Subpart EEE Documentation of Compliance	N/A	See Condition	N/A	N/A	6.B.9(f)

TABLE 6.24 MONITORING AND REPORTING (OPERATION, MAINTENANCE AND COMPLIANCE)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-02 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-14 C-15	F-05 F-06 F-07 F-08 F-09 F-10 F-12	40CFR63 Subpart LLL Operation and Maintenance Plan	N/A	See Condition	N/A	N/A	6.B.10(a)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	40CFR63 Subpart EEE Operation and Maintenance Plan	N/A	See Condition	N/A	N/A	6.B.10(b)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Changes in The Design, Operation, or Maintenance of a Kiln that May Adversely Affect Compliance With Any 40CFR63 Subpart EEE Emission Standard that is not Monitored With a CEMS	N/A	See Condition	N/A	N/A	6.B.10(c)

TABLE 6.25 MONITORING AND REPORTING (OPERATION, MAINTENANCE AND COMPLIANCE)							
Current Unit ID (Current Giant ID)	**Future Unit ID (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Changes in The Design, Operation, or Maintenance of a Kiln that Will Not Affect Compliance With Any 40CFR63 Subpart EEE Emission Standard that is not Monitored With a CEMS	N/A	See Condition	N/A	N/A	6.B.10(d)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	40CFR63 Subpart EEE Kiln Operating Requirements	N/A	See Condition	N/A	N/A	6.B.10(e)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Alternative Operation of the Kilns According to 40CFR63 Subpart LLL or Other Requirements	N/A	See Condition	N/A	N/A	6.B.10(f)

TABLE 6.26 MONITORING AND REPORTING (CURRENT UNIT ID C-01 AND FUTURE UNIT ID F-01 QUARRY/MARL HANDLING EQUIPMENT)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
See Condition	See Condition	Conveying Saturated and Unsaturated Materials on the Quarry Conveyor Belts	N/A	See Condition	N/A	See Condition	6.B.11(a)
All Quarry Equip.	All Quarry Equip.	Physical or Operational Change in Quarry Operations	N/A	Submit Notification	N/A	See Condition	6.B.11(b)
All Quarry Equip.	All Quarry Equip.	Quarry Equipment Replacement	N/A	See Condition	N/A	See Condition	6.B.11(c)
See Condition	See Condition	Visible Emission Monitoring of Quarry Equipment Processing Unsaturated Materials	N/A	Conduct Visual Observations	Weekly	N/A	6.B.11(d)
See Condition	See Condition	Quarry Equipment Inspections of Quarry Equipment Processing Unsaturated Materials	N/A	Conduct Inspections and Maintenance	Weekly	N/A	6.B.11(e)

TABLE 6.27 MONITORING AND REPORTING (CURRENT UNIT C-13 AND FUTURE UNIT ID F-11STEAM BOILER)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-655	K-655	Permitted Steam Boiler Fuels	See Condition	Recordkeeping	See Condition	N/A	6.B.12(a)

TABLE 6.28 MONITORING AND REPORTING (CURRENT UNIT ID C-03 AND FUTURE UNIT ID F-02) (COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
See Condition	See Condition	Visible Emission Monitoring of Uncontrolled Coal/Coke Crushing and Processing Equipment	N/A	Conduct Visual Observations	Weekly	N/A	6.B.13(a)
N/A	461-AH-01	Coal Mill Heater Exhaust Gas Temperature Monitoring	N/A	CMS	Continuous	N/A	6.B.13(b)

TABLE 6.29 MONITORING AND REPORTING CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Transfer of Benzene-Containing Wastes into Containers by Pumping	N/A	See Condition	N/A	N/A	6.B.14(a)
C-04	F-03	Inspection of Benzene-Containing Waste Containers	N/A	Conduct Visual Inspections	See Condition	N/A	6.B.14(b)
C-04	F-03	Air Pollution Controls for Containers Storing Benzene-Containing Wastes	N/A	See Condition	N/A	N/A	6.B.14(c)
C-04	F-03	Inspection Requirements for Containers Using Level 3 Container Air Pollution Controls	N/A	See Condition	N/a	N/A	6.B.14(d)
C-04	F-03	Required Air Pollution Controls for Containers Having a Design Capacity greater than 0.46 m^3 (121.51 gallons) and in Light-Material Service	N/A	See Condition	N/A	N/A	6.B.14(e)
C-04	F-03	Standards for Level 1 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(f)
C-04	F-03	Transfer of Regulated Material into or out of a Container Using Level 2 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(g)
C-04	F-03	Standards for Level 2 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(h)

TABLE 6.30 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Required Air Pollution Controls For Containers Having a Design Capacity greater than 0.1 m^3 (26.41 gallons) and less than or equal to 0.46 m^3 (121.51 gallons)	N/A	See Condition	N/A	N/A	6.B.14(i)
C-04	F-03	Opening of a Closure Device or Cover for the Purpose of Adding Material to a Container Using Level 1 or Level 2 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(j)
C-04	F-03	Standards for Level 3 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(k)
C-04	F-03	Opening of a Closure Device or Cover for the Purpose of Removing Material From a Container Using Level 1 or Level 2 Container Air Pollution Controls	N/A	See Condition	N/A	N/A	6.B.14(l)
C-04	F-03	Inspection Requirements for Containers using Level 1 or Level 2 Container Air Pollution Controls when a Regulated-Material is already in the Container at the time that Giant Cement first Accepts Possession of the Container and the Container is not Empty	N/A	See Condition	N/A	N/A	6.B.14(m)
C-04	F-03	Other Allowable Openings of a Closure Device, Cover or Spring-Loaded Pressure-Vacuum Relief Valve, Conservation Vent, or Similar Type of Pressure Relief Device Which Vents to the Atmosphere	N/A	See Condition	N/A	N/A	6.B.14(n)
C-04	F-03	Required Air Pollution Controls for Containers Having a Design Capacity greater than 0.46 m^3 (121.51 gallons) and not in Light-Material Service	N/A	See Condition	N/A	N/A	6.B.14(o)
C-04	F-03	Inspection Requirements for Containers Using Container Level 1 or Level 2 Air Pollution Controls Fully or Partially Filled With Regulated-Materials And Remain Unopened On-Site For a Calendar Period of One Year or More	N/A	See Condition	N/A	N/A	6.B.14(p)

TABLE 6.31 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (LIQUID WASTE FUEL STORAGE TANKS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Records of Liquid Waste Fuel Storage Tank Dimensions and Capacity	N/A	Recordkeeping	N/A	N/A	6.B.15(a)
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Liquid Waste Fuel Storage Tank Inspections	N/A	Conduct Visual Inspections	See Condition	N/A	6.B.15(b)
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Repair of Liquid Waste Fuel Storage Tank Defects	N/A	See Condition	N/A	N/A	6.B.15(c)
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Records of Liquid Waste Fuel Storage Tank Inspections	N/A	Recordkeeping	N/A	N/A	6.B.15(d)
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Liquid Waste Fuel Storage Tank Design Requirements	N/A	See Condition	N/A	N/A	6.B.15(e)
K-666 K-801 K-802 K-803	K-666 K-801 K-802 K-803	Liquid Waste Fuel Storage Tank Operational Requirements	N/A	See Condition	N/A	N/A	6.B.15(f)

TABLE 6.32 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (WASTE TRANSFER SYSTEMS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Control of Air Emissions from Waste Transfer Systems	N/A	See Condition	N/A	N/A	6.B.16(a)
C-04	F-03	Required Inspections for Waste Transfer Systems Equipped with Covers	N/A	See Condition	See Condition	N/A	6.B.16(b)
C-04	F-03	Requirements for Waste Transfer Systems Equipped with Covers	N/A	See Condition	N/A	N/A	6.B.16(c)

TABLE 6.33 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CLOSED-VENT SYSTEMS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Inspection and Monitoring Requirements for Closed-Vent Systems Designed to Operate at a Pressure below atmospheric pressure	N/A	Conduct Visual Inspections	See Condition	N/A	6.B.17(a)
C-04	F-03	Closed-Vent System Design Requirements	N/A	See Condition	N/A	N/A	6.B.17(b)
C-04	F-03	Inspection and Monitoring Requirements for Closed Vent Systems Designed to Operate with No Detectible Organic Emissions	N/A	Conduct Visual Inspections	See Condition	N/A	6.B.17(c)
C-04	F-03	Records of Closed-Vent System Inspections	N/A	Recordkeeping	N/A	N/A	6.B.17(d)
C-04	F-03	Repair of Closed-Vent System Defects	N/A	See Condition	N/A	N/A	6.B.17(e)
C-04	F-03	Closed-Vent System Bypass Devices	N/A	See Condition	N/A	N/A	6.B.17(f)
C-04	F-03	Closed-Vent System Performance Certifications	N/A	Recordkeeping	N/A	N/A	6.B.17(g)

TABLE 6.34 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (EQUIPMENT LEAKS)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Equipment Leaks	N/A	See Condition	N/A	N/A	6.B.18(a)
C-04	F-03	Affected Source for Equipment Leaks	N/A	See Condition	N/A	N/A	6.B.18(b)

TABLE 6.35 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 STACU	321 421 431 441-CC-01	Establishment of Vapor Incinerator (Kiln) Minimum and/or Maximum Operating Temperature	N/A	See Condition	N/A	N/A	6.B.19(a)
K-250 K-350 STACU	321 421 431 441-CC-01	Vapor Incinerator (Kiln) Continuous Temperature Monitoring	N/A	CMS	Continuous	N/A	6.B.19(b)
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Records of Carbon Adsorption System and Vapor Incinerator (Kiln) Planned Routine Maintenance	N/A	Recordkeeping	N/A	N/A	6.B.19(c)
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Bypassing of all Vapor Incinerators (Kilns) and the Carbon Adsorption System for Performing Routine Maintenance on the Closed-Vent System	N/A	See Condition	N/A	N/A	6.B.19(d)
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Vapor Incinerator (Kiln) Operating Temperature Excursions	N/A	See Condition	N/A	N/A	6.B.19(e)
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Summary Report of All Vapor Incinerator (Kiln) Operating Temperature Excursions	N/A	Submit Report	N/A	Quarterly	6.B.19(f)
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Management of Used Carbon from the Carbon Adsorption System	N/A	See Condition	N/A	N/A	6.B.19(g)

TABLE 6.36 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 STACU	321 421 431 441-CC-01 STACU	Records of Unexpected Carbon Adsorption System and Vapor Incinerator (Kiln) Malfunctions	N/A	Recordkeeping	N/A	N/A	6.B.19(h)
STACU	STACU	Carbon Adsorption System Operating Parameters	N/A	See Condition	N/A	N/A	6.B.19(i)

TABLE 6.37 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (ALTERNATIVE INSPECTION AND MONITORING INTERVAL)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Alternative Inspection and Monitoring Intervals for the Liquid Waste Fuel Storage Tanks, Waste Transfer Systems and the Closed-Vent System	N/A	See Condition	See Condition	N/A	6.B.20(a)

TABLE 6.38 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Calculation of Total Annual Benzene Quantity	N/A	See Condition	N/A	N/A	6.B.21(a)
C-04	F-03	Transfer of Benzene-Containing Wastes and/or Waste Streams for Off-Site Treatment	N/A	See Condition	N/A	N/A	6.B.21(b)
C-04	F-03	Content of Report for Total Annual Benzene Quantity	N/A	See Condition	N/A	N/A	6.B.21(c)
C-04	F-03	Frequency of Reporting for the Total Annual Benzene Quantity less than 1 Mg/yr	N/A	See Condition	N/A	N/A	6.B.21(d)
C-04	F-03	Frequency of Reporting for the Total Annual Benzene Quantity Between 1 Mg/yr and 10 Mg/yr	N/A	See Condition	N/A	N/A	6.B.21(e)

TABLE 6.39 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)							
Current Unit ID (Current Giant ID)	**Future Unit (Future Giant ID)**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Frequency of Reporting for The Total Annual Benzene Quantity Equal to or Greater than 10 Mg/yr (11 tpy)	N/A	See Condition	N/A	N/A	6.B.21(f)
(K-666) (K-801) (K-802) (K-803)	(K-666) (K-801) (K-802) (K-803)	Mixing of Benzene-Containing Waste and/or Waste Streams for Treatment	N/A	See Condition	N/A	N/A	6.B.21(g)
C-04	F-03	Records that Identify Benzene-Containing Wastes and/or Waste Streams	N/A	See Condition	N/A	N/A	6.B.21(h)
C-04	F-03	Records of Benzene-Containing Wastes and/or Waste Streams Exempt from Treatment	N/A	See Condition	N/A	N/A	6.B.21(i)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Measurements of Benzene-Containing Waste and/or Waste Stream Concentration After Treatment	N/A	See Condition	N/A	N/A	6.B.21(j)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Quarterly Report of Benzene-Containing Waste Treatment Process Exit Concentration Exceedances	N/A	Submit Report	N/A	See Condition	6.B.21(k)
(K-666) (K-801) (K-802) (K-803)	(K-666) (K-801) (K-802) (K-803)	Quarterly Certifications of Waste Management Unit and Associated Air Pollution Control Equipment Inspections	N/A	See Condition	N/A	N/A	6.B.21(l)
(K-250) (K-350)	(321) (421) (431) (441-CC-01)	Treatment Requirements for Benzene-Containing Wastes and/or Waste Streams	N/A	See Condition	N/A	N/A	6.B.21(m)
C-04	F-03	Exemption of Benzene-Containing Wastes and/or Waste Streams from Treatment Requirements	N/A	See Condition	N/A	N/A	6.B.21(n)

TABLE 6.40 MONITORING AND REPORTING (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE MATERIALS RECEIVED FROM OFF-SITE)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Waste Materials Received from Off-Site Not Subject To 40CFR63 Subpart DD	N/A	N/A	N/A	N/A	6.B.22(a)
C-04	F-03	Exemption of Certain Off-Site Materials from 40CFR63 Subpart DD	N/A	Recordkeeping	N/A	N/A	6.B.22(b)
C-04	F-03	Waste Materials Received from Off-Site Subject to 40CFR63 Subpart DD	N/A	N/A	N/A	N/A	6.B.22(c)

TABLE 6.41 MONITORING AND REPORTING (UNIT ID 04 WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (EXEMPTION OF OFF-SITE WASTE MATERIAL MANAGEMENT UNITS FROM 40CFR63 SUBPART DD)							
Current Unit ID	**Future Unit ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
C-04	F-03	Exemption of Off-Site Waste Material Management Units from 40CFR63 Subpart DD	N/A	See Condition	N/A	N/A	6.B.23(a)
C-04	F-03	Identification of Designated Exempt Off-Site Waste Material Management Units	N/A	See Condition	N/A	N/A	6.B.23(b)
C-04	F-03	Determination of Total Annual HAP in the Off-Site Waste Material Placed in the Designated Exempt Off-Site Waste Material Management Units	N/A	See Condition	See Condition	N/A	6.B.23(c)
C-04	F-03	Other Exemptions of Off-Site Waste Material Management Units from 40CFR63 Subpart DD	N/A	N/A	N/A	N/A	6.B.23(d)

TABLE 6.42 MONITORING AND REPORTING (UNIT ID 05 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350 K-434 KF-1	321 421 431 441-CC-01	Continuous Monitoring of Kiln PM Emissions	N/A	CPMS	Continuous	N/A	6.B.24(a)
K-250 K-350 K-434 KF-1	321 421 431 441-CC-01	Use of a CEMS to Demonstrate Compliance with the Kiln Carbon Monoxide and Hydrocarbon Emission Limits	N/A	See Condition	Continuous	N/A	6.B.24(b)
K-250 K-350 K-434 KF-1	321 421 431 441-CC-01	Continuous Monitoring of Kiln Visible Emissions	N/A	COMS	Continuous	N/A	6.B.24(c)
K-270 K-370	N/A	Continuous Monitoring of Existing Clinker Cooler Visible Emissions	N/A	COMS	Continuous	N/A	6.B.24(d)
K-250 K-350	321 421 431 441-CC-01	Carbon Monoxide and Hydrocarbon CEMS Performance Specifications	N/A	See Condition	N/A	N/A	6.B.24(e)
K-250 K-350	321 421 431 441-CC-01	Carbon Monoxide Readings Exceeding the Span	N/A	See Condition	N/A	N/A	6.B.24(f)
K-250 K-350	321 421 431 441-CC-01	Petitions to Use CEMS for Other 40CFR63 Subpart EEE Emission Standards	N/A	See Condition	N/A	N/A	6.B.24(g)
K-250 K-350	321 421 431 441-CC-01	Calculation of Initial Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS	N/A	See Condition	N/A	N/A	6.B.24(h)
K-250 K-350	321 421 431 441-CC-01	Hydrocarbon Readings Exceeding the Span	N/A	See Condition	N/A	N/A	6.B.24(i)

TABLE 6.43 MONITORING AND REPORTING (UNIT ID 05 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Monitoring**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Calculation of Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS Upon Intermittent Operations	N/A	See Condition	N/A	N/A	6.B.24(j)
K-250 K-350	321 421 431 441-CC-01	Calculation of Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS When the Hazardous Waste Feed is Cutoff	N/A	See Condition	N/A	N/A	6.B.24(k)
K-250 K-350	321 421 431 441-CC-01	Operating Parameter Limits for Hydrocarbons	N/A	See Condition	N/A	N/A	6.B.24(l)
K-250 K-350	321 421 431 441-CC-01	Other CMS Required by 40CFR63 Subpart EEE	N/A	See Condition	N/A	N/A	6.B.24(m)
K-250 K-350	321 421 431 441-CC-01	Calibration of Thermocouples and Pyrometers Required by 40CFR63 Subpart EEE	N/A	See Condition	N/A	N/A	6.B.24(n)
K-250 K-350	321 421 431 441-CC-01	Detector Span for Other CMS Required by 40CFR63 Subpart EEE	N/A	See Condition	N/A	N/A	6.B.24(o)
K-250 K-350	321 421 431 441-CC-01	Calculation of Rolling Averages for Other CMS Required by 40CFR63 Subpart EEE Upon Intermittent Operations	N/A	See Condition	N/A	N/A	6.B.24(p)
K-250 K-350	321 421 431 441-CC-01	Calculation of Initial Rolling Averages For Other CMS Required by 40CFR63 Subpart EEE	N/A	See Condition	N/A	N/A	6.B.26(q)
K-250 K-350	321 421 431 441-CC-01	Calculation of Rolling Averages for Other CMS Required by 40CFR63 Subpart EEE When the Hazardous Waste Feed is Cutoff	N/A	See Condition	N/A	N/A	6.B.24(r)
K-250 K-350	321 421 431 441-CC-01	Feedstream Analysis Plan	N/A	Develop Plan	N/A	N/A	6.B.24(s)

TABLE 6.44 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Monitoring of Kiln Hazardous Waste Fuel Feedrate Limits	N/A	See Condition	See Condition	N/A	6.B.24(t)
K-250 K-350	321 421 431 441-CC-01	Analysis of Feedstreams	N/A	See Condition	See Condition	N/A	6.B.24(u)
K-250 K-350	321 421 431 441-CC-01	Waiver of Monitoring of Constituents in Certain Feedstreams	N/A	See Condition	N/A	N/A	6.B.24(v)
K-250 K-350	321 421 431 441-CC-01	Operating Parameters Applicable to Multiple Standards	N/A	See Condition	N/A	N/A	6.B.24(w)
K-250 K-350	321 421 431 441-CC-01	Establishing a Limit for the Minimum Combustion Chamber Temperature to Remain in Compliance with the DRE Standard	N/A	See Condition	See Condition	N/A	6.B.24(x)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Remain in Compliance with the DRE Standard	N/A	See Condition	See Condition	N/A	6.B.24(y)
K-250 K-350	321 421 431 441-CC-01	Establishing an Operating Limit for the Maximum Hazardous Waste Feedrate to Remain in Compliance with the DRE Standard	N/A	See Condition	See Condition	N/A	6.B.24(z)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Operation Of Waste Firing System to Remain in Compliance with the DRE Standard	N/A	See Condition	See Condition	N/A	6.B.24(aa)
K-250 K-350	321 421 431 441-CC-01	Establishing a Limit for the Gas Temperature at the Inlet to a Dry PMCD to Comply with the Dioxin/Furan Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(bb)

TABLE 6.45 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Establishing an Operating Limit on the Maximum Flue Gas Flowrate or Production Rate to Comply with the Dioxin/Furan Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(dd)
K-250 K-350	321 421 431 441-CC-01	Establishing Limits for the Maximum Waste Feedrate to Comply with the Dioxin/Furan Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(ee)
K-250 K-350	321 421 431 441-CC-01	Establishing Limits for the Total Mercury Feedrate to Comply with the Mercury Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(ff)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Particulate Matter Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(gg)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Maximum Inlet Temperature to the Dry PMCD to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards	N/A	See Condition	See Condition	N/A	6.B.24(hh)
K-250 K-350	321 421 431 441-CC-01	Establishing Limits for the Maximum Feedrate of Semivolatile and Low Volatile Metals to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards	N/A	See Condition	See Condition	N/A	6.B.24(ii)
K-250 K-350	321 421 431 441-CC-01	Feedrate Extrapolation in Lieu of Establishing Limits for the Maximum Feedrate of Semivolatile and Low Volatile Metals to Comply With the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards	N/A	See Condition	See Condition	N/A	6.B.24(jj)

TABLE 6.46 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Establishing Limits for the Maximum Total Chlorine and Chloride Feedrate to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards	N/A	See Condition	See Condition	N/A	6.B.24(kk)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards	N/A	See Condition	See Condition	N/A	6.B.24(ll)
K-250 K-350	321 421 431 441-CC-01	Establishing Limits for the Feedrate of Total Chlorine and Chloride to Comply with the Hydrochloric Acid and Chlorine Gas Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(mm)
K-250 K-350	321 421 431 441-CC-01	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Hydrochloric Acid and Chlorine Gas Emission Limit	N/A	See Condition	See Condition	N/A	6.B.24(nn)
K-250 K-350	321 421 431 441-CC-01	Monitoring of the Maximum Combustion Chamber Pressure	N/A	See Condition	N/A	N/A	6.B.24(oo)
K-250 K-350	321 421 431 441-CC-01	Operating Under Different Modes of Operation	N/A	See Condition	N/A	N/A	6.B.24(pp)
K-250 K-350	321 421 431 441-CC-01	Retrieval Approach for Calculating Rolling Averages Under Different Modes of Operation	N/A	See Condition	N/A	N/A	6.B.24(qq)
K-250 K-350	321 421 431 441-CC-01	Start Anew Approach for Calculating Rolling Averages Under Different Modes of Operation	N/A	See Condition	N/A	N/A	6.B.24(rr)

TABLE 6.47 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Seamless Transition Approach for Calculating Rolling Averages Under Different Modes of Operation	N/A	See Condition	N/A	N/A	6.B.24(ss)
K-250 K-350	321 421 431 441-CC-01	Kiln Combustion System Leaks	N/A	See Condition	N/A	N/A	6.B.24(tt)
K-250 K-350	321 421 431 441-CC-01	Kiln Operator Training and Certification	N/A	See Condition	N/A	N/A	6.B.24(uu)
K-250 K-350	321 421 431 441-CC-01	Maintenance of Kiln Control Room Operator Qualifications	N/A	See Condition	N/A	N/A	6.B.24(vv)
K-250 K-350	321 421 431 441-CC-01	Kiln Control Room Operator Training	N/A	See Condition	N/A	N/A	6.B.24(ww)
K-250 K-350	321 421 431 441-CC-01	Ducting of Kiln Combustion Gases During AWFCO	N/A	See Condition	N/A	N/A	6.B.24(xx)
K-250 K-350	321 421 431 441-CC-01	Restarting Waste Feed to a Kiln After AWFCO	N/A	See Condition	N/A	N/A	6.B.24(yy)
K-250 K-350	321 421 431 441-CC-01	AWFCO	N/A	See Condition	N/A	N/A	6.B.24(zz)
K-250 K-350	321 421 431 441-CC-01	Failure of the AWFCO	N/A	See Condition	N/A	N/A	6.B.24(aaa)

TABLE 6.48 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
K-250 K-350	321 421 431 441-CC-01	Corrective Measures After AWFCO	N/A	See Condition	N/A	N/A	6.B.24(bbb)
K-250 K-350	321 421 431 441-CC-01	Excessive Exceedance Reporting for AWFCO	N/A	Submit Reports	See Condition	N/A	6.B.24(ccc)
K-250 K-350	321 421 431 441-CC-01	AWFCO Testing	N/A	See Condition	Weekly	N/A	6.B.24(ddd)
K-250 K-350	321 421 431 441-CC-01	Ramping Down the Waste Feed During AWFCO	N/A	See Condition	N/A	N/A	6.B.24(eee)
K-250 K-350	321 421 431 441-CC-01	Permitted Kiln Fuels	N/A	See Condition	N/A	N/A	6.B.24(fff)
K-250 K-350	321 421 431 441-CC-01	Analysis of Kiln Waste Fuels for SC Regulation 62.5 Standard 8 Compounds	N/A	See Condition	N/A	N/A	6.B.24(ggg)
K-250 K-350	N/A	Records of Existing Kiln Slurry Feed Rates and Existing Kiln Clinker Production Rates	N/A	Recordkeeping	N/A	N/A	6.B.24(hhh)
N/A	321 421 431 441-CC-01	Use of COMS to Demonstrate Compliance with the New Kiln System and New Clinker Cooler Visible Emission Limit	N/A	COMS	Continuous	N/A	6.B.24(iii)
N/A	321 421 431 441-CC-01	Emissions Averaging Using a Time-Weighted Average Basis for the New Kiln System	N/A	See Condition	See Condition	N/A	6.B.24(jjj)

TABLE 6.49 MONITORING AND REPORTING (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)							
Current Giant ID	**Future Giant ID**	**Pollutant/Parameter**	**Limit**	**Required Action**	**Monitoring Frequency**	**Reporting Frequency**	**Condition Number**
N/A	321 421 431 441-CC-01	Records of New Kiln System Feed Rates and New Kiln System Clinker Production Rates	N/A	Recordkeeping	See Condition	N/A	6.B.24(kkk)
K-250 K-350	321 421 431 441-CC-01	Compliance With Emissions Averaging Using a Time-Weighted Average Basis	N/A	See Condition	See Condition	N/A	6.B.24(lll)
K-250 K-350	321 421 431 441-CC-01	Department Notification of Compliance With Emission Averaging Using a Time-Weighted Average Basis	N/A	Submit Notification	See Condition	N/A	6.B.24(mmm)
K-250 K-350	321 421 431 441-CC-01	Monitoring of Raw Materials and Adjustments to the New Kiln System's PSD CO and VOC Emission Limits	N/A	See Condition	See Condition	See Condition	6.B.24(nnn)
K-250 K-350	321 421 431 441-CC-01	Total NO_x Emissions Recordkeeping and Reporting	N/A	Recordkeeping	See Condition	See Condition	6.B.24(ooo)
K-250 K-350	321 421 431 441-CC-01	Alternative NO_x Emission Monitoring	N/A	See Condition	See Condition	N/A	6.B.24(ppp)

B. MONITORING AND REPORTING CONDITIONS

MONITORING AND REPORTING CONDITIONS (FACILITY OPERATING RECORD REQUIREMENTS)	
Condition Number	**Condition**
6.B.1(a)	40CFR63 Subpart EEE Facility Operating Record Requirements (SC Regulation 61-62.70.6(a)(9), 40CFR63.1201 and 40CFR63.1211) The Facility Operating Record is defined as a documentation to be retained on-site at Giant Cement for ready inspection by authorized officials of all information required by the relevant standards to document and maintain compliance with the applicable regulations, including data and information, reports, notifications and communications with regulatory officials. By September 30, 2003, for the existing Kilns and no later than 180 calendar days after startup of the New Kiln System, the Facility Operating Record shall contain the information required to document and maintain compliance with the applicable provisions of 40CFR63 Subpart EEE, including data recorded by CMS, copies of all notifications, reports, plans and other documents submitted to the Department. The Facility Operating Record shall include the Documentation of Compliance, documentation of the results of AWFCO operability testing and documentation of the corrective measures for any AWFCO that results in an exceedance of an emission standard or operating parameter limit. It shall also include a copy of the Feedstream Analysis Plan, 40CFR63 Subpart EEE Operation and Maintenance Plan, Operator Training and Certification Program and the 40CFR63 Subpart EEE SSM Plan. The method used for control of combustion system leaks shall also be recorded in the Facility Operating Record. The Facility Operating Record shall be kept on-site and on-file and made available to Department personnel upon request. Giant Cement shall also record in the Facility Operating Record the date on which it begins compliance with each future-effective MACT requirement included in this permit.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(a)	40CFR63 Subpart EEE SSM Plan Requirements (40CFR63.6(e)(3)(i), 40CFR63.6(e)(3)(vi), 40CFR63.1206(c)(2)(i), 40CFR63.1206(c)(2)(ii) and 40CFR63.1206(c)(2)(iii)) Once approved by the Department, Giant Cement shall implement and record in the Facility Operating Record, the written 40CFR63 Subpart EEE Startup, Shutdown and Malfunction Plan. This plan shall describe, in detail, procedures for operating and maintaining each Kiln during periods of startup, shutdown and malfunction. This plan shall also include a program of corrective action for existing Kiln and New Kiln System malfunctions, their associated air pollution control equipment malfunctions and their associated air pollution monitoring equipment malfunctions. This plan shall also identify a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown. If Giant Cement elects to comply with 40CFR270.235(a)(1)(iii), 40CFR270.235(a)(2)(iii) or 40CFR270.235(b)(1)(ii) to address RCRA concerns that it minimize emissions of toxic compounds from startup, shutdown and malfunction events, the Startup, Shutdown, and Malfunction Plan shall include a description of potential causes of malfunctions that may result in significant releases of hazardous air pollutants and the actions that Giant Cement will take to minimize the frequency and severity of those malfunctions.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(b)	40CFR63 Subpart DD and 40CFR63 Subpart LLL SSM Plan Requirements (40CFR63.6(e)(3)(i) and 40CFR63.6(e)(3)(vi)) When a source becomes subject to 40CFR63 Subpart DD or 40CFR63 Subpart LLL, Giant Cement shall develop and implement a written Startup, Shutdown and Malfunction Plan for operating and maintaining the source subject to those subparts during periods of startup, shutdown, and malfunction. The plan shall describe in detail, procedures for operating and maintaining the source during periods of startup, shutdown and malfunction and also include a program of corrective action for malfunctioning process, air pollution control and air pollution monitoring equipment used to comply with the relevant standard. Giant Cement may choose to maintain a separate Startup, Shutdown and Malfunction Plan for each source subject to 40CFR63 Subpart DD or 40CFR63 Subpart LLL or choose to maintain one plan for all sources subject to 40CFR63 Subpart DD or 40CFR63 Subpart LLL. If Giant Cement chooses to maintain one plan, when new sources subject to 40CFR63 Subpart DD or 40CFR63 Subpart LLL are added, it shall revise the plan to include the required information for that source no later than 180 calendar days after placing it in operation. To satisfy the requirements to develop a startup, shutdown, and malfunction plan, Giant Cement may use the affected source's SOP manual, OSHA or other plan, provided the alternative plans meet all the requirements of this condition and are made available for inspection by Department personnel.
6.B.2(c)	Development and Department Approval of the 40CFR63 SSM Plan (40CFR63.1206(c)(2)(ii)(B)) Giant Cement shall develop a 40CFR63 Subpart EEE Startup, Shutdown and Malfunction Plan. This plan shall be submitted to the Department for review and approval no later than 180 calendar days after September 30, 2003, for the existing Kilns. Giant Cement shall develop a new plan or modify the existing plan for the New Kiln System no later than 180 calendar days after startup of the New Kiln System and submit the modified or new plan to the Department for approval. The Department will notify Giant Cement of approval or intention to deny approval a plan within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplemental information that Giant Cement submits. Before disapproving a plan, the Department will notify Giant Cement of its intention to disapprove the plan together with a notice of the information and findings on which intended disapproval is based and a notice of opportunity for Giant Cement to present additional information to the Department before final action on disapproval of a plan. At the time the Department notifies Giant Cement of intention to disapprove a plan, it will specify how much time Giant Cement will have after being notified on the intended disapproval to submit additional information. Giant Cement is responsible for ensuring that it submits any supplementary and additional information supporting its plan in a timely manner to enable the Department to consider whether to approve the plan. Neither Giant Cement's submittal of a plan, nor the Department's failure to approve or disapprove the plan, relieves Giant Cement of the responsibility to comply with the provisions of 40CFR63 Subpart EEE.
6.B.2(d)	Operation and Maintenance of Sources Subject to 40CFR63 Subpart DD , 40CFR63 Subpart EEE and 40CFR63 Subpart LLL During SSM (40CFR63.6(e)(3)(ii)) During periods of startup, shutdown, and malfunction, Giant Cement shall for a source subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE and/or 40CFR63 Subpart LLL, operate and maintain it (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in its Startup, Shutdown and Malfunction Plan.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(e)	Records of Corrective Actions Taken During Periods of SSM When Such Actions Are Consistent with the Procedures Specified in an Affected Source's SSM Plan (40CFR63.6(e)(3)(iii), 40CFR63.10(b)(1) and 40CFR63.10(b)(2)(v))) For process and air pollution control equipment subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL, Giant Cement shall record all information necessary to demonstrate conformance with an affected source's Startup, Shutdown and Malfunction Plan when all actions taken during periods of startup, shutdown and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in the plan. The information needed to demonstrate conformance with the Startup, Shutdown and Malfunction Plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events. These records shall be retained for a calendar period of five(5) years following the date of each occurrence. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.2(f)	Records of Corrective Actions Taken During Periods of SSM when Such Actions are Not Consistent with the Procedures Specified in an Affected Source's SSM Plan (40CFR63.6(e)(3)(iv), 40CFR63.10(b)(1) and 40CFR63.10(b)(2)(iv)) For process and air pollution control equipment subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL, Giant Cement shall record the actions taken during periods of startup, shutdown and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are not consistent with the procedures specified in an affected source's Startup, Shutdown and Malfunction Plan. These records shall be retained for a calendar period of five(5) years following the date of each occurrence. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.2(g)	Records of the SSM Plan(s) Required by 40CFR63 Subpart DD and 40CFR63 Subpart LLL (40CFR63.6(e)(3)(v)) Giant Cement shall maintain the current written Startup, Shutdown and Malfunction Plan(s) on-site and on-file that it developed for sources subject to40CFR63 Subpart DD or 40CFR63 Subpart LLL and make it (them) available for inspection by Department personnel. In addition, if a Startup, Shutdown, and Malfunction Plan is subsequently revised as provided in condition 6.B.1(h), Giant Cement shall maintain on-site and on-file each previous (i.e., superseded) version of that Startup, Shutdown and Malfunction Plan and make each previous version available for inspection by Department personnel for a period of five(5) calendar years after revision of a plan. If at any time after adoption of a Startup, Shutdown and Malfunction Plan an affected source ceases operation or is otherwise no longer subject to the provisions of 40CFR63 Subpart DD or 40CFR63 Subpart LLL, Giant Cement shall retain a copy of the most recent plan on-site and on-file for a period of five(5) calendar years from the date the source ceases operation or is no longer subject to that subpart and make the plan available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(h)	Revisions to a SSM Plan (40CFR63.6(e)(3)(vii) and 40CFR63.6(e)(3)(viii)) The Department may require Giant Cement to make changes to an affected source's Startup, Shutdown and Malfunction Plan. The Department may require reasonable revisions to a Startup, Shutdown and Malfunction Plan for any of the reasons specified by paragraphs (h)(1) through (h)(4) of this condition. Giant Cement may periodically revise a Startup, Shutdown, and Malfunction Plan for an affected source as necessary to satisfy the requirements of 40CFR63 Subpart DD, 40CFR63 Subpart EEE and 40CFR63 Subpart LLL or to reflect changes in equipment or procedures at the affected source. Unless the Department specifies otherwise, Giant Cement may make such revisions to a Startup, Shutdown and Malfunction Plan without prior approval by the Department. However, each such revision to a Startup, Shutdown and Malfunction Plan shall be reported in the semiannual report If a Startup, Shutdown and Malfunction Plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction (as defined in condition 6.B.2(i)) but was not included in the plan at the time that Giant Cement developed the plan, then it shall revise the plan within 45 calendar days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that Giant Cement makes any revision to a Startup, Shutdown and Malfunction Plan which alters the scope of the activities at a source which are deemed to be a startup, shutdown, malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in an applicable standard, the revised plan shall not take effect until after Giant Cement has provided a written notice describing the revision to the Department. (h)(1) A plan does not address a startup, shutdown, or malfunction event that has occurred. (h)(2) A plan fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards. (h)(3) A plan does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable. (h)(4) A plan includes an event that does not meet the definition of a startup, shutdown or malfunction as defined in condition 6.B.2(i).
6.B.2(i)	SSM Records for Process Equipment (40CFR60.7(b), 40CFR63.2, 40CFR63.10(b)(1) and 40CFR63.10(b)(2)(i)) (40CFR60.7(b), 40CFR63.2, 40CFR63.10(b)(1) and 40CFR63.10(b)(2)(i)) For sources subject to 40CFR 60, a startup is defined as the setting in operation of an affected facility for any purpose and a shutdown is defined as the cessation of operation of an affected facility for any purpose. For sources subject to 40FR 63, a startup is defined as the setting in operation of an affected source or portion of an affected source for any purpose and a shutdown is defined as the cessation of operation of an affected source or portion of an affected source for any purpose. For sources subject to 40FR 60, a malfunction is defined as any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. For sources subject to 40CFR63, a malfunction is defined as any sudden, infrequent and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. Giant Cement shall record the occurrence and duration of each startup, shutdown or malfunction subject to 40CFR60 Subpart Kb, 40CFR60 Subpart Y, 40CFR60 Subpart OOO, 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. These records shall be retained for a calendar period of five (5) years following the date of each startup, shutdown or malfunction. At a minimum, the most recent two (2) years of records shall be retained on-site and on-file. Records for the remaining three (3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(j)	Immediate SSM Reports (40CFR63.6(e)(3)(iv), 40CFR63.10(b)(1) and 40CFR63.10(d)(5)(ii)) Notwithstanding the allowance to reduce the frequency of reporting for Periodic Startup, Shutdown and Malfunction reports specified by condition 6.B.2(k), any time an action taken by Giant Cement during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in an affected source's Startup, Shutdown and Malfunction Plan, it shall report the actions taken for that event within two(2) working days to the Trident District Office after commencing actions inconsistent with the plan followed by a written letter within seven(7) working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call (or facsimile (FAX) transmission) to the Trident District Office within two(2) working days after commencing actions inconsistent with the plan. It shall be followed by a written letter addressed to the Trident District Office, delivered or postmarked within seven(7) working days after the end of the event, that contains the name, title and signature of the responsible official who is certifying its accuracy, 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. Notwithstanding the requirements of the previous sentence, Giant Cement may make alternative reporting arrangements, in advance, with the Department. These reports shall also be retained for a calendar period of five(5) years following the date of each occurrence. At a minimum, the most recent two(2) years of reports shall be retained on-site and on-file. Records for the remaining three(3) years of reports may be retained off-site. Such records of reports may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.2(k)	Periodic SSM Reports (40CFR63.6(e)(3)(iii), 40CFR63.10(b)(1) and 40CFR63.10(d)(5)(i)) For all sources subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL, if actions taken by Giant Cement during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in a source's Startup, Shutdown and Malfunction Plan, then Giant Cement shall state such information in a Startup, Shutdown and Malfunction Report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period and they shall include the number, duration and a brief description of each startup, shutdown, or malfunction. If changes to the reporting requirements are promulgated then the reports shall include the revised information specified in 40CFR63 Subpart A. The Startup, Shutdown and Malfunction Report shall consist of a letter, containing the name, title and signature of the responsible official who is certifying its accuracy and be submitted to the Department semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise). The Startup, Shutdown and Malfunction Report shall be addressed to the Manager of the Technical Management Section, Bureau of Air Quality and delivered or postmarked by the 30th calendar day following the end of each calendar half (or other calendar reporting period, as appropriate). If Giant Cement is required to submit Excess Emissions and CMS Performance Reports (or other periodic reports), the Startup, Shutdown and Malfunction Reports may be submitted simultaneously with the Excess Emissions and CMS Performance Reports (or other reports). If Startup, Shutdown and Malfunction Reports are submitted with Excess Emissions and CMS Performance Reports (or other periodic reports) and Giant Cement receives approval to reduce the frequency of reporting for the latter, the frequency of reporting for the Startup, Shutdown and Malfunction Reports also may be reduced if the Department does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified for Excess Emissions and CMS Performance Reports. These reports shall also be retained for a calendar period of five(5) years following the date of each occurrence. At a minimum, the most recent two(2) years of reports shall be retained on-site and on-file. Records for the remaining three(3) years of reports may be retained off-site. Such records of reports may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (STARTUPS, SHUTDOWNS AND MALFUNCTIONS)	
Condition Number	**Condition**
6.B.2(l)	Existing Kiln and New Kiln System Operations Under the 40CFR63 Startup, Shutdown and Malfunction Plan (40CFR63.1206(c)(2)(v)(A)(1) and 40CFR63.1206(c)(2)(v)(A)(2)) During malfunctions, the AWFCO requirements continue to apply, except for conditions 6.B.24(bbb) and 6.B.24(ccc). If Giant Cement exceeds an applicable 40CFR63 Subpart EEE emission standard monitored by a CEMS or COMS or an operating limit, the AWFCO must immediately and automatically cutoff the hazardous waste feed, except as provided by condition 6.B.24(eee). If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, Giant Cement must cease feeding hazardous waste as quickly as possible. Although the AWFCO requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit is not a violation of 40CFR63 Subpart EEE if Giant Cement takes the corrective measures prescribed in the startup, shutdown, and malfunction plan.
6.B.2(m)	Compliance With AWFCO Requirements When Burning Hazardous Waste During Startups and Shutdowns (40CFR63.1206(c)(2)(v)(B)) If Giant Cement feeds hazardous waste during startup or shutdown to an existing Kiln or to the New Kiln System (when placed into operation), it shall include waste feed restrictions (e.g., type and quantity), and other appropriate operating conditions and limits in the startup, shutdown and malfunction plan. Giant Cement must interlock the established operating limits with the AWFCO except for conditions 6.B.26(bbb) and 6.B.26(ccc). When feeding hazardous waste during startup or shutdown, the AWFCO must immediately and automatically cutoff the hazardous waste feed if Giant Cement exceeds the established operating limits except as provided by condition 6.B.26(eee). Although the AWFCO requirements apply during startup and shutdown, an exceedance of an emission standard or operating limit is not a violation of 40CFR63 Subpart EEE if Giant complies with the operating procedures prescribed in the startup, shutdown, and malfunction plan.
6.B.2(n)	Excessive Exceedances During Existing Kiln and New Kiln System Malfunctions (40CFR63.1206(c)(2)(v)(A)(3)) For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in an existing Kiln's or the New Kiln System's (when placed in operation) combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, Giant Cement shall within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance. The results of the investigation and evaluation shall be recorded in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(a)	CMS Requirements for the Combining of Effluents (40CFR60.13(g), 40CFR63.8(b)(2)(i) and 40CFR63.8(b)(2)(ii)) When the emissions from two(2) or more affected sources subject to 40CFR60 Subpart Y, 40CFR63 Subpart EEE and/or 40CFR63 Subpart LLL are combined before being released to the atmosphere, Giant Cement may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with a relevant standard. If a relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one emission point, then Giant Cement shall install an applicable CMS at each emission point unless the installation of fewer systems is approved by the Department or provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).
6.B.3(b)	Reporting Requirements for Multiple CMS (40CFR63.8(b)(3)) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), Giant Cement shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, it shall report the results from the CMS used to meet the monitoring requirements of 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. If both such CMS are used during a particular reporting period to meet the monitoring requirements of 40CFR63 Subpart DD, 40CFR63 Subpart EEE and 40CFR63 Subpart LLL, then Giant Cement shall report the results from each CMS for the relevant compliance period.
6.B.3(c)	CMS Operation and Maintenance (40CFR60.13(e), 40CFR63.8(c)(1) and 40CFR63.8(c)(4)) For an affected source required by 40CFR60 Subpart Y, 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL to be monitored using a CMS, Giant Cement shall maintain and operate each CMS in a manner consistent with good air pollution control practices. For all CMS, Giant Cement shall keep the necessary parts for routine repairs of the affected CMS equipment readily available and comply with the written Startup, Shutdown and Malfunction Plan that it implemented as specified in conditions 6.B.2(a) and 6.B.2(b). Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation.
6.B.3(d)	CMS Installation (40CFR60.13(a), 40CFR63.8(c)(2) and 40CFR63.8(c)(3)) All CMS shall be installed such that representative measures of emissions or process parameters from an affected source are obtained. In addition, CEMS shall be located according to procedures contained in the applicable performance specification(s). Unless stated otherwise, Giant Cement shall ensure that the read out (the portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with an emission standard is readily accessible on-site for operational control or inspection by the operator of the equipment. All CMS required by 40CFR60 Subpart Y, 40CFR63 Subpart DD and 40CFR63 Subpart LLL shall be installed, operational and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. All CMS required by 40CFR63 Subpart EEE shall be installed, calibrated and continuously operated upon startup of the associated equipment.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(e)	Minimum Procedures for COMS (40CFR63.8(c)(5)) Unless otherwise approved by the Department, the minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.
6.B.3(f)	Records of CMS Zero (Low-Level) and High-Level Calibration Drifts for CMS except CPMS (40CFR60.13(d)(1), 40CFR63.8(c)(6) and 40CFR63.10(b)(1)) Except for CMS identified in conditions 6.B.26(m) and 6.B.26(n), Giant Cement for CMS that are not a CPMS, which is installed in accordance with the provisions of 40CFR60 Subpart Y, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL and the applicable CMS performance specification(s), shall monitor and record the zero(low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the CMS Performance Evaluation Plan. The zero (low-level) and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases shall be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces shall be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4% opacity. These records shall be retained for a calendar period of five(5) years following the date of each calibration check. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(g)	CPMS System Response Checks (40CFR63.8(c)(6) and 40CFR63.10(b)(1)) Once a CPMS is required to be installed and operating by the EPA, the CPMS shall be calibrated prior to use for the purposes of complying with this condition. Giant Cement shall check the CPMS daily for indication that the system is responding. If the CPMS system includes an internal system check, results shall be recorded and checked daily for proper operation. These records shall be retained for a calendar period of five(5) years following the date of each system response check. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(h)	Records of All CMS Calibration Checks (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(x)) Giant Cement shall record all calibration checks of CMS subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. These records shall be retained for a calendar period of five(5) years following the date of each calibration check. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(i)	Records of All Adjustments and Maintenance Performed on CMS (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(xi)) Giant Cement shall record all adjustments and maintenance performed on CMS required by 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. These records shall be retained for a calendar period of five(5) years following the date of each adjustment or maintenance action. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(j)	CMS Quality Control Program (40CFR63.8(d)) Giant Cement shall develop and implement a CMS Quality Control Program(s) for the CMS required by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. As part of the CMS Quality Control Program, it shall develop and submit to the Department for approval a site-specific CMS Performance Evaluation Test Plan for the required CMS performance evaluation. In addition, the CMS Quality Control Program shall include, at a minimum, a written protocol that describes procedures for each of the operations listed in paragraphs (j)(1) through (j)(6) of this condition. The results of this CMS Quality Control Program will be considered by the Department when it determines the validity of monitoring data. Giant Cement shall keep these written procedures on-site and on-file for the life of an affected source or until the affected source is no longer subject to the provisions of 40CFR63 Subpart EEE or 40CFR63 Subpart LLL and make then available to Department personnel upon request. If a CMS Quality Control Plan is revised, then Giant Cement shall keep previous (i.e., superseded) versions of the plan on-site and on-file for a calendar period of five(5) years after the date of each revision to the plan and made available to Department personnel upon request. Revisions to a plan do not require a formal operating permit modification. Where relevant (e.g., program of corrective action for a malfunctioning continuous monitoring system) these written procedures may be incorporated as part of an affected source's Startup, Shutdown and Malfunction Plan to avoid duplication of planning and recordkeeping efforts. (j)(1) Initial and any subsequent calibration of the CMS. (j)(2) Determination and adjustment of the calibration drift of the continuous monitoring system. (j)(3) Preventive maintenance of the continuous monitoring system, including spare parts inventory. (j)(4) Data recording, calculations, and reporting. (j)(5) Accuracy audit procedures, including sampling and analysis methods. (j)(6) Program of corrective action for a malfunctioning CMS.
6.B.3(k)	Records of CMS Malfunction or Inoperative Periods (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(vi)) Giant Cement shall record each period during which a CMS required by 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL is malfunctioning or inoperative (including out-of-control periods). These records shall be retained for a calendar period of five(5) years following the date of each CMS malfunction or inoperative period. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(l)	Out of Control CMS (40CFR63.8(c)(7)) A CMS is out of control if the zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard, the CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, linearity test audit or the COMS calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard. When a CMS is out of control, Giant Cement shall take the necessary corrective action and repeat all necessary tests which indicate that the system is out of control. Giant Cement shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour that Giant Cement conducts a performance check (e.g., calibration drift) that indicates an exceedance of performance requirements. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any established data availability requirement.
6.B.3(m)	Records of All Required CMS Measurements (40CFR63.10(b)(1) and 40CFR63.10(c)(1)) Giant Cement shall record all required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods) for CMS required by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. These records shall be retained for a calendar period of five(5) years following the date of each CMS measurement. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(n)	Records of the Date and Time that Identify Inoperative CMS Periods (40CFR63.10(b)(1) and 40CFR63.10(c)(5)) Giant Cement shall record the date and time identifying each calendar period during which a CMS required by 40CFR63 Subpart LLL is inoperative except for zero (low-level) and high-level checks. These records shall be retained for a calendar period of five(5) years following the date of each inoperative CMS period. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(o)	Records of the Date and Time that Identify Out of Control CMS Periods (40CFR63.8(c)(7), 40CFR63.10(b)(1) and 40CFR63.10(c)(6)) Giant Cement shall record the date and time identifying each calendar period during which a CMS required by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL is out of control. A CMS is out of control if the zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two(2) times the applicable calibration drift specification in the applicable performance specification or in the relevant standard, the CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or the COMS calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard. These records shall be retained for a calendar period of five(5) years following the date of each out of control CMS period. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(p)	Records of Total Process Operating Time During the Reporting Period (40CFR63.10(b)(1) and 40CFR63.10(c)(13)) Giant Cement shall record the total process operating time during the reporting period for sources subject to 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. These records shall be retained for a calendar period of five(5) years following the date of each record. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche
6.B.3(q)	Records of the Specific Identification of Each Period of Excess Emissions and Parameter Monitoring Exceedances (40CFR63.10(b)(1) and 40CFR63.10(c)(8)) Giant Cement shall record the specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL that occurs during startups, shutdowns, and malfunctions of the affected source and occurs during periods other than startups, shutdowns, and malfunctions of the affected source. These records shall be retained for a calendar period of five(5) years following the date of each exceedance. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(r)	Records of CMS Malfunctions, Corrective Actions and Repairs (40CFR63.10(b)(1), 40CFR63.10(c)(10), 40CFR63.10(c)(11), 40CFR63.10(c)(12) and 40CFR63.10(c)(15)) Giant Cement shall record the nature and cause of any CMS malfunction (if known), the corrective action taken or preventive measures adopted and the nature of the repairs or adjustments to the CMS that was inoperative or out of control for any CMS required by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. In order to satisfy these recordkeeping requirements and to avoid duplicative recordkeeping efforts, Giant Cement may use the affected source's Startup, Shutdown and Malfunction Plan or records kept to satisfy the recordkeeping requirements of the Startup, Shutdown, and Malfunction Plan provided that such plan and records adequately address the recordkeeping requirements this condition. These records shall be retained for a calendar period of five(5) years following the date of each malfunction, corrective action and/or repair. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(s)	Emission Data Units of Measurement (40CFR63.8(g)(4)) All emission data shall be converted into the units of measurement of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1% opacity).
6.B.3(t)	Use of Monitoring Data Recorded During Periods of Unavoidable CMS Breakdowns, Out-Of-Control Periods, Repairs, Maintenance Periods, Calibration Checks and Zero (Low-Level) and High-Level Adjustments (40CFR63.8(g)(5)) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any computed data average. If Giant Cement complies with the requirements of condition 6.B.3(u), data averages shall include any data recorded during periods of monitor breakdown or malfunction.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(u)	Records of All CMS Measurements Needed to Demonstrate Compliance With a Relevant Standard (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(vii)) Giant Cement shall record all required measurements needed to demonstrate compliance with 40CFR63 Subpart EEE and 40CFR63 Subpart LLL. To demonstrate compliance with those subparts, the records shall include, but are not limited to, 15-minute averages of CMS data, raw performance testing measurements and raw performance evaluation measurements that support the data that Giant Cement is required to report. Where a CEMS is automated and the calculated data averages do not exclude periods of CEMS breakdown or malfunction, in lieu of maintaining a file of all CEMS subhourly, Giant Cement shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard. An automated CEMS is defined as a CEMS that records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. Where the measured data from a CEMS is manually reduced to obtain the reportable form of the standard, and the calculated data averages do not exclude periods of CEMS breakdown or malfunction, in lieu of maintaining a file of all CEMS subhourly measurements, Giant Cement shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 calendar days from the date of the most recent Summary or Excess Emission Report submitted to the Department. The Department, upon notification, may require Giant Cement to maintain all measurements if it determines these records are required to more accurately assess the compliance status of the affected source. These records shall be retained for a calendar period of five(5) years following the date of each measurement. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.3(v)	Reduction of COMS and CEMS Data (40CFR63.2 and 40CFR63.8(g)(2)) Giant Cement shall for a COMS reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in a relevant standard, shall be reduced to one(1)-hour averages computed from four or more data points equally spaced over each one(1)-hour period, except during periods when calibration, quality assurance, or maintenance activities are being performed. During periods when calibration, quality assurance, or maintenance activities are being performed, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. A six(6)-minute period is defined as, with respect to opacity determinations, any one of the 10 equal parts of a one(1)-hour period. A one(1)-hour period, unless otherwise defined in an applicable subpart, is defined as any 60-minute period commencing on the hour.
6.B.3(w)	Recording of CMS Data (40CFR63.8(g)(3)) The monitoring data obtained from CMS may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(x)	Content and Submittal Dates for Excess Emissions and CMS Performance Reports (40CFR60.7(c), 40CFR63.8(c)(7), 40CFR63.8(c)(8), 40CFR63.10(c)(5), 40CFR63.10(c)(6), 40CFR63.10(c)(7), 40CFR63.10(c)(8), 40CFR63.10(c)(10), 40CFR63.10(c)(11), 40CFR63.10(c)(12), 40CFR63.10(c)(13), and 40CFR63.10(e)(3)(v)) All Excess Emissions and CMS Performance Reports and all Summary Reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate to the Manager of the Technical Management Section, Bureau of Air Quality. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information as specified in paragraphs (x)(1) through (x)(10). When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report. (x)(1) The reports shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. (x)(2) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks. (x)(3) The date and time identifying each period during which the CMS was out of control. A CMS is out of control if the zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard, the CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or the COMS calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard. (x)(4) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source. (x)(5) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source. (x)(6) The nature and cause of any malfunction (if known). (x)(7) The corrective action taken or preventive measures adopted. (x)(8) The nature of the repairs or adjustments to the CMS that was inoperative or out of control. (x)(9) The total process operating time during the reporting period. (x)(10) All information concerning CMS out-of-control periods, including start dates, end dates, hours and descriptions of the corrective actions taken.
6.B.3(y)	Records of Procedures that are Part of a CMS Quality Control Program (40CFR63.10(b)(1) and 40CFR63.10(c)(14)) Giant Cement shall record all procedures that are part of a quality control program developed and implemented for CMS subject to 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. The record of procedures shall be retained for a calendar period of five(5) years following the origin date of each procedure. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(z)	Summary Report Content Requirements (40CFR60.7(d) and 40CFR63.10(e)(3)(vi)) If required to submit a Summary Report, Giant Cement shall submit one Summary Report for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report (Gaseous and Opacity Excess Emission and CMS Performance)" and contain the information specified by paragraphs (z)(1) through (z)(12). (z)(1) The company name and address of the affected source. (z)(2) An identification of each hazardous air pollutant monitored at the affected source. (z)(3) The beginning and ending dates of the reporting period. (z)(4) A brief description of the process units. (z)(5) The emission and operating parameter limitations specified in the relevant standard(s). (z)(6) The monitoring equipment manufacturer(s) and model number(s). (z)(7) The date of the latest CMS certification or audit. (z)(8) The total operating time of the affected source during the reporting period. (z)(9) An emission data summary (or similar summary if it monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes. (z)(10) A CMS performance summary (or similar summary if it monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes. (z)(11) A description of any changes in CMS, processes, or controls since the last reporting period. (z)(12) The name, title, and signature of the responsible official who is certifying the accuracy of the report and the date of the report.
6.B.3(aa)	Submission of Only the Summary Report (40CFR60.7(d)(1) and 40CFR63.10(e)(3)(vii)) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1% of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5% of the total operating time for the reporting period, Giant Cement only needs to submit the Summary Report and the full Excess Emissions and CMS Performance Report need not be submitted unless required by the Department.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(bb)	Reduction in the Frequency of Submitting Excess Emissions and CMS Performance and/or Summary Reports (40CFR60.7(e) and 40CFR63.10(e)(3)(iii)) The frequency of submitting Excess Emissions and CMS Performance and/or Summary Reports required to comply with a relevant standard may be reduced only after Giant Cement notifies the Department in writing of its intention to make such a change and the Department does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Department may review information concerning a source's entire previous performance history during the five(5) year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of Giant Cement's conformance with operation and maintenance requirements. Such information may be used by the Department to make a judgment about a source's potential for noncompliance in the future. If the Department disapproves Giant Cement's request to reduce the frequency of reporting, the Department will notify it in writing within 45 calendar days after receiving notice of Giant Cement's intention. The notification from the Department to Giant Cement will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 calendar days, approval is automatically granted.
6.B.3(cc)	Submission of Both the Summary Report and the Excess Emissions and CMS Performance Report (40CFR60.7(d)(2) and 40CFR63.10(e)(3)(viii)) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period, then Giant Cement shall submit both the Summary Report and the Excess Emissions and CMS Performance Report.
6.B.3(dd)	Excess Emissions and CMS Performance Reports and/or Summary Reports (40CFR60.7(c) and 40CFR63.10(e)(3)(i)) For sources subject to 40CFR60 Subpart Y, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL required by those subparts to be monitored by a CMS, Giant Cement shall submit an Excess Emissions and CMS Performance Report and/or a Summary Report to the Department for those CMS. Reports shall be submitted semiannually, except when more frequent reporting is specifically required by a relevant standard and the Department determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of a source.
6.B.3(ee)	Resumption of the Normal Frequency of Submitting Excess Emissions and CMS Performance and/or Summary Reports (40CFR60.7(e)(3) and 40CFR63.10(e)(3)(iv)) As soon as CMS data indicate that a source is not in compliance with any applicable emission limitation or operating parameter, the frequency of reporting for Excess Emissions and CMS Performance and/or Summary Reports shall revert to the original submission frequency and Giant Cement shall submit an Excess Emissions and CMS Performance and/or Summary Report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the applicable emission limitation or operating parameter for another full year, Giant Cement may again request approval from the Department to reduce the submission frequency of reporting for that standard.

MONITORING AND REPORTING CONDITIONS (CONTINUOUS MONITORING SYSTEMS)	
Condition Number	**Condition**
6.B.3(ff)	Request to Reduce Frequency of Excess Emissions and CMS Performance Reports (40CFR63.10(e)(3)(ii)) Notwithstanding the frequency of reporting requirements specified in condition 6.B.3(dd), if Giant Cement is required by a relevant standard to submit Excess Emissions and CMS Performance Reports and/or Summary Reports on a quarterly (or more frequent) basis, it may reduce the frequency of reporting for that standard to semiannual if the requirements of paragraphs (ff)(1) through (ff)(3) are met. (ff)(1) If for one full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and CMS Performance Reports continually demonstrate that the source is in compliance with the relevant standard. (ff)(2) Giant Cement continues to comply with all applicable recordkeeping and monitoring requirements. (ff)(3) The Department does not object to a reduced frequency of reporting for the affected source.

MONITORING AND REPORTING CONDITIONS (AIR POLLUTION CONTROL EQUIPMENT)	
Condition Number	**Condition**
6.B.4(a)	Air Pollution Control and Monitoring Equipment Maintenance Records (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(iii)) Giant Cement shall record all required maintenance performed on the air pollution control and monitoring equipment required by 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
6.B.4(b)	Operation and Maintenance of Air Pollution Control Equipment (SC Regulation 61-62.70.6(a)(3)(i)(B)) Giant Cement shall operate, inspect and maintain each existing dust collector and each new dust collector (when placed in service) as specified by the Dust Collector O&M Plan or other O&M plan developed to combine regulatory O&M Plan requirements. The differential pressure across each dust collector shall be maintained between the required differential pressure ranges as specified in the plan. The differential pressure across each dust collector shall be monitored according to the plan. If the differential pressure across a dust collector deviates from its specified differential pressure range, then Giant Cement shall perform and record a visual emission observation and a reason for the deviation from the specified range. If the visual emission observation exceeds the opacity limit for the source(s) then the procedures outlined in Section VII of the plan shall be followed. If a problem is found during an inspection of a dust collector, then the inspection shall be documented. The inspection documentation shall include the date and time of inspection, list the problem(s) found and the corrective action(s) taken. All documented inspection records shall be kept on-file and on-site for a calendar period of five(5) years from the date of record and made available to Department personnel upon request. All visible emissions monitoring, inspections, reporting, recordkeeping and preventative maintenance shall be performed as specified by the plan.

MONITORING AND REPORTING CONDITIONS (AIR POLLUTION CONTROL EQUIPMENT)	
Condition Number	**Condition**
6.B.4(c)	Records of the Occurrence and Duration of Air Pollution Control and Monitoring Equipment Malfunctions (40CFR63.10(b)(1) and 40CFR63.10(b)(2)(ii)) Giant Cement shall record the occurrence and duration of each malfunction of the air pollution control and monitoring equipment required by 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL. At a minimum, the most recent two(2) years of records shall be retained on-site and on-file. Records for the remaining three(3) years may be retained off-site. Such records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

MONITORING AND REPORTING CONDITIONS (REGULATION APPLICABILITY DETERMINATIONS)	
Condition Number	**Condition**
6.B.5(a)	Recordkeeping Requirement for Regulation Applicability Determinations (40CFR63.10(b)(3)) If Giant Cement determines that a stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Clean Air Act Section 112(d) or Clean Air Act Section 112(f) and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40CFR63) because of limitations on the source's potential to emit or an exclusion, then Giant Cement shall keep a record of the applicability determination on-site and on-file for a calendar period of five(5) years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of applicability determination shall also be signed by the person making the determination and include an analysis (or other information) that demonstrates why Giant Cement believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Department to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with requirements established in 40CFR63 Subpart DD and 40CFR63 Subpart LLL. Also, if relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under Clean Air Act Section 112, if any.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(a)	CMS Performance Evaluations (40CFR63.8(e)(1)) During the Comprehensive and Confirmatory Performance Tests and at any other time the Department may require, Giant Cement for an affected source being monitored by a CMS, shall conduct a performance evaluation of that CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(b)	Notification of CMS Performance Evaluations (SC Regulation 61-62.1 Section IV(D), 40CFR63.8(e)(2) and 40CFR63.1207(e)) Giant Cement shall submit written notifications of CMS Performance Evaluations to the Manager of the Source Evaluation Section, Bureau of Air Quality as specified by paragraphs (b)(1) through (b)(3) of this condition. In the event that Giant Cement is unable to conduct the CMS performance evaluation on the date specified in the notification, it shall notify the Department as soon as practical by telephone and follow up in writing within 30 calendar days. Telephone notification shall include a description of the circumstance(s) causing the cancellation of the CMS performance evaluation and a projected date that the evaluation will take place. The written follow-up report shall include a description of the condition(s) which prevented the evaluation from being conducted, and when applicable, what corrective action was performed, or what equipment repairs were required. (b)(1) For CMS not subject to a Federal Standard, Giant Cement shall submit a notification 14 calendar days before the performance evaluation is scheduled to begin. (b)(2) For CMS subject to 40CFR63 Subpart EEE and where a performance specification has been specified, Giant Cement shall submit a notification one(1) calendar year before the performance test and performance evaluation are scheduled to begin. (b)(3) For CMS subject to Federal Standards other than 40CFR63 Subpart EEE, Giant Cement shall submit notification 60 calendar days before the performance evaluation is scheduled to begin if no performance test is required.
6.B.6(c)	Content of CMS Performance Evaluation Test Plan (SC Regulation 61-62.1 Section IV(C), 40CFR63.8(e)(3)(i) and 40CFR63.8(e)(3)(ii)) Before conducting a required CMS performance evaluation, Giant Cement shall develop a site-specific CMS Performance Evaluation Test Plan. The CMS Performance Evaluation Test Plan shall include the applicable information specified by condition 6.B.7(i), evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data. The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Department of instrument calibration, data validation, sample logging and documentation of quality control data and field maintenance activities.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(d)	Submission of CMS Performance Evaluation Test Plan (SC Regulation 61-62.1 Section IV(B), 40CFR63.8(e)(3)(iii), 40CFR63.8(e)(3)(iv) and 40CFR63.1207(e)) Giant Cement shall submit a CMS Performance Evaluation Test Plan to the Manager of the Source Evaluation Section, Bureau of Air Quality for approval as specified by paragraphs (d)(1) through (d)(3) of this condition. The review and approval of the CMS Performance Evaluation Test Plan by the Department will occur with the review and approval of the Pollutant Performance Test Plan. The Department may request additional relevant information after the submittal of a plan. (d)(1) For CMS not subject to a Federal Standard, Giant Cement shall submit a test plan 45 calendar days before the performance evaluation is scheduled to begin. (d)(2) For CMS subject to 40CFR63 Subpart EEE and where a performance specification has been specified, Giant Cement shall submit a test plan one(1) calendar year before the performance test and performance evaluation are scheduled to begin. (d)(3) For CMS subject to Federal Standards other than 40CFR63 Subpart EEE, Giant Cement shall submit a test plan 60 calendar days before the performance evaluation is scheduled to begin if no performance test is required.
6.B.6(e)	Department Approval of the CMS Performance Evaluation Test Plan (SC Regulation 61-62.1 Section IV(B) , 40CFR63.7(c)(3) and 40CFR63.1207(e)(1)(i)(A)) For CMS that are not subject to 40CFR63 Subpart EEE, the Department will notify Giant Cement of approval or intention to deny approval of the site-specific CMS Performance Evaluation Test Plan within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information. For CMS subject to 40CFR63 Subpart EEE, the Department will notify Giant Cement of approval or intention to deny approval of the site-specific CMS Performance Evaluation Test Plan within nine(9) months after receipt of the original plan. Before disapproving the plan, the Department will notify Giant Cement of its intention to disapprove the plan together with a notice of the information and findings on which the intended disapproval is based and a notice of opportunity for Giant Cement to present, within 30 calendar days after it is notified of the intended disapproval, additional information to the Department before final action on the plan.
6.B.6(f)	Department Failure to Approve or Disapprove a CMS Performance Evaluation Plan (SC Regulation 61-62.1 Section IV(B), 40CFR63.8(e)(3)(v) and 40CFR63.8(e)(3)(vi)) In the event that the Department fails to approve or disapprove a CMS Performance Evaluation Test Plan within the time period specified in condition 6.B.6(e) and Giant Cement intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, it shall conduct the CMS performance evaluation within the specified time using the specified method(s) in the relevant standard. If Giant Cement intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, it shall refrain from conducting the CMS performance evaluation until the Department approves the use of the alternative method. If the Department does not approve the use of the alternative method within 30 calendar days before the CMS performance evaluation is scheduled to begin, the CMS performance evaluation deadlines specified by condition 6.B.8(g) may be extended such that Giant Cement shall conduct the CMS performance evaluation within 60 calendar days after the Department approves the use of the alternative method. Neither the submission of a CMS Performance Evaluation Test Pan for approval, nor the Department's approval or disapproval of a plan, nor the Department's failure to approve or disapprove a plan in a timely manner shall relieve Giant Cement of legal responsibility for compliance with any applicable provisions or with any other applicable Federal, State, or local requirement; or prevent the Department from implementing, enforcing or taking any other action under the Clean Air Act.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(g)	Conduct of CMS Performance Evaluations and CMS Performance Evaluation Dates (SC Regulation 61-62.1 Section IV(D) and 40CFR63.8(e)(4)) Giant Cement shall conduct a performance evaluation of a required CMS during any required Pollutant Performance Test in accordance with the applicable performance specification as specified in the relevant standard and if applicable, SC Regulation 61-62.5 Section IV(D). Notwithstanding the requirement in the previous sentence, if Giant Cement for an affected source elects to submit COMS data for compliance with a relevant opacity emission standard, it shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the required pollutant performance test is conducted in time to submit the results of the CMS performance evaluation as specified in condition 6.B.6(h). If a Pollutant Performance Test is not required or the requirement for a Pollutant Performance Test has been waived, Giant Cement for an affected source shall conduct the CMS performance evaluation no later than 180 calendar days after the appropriate compliance date for the affected source as specified in the relevant standard.
6.B.6(h)	Reporting of CMS Performance Evaluation Results (SC Regulation 61-62.1 Section (F) and 40CFR63.8(e)(5)) Giant Cement shall furnish the Department with a written report of the results of the CMS performance evaluation simultaneously with the results of the Pollutant Performance Test or within 60 calendar days of completion of the CMS performance evaluation if no pollutant performance test is required, unless otherwise specified in a relevant standard. The report of performance results shall contain the applicable information specified in condition 6.B.7(cc) and include the raw data from the CMS performance evaluation. If Giant Cement uses a COMS to determine opacity compliance during any required pollutant performance test, it shall furnish the Department with two(2) or, upon request, three(3) copies of a written report of the results of the required COMS performance evaluation. The copies shall be provided to the Manager of the Source Evaluation Section, Bureau of Air Quality at least 15 calendar days before the required pollutant performance test is conducted.
6.B.6(i)	Alternative to the CEMS Relative Accuracy Test (40CFR63.8(f)(6)(i)) An alternative to the test method for determining CEMS relative accuracy is available for affected sources with emission rates demonstrated to be less than 50% of the relevant standard. Giant Cement may petition the Department to substitute the CEMS relative accuracy test in Section 7 of Performance Specification 2 with the procedures in Section 10 if the results of a Pollutant Performance Test or other tests performed demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50% of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, Giant Cement may petition the Department to substitute the CEMS relative accuracy test with the procedures in Section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50% of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with a relevant standard.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(j)	Department Rescission of Approval to use the Alternative to the CEMS Relative Accuracy Test (40CFR63.8(f)(6)(iii)) The Department will review its permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70% of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70% of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. Giant Cement for an affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, then Giant Cement shall notify the Department within 10 calendar days of such occurrence and include a description of the nature and cause of the increased emissions. The Department will review the notification and may rescind permission to use an alternative and require Giant Cement to conduct a relative accuracy test of the CEMS as specified in Section 7 of Performance Specification 2.
6.B.6(k)	Content of Petition to use the Alternative to the CEMS Relative Accuracy Test (40CFR63.8(f)(6)(ii)) The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Department will review the petition for completeness and applicability. The Department's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.
6.B.6(l)	Stack Sampling Team and PM CEMS Correlation Tests (40CFR63.1206(b)(8)(vi) and 40CFR63.1357(d)) The stack sampling team shall be on-site and prepared to perform PM CEMS 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.

MONITORING AND REPORTING CONDITIONS (CMS PERFORMANCE EVALUATIONS)	
Condition Number	**Condition**
6.B.6(m)	PM CEMS Correlation Tests (40CFR63.1206(b)(8), 40CFR63.1357(a), 40CFR63.1357(b), 40CFR63.1357(d) and 40CFR63.1357(e)) Any particulate matter and opacity standards of 40CFR60, 40CFR61, 40CFR63, 40CFR264, 40CFR265 or 40CFR266 applicable to the existing Kilns, existing clinker coolers, New Kiln System and New Clinker Cooler do not apply while Giant Cement conducts PM CEMS correlation tests (i.e., correlation with manual stack methods). Any permit or other emissions, operating parameter limits or conditions, including any limitation on workplace practices, that are applicable to the New Kiln to ensure compliance with any particulate matter and opacity standards also do not apply while conducting particulate matter CEMS correlation tests. For the provisions of this condition to apply, Giant Cement must develop a PM CEMS correlation test plan that includes the information specified by paragraphs (m)(1) through (m)(4) of this condition. This test plan may be included as part of the Comprehensive Performance Test Plan. The test plan shall be submitted to the Department for approval at least 90 calendar days before the correlation test is scheduled to be conducted. 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 of all test conditions, unless more time is approved by the Department. The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after Giant Cement modifies operations to attain the desired particulate matter emissions concentrations, unless it documents in the correlation test plan that a longer period of conditioning is appropriate. Giant Cement must return to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed. (m)(1) Number of test conditions and number of runs for each test condition. (m)(2) Target particulate matter emission level for each test condition. (m)(3) How you plan to modify operations to attain the desired particulate matter emission levels. (m)(4) Anticipated normal particulate matter emission levels.
6.B.6(n)	Department Approval or Disapproval of the PM CEMS Test Plan (40CFR63.7(c)(3)(i), 40CFR63.7(c)(3)(iii) and 40CFR63.1357(c)) The Department will review and approve or disapprove the PM CEMS Correlation Test Plan. The Department will notify Giant Cement of approval or intention to deny approval of the plan within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information. Before disapproving any PM CEMS Correlation Test Plan, the Department will notify Giant Cement of its intention to disapprove the plan together with a notice of the information and findings on which the intended disapproval is based and a notice of opportunity for Giant Cement to present, within 30 calendar days after it is notified of the intended disapproval, additional information to the Department before final action on the plan. If the Department fails to approve or disapprove the PM CEMS Correlation Test Plan within the specified time period the plan shall be considered approved, unless the Department has requested additional information.
6.B.6(o)	Public Notice of Comprehensive and Confirmatory CMS Performance Evaluation Test Plans (40CFR63.1207(e)(2)) After the Department has approved a Comprehensive or Confirmatory CMS Performance Evaluation Test Plan, Giant Cement shall make the test plans available to the public for review. It must issue a public notice announcing the approval of the test plans and the location where the test plans are available for review.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(a)	Initial Comprehensive Performance Test (40CFR63.693(f)(2)(i), 40CFR63.1207(b)(1), 40CFR63.1207(c)(1) and 40CFR63.1207(c)(2)) Giant Cement shall conduct Comprehensive Performance Tests for each existing Kiln to demonstrate compliance with all applicable existing Kiln emission standards (except the Nickel emission standard), establish applicable operating parameter limits, demonstrate compliance with the required CMS performance specifications and demonstrate compliance with the Vapor Incinerator performance specifications. Giant Cement shall commence the initial Comprehensive Performance Test for each existing Kiln no later than six(6) months after September 30, 2003, except as specified by condition 6.B.7(rr). Giant Cement shall conduct Comprehensive Performance Tests for the New Kiln System to demonstrate compliance with all applicable New Kiln System emission standards (including the Nickel and PSD CO emission standards), establish applicable operating parameter limits, demonstrate compliance with the required CMS performance specifications and demonstrate compliance with the Vapor Incinerator performance specifications. Giant Cement shall commence the initial New Kiln System's Comprehensive Performance Test no later than six(6) months after the startup of the New Kiln System.
6.B.7(b)	Comprehensive Performance Test Frequency (SC Regulation 61-62.5 Standard 3 Section VIII, 40CFR63.1207(d)(1), 40CFR63.1207(d)(4)(i) and 40CFR63.1349(c)) Giant Cement shall commence subsequent Comprehensive Performance testing of the existing Kilns (if still in operation) and the New Kiln System no later than 61 months from the date of commencing the previous Comprehensive Performance Test. Giant Cement is only required to conduct one(1) initial Comprehensive Performance Test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002) All subsequent Comprehensive Performance Testing requirements are waived under the interim standards. The provisions in the introductory text to 40CFR63.1207(d) and 40CFR63.1207(d)(1) do not apply until the EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001. For the existing Kilns (if still in operation) and the New Kiln System Giant Cement shall conduct a performance test for Nickel emissions every 36 months from the date of the previous test.
6.B.7(c)	Completion of Comprehensive and Confirmatory Testing after Commencing Actual Testing (40CFR63.1207(d)(3)) Giant Cement shall complete Comprehensive and Confirmatory Performance testing within 60 calendar days after the actual date of the test commencement, unless the Department determines that a time extension is warranted based on Giant Cement's documentation in writing of factors beyond its control that prevent it from meeting the 60 calendar day deadline.
6.B.7(d)	Confirmatory Performance Tests (40CFR63.1207(b)(2), 40CFR63.1207(d)(2) and 40CFR63.1207(d)(4)(ii)) Giant Cement shall conduct Confirmatory Performance Tests to demonstrate compliance with the applicable Dioxin/Furan emission limitation when each existing Kiln (if still in operation) and the New Kiln System (when placed in operation) operates under normal operating conditions. As part of this test Giant Cement shall also evaluate the performance of CMS required for compliance assurance with the applicable Dioxin/Furan emission limitation. Giant Cement must commence Confirmatory Performance Testing no later than 31 months after the date of commencing the previous Comprehensive Performance Test. To ensure that the Confirmatory Performance Test is conducted approximately midway between Comprehensive Performance Tests, the Department will not approve a test plan that schedules testing within 9 months of commencing the previous Comprehensive Performance Test. Giant Cement is not required to conduct a Confirmatory Performance Test under the interim standards (i.e., the standards published in the Federal Register on February 13, 2002). The confirmatory testing requirements in the introductory text to 40CFR63.1207(d) and 40CFR63.1207(d)(1) are waived until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(e)	Notification of Pollutant Performance Tests (SC Regulation 61-62.1 Section IV(D), 40CFR63.7(b)(1), 40CFR63.7(b)(2), 40CFR63.1207(e)(1)(i) and 40CFR63.1207(e)(1)(ii)) Giant Cement shall submit written notification of Pollutant Performance Tests to the Manager of the Source Evaluation Section, Bureau of Air Quality for approval as specified by paragraphs (e)(1) through (e)(3) of this condition. In the event Giant Cement is unable to conduct a Pollutant Performance test on the date specified in the notification, it shall notify the Department as soon as practical by telephone and follow up in writing within 30 calendar days. Telephone notification shall include a description of the circumstance(s) causing the cancellation of the pollution performance test and a projected retest date. The written follow-up report shall include a description of the condition(s) which prevented the evaluation from being conducted, and when applicable, what corrective action was performed, or what equipment repairs were required. This notification of delay in conducting the Pollutant Performance Test shall not relieve Giant Cement of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Department from implementing, enforcing or taking any other action under the Clean Air Act. (e)(1) For the Comprehensive Performance Test, Giant Cement shall submit a notification one(1) calendar year before the performance test is scheduled to begin. (e)(2) For the Confirmatory Performance Test and all other Pollutant Performance Tests required by a Federal Standard, Giant Cement shall submit a notification 60 calendar days before the performance test is scheduled to begin. (e)(3) For all other Pollutant Performance Tests (i.e. State Only), Giant Cement shall submit a notification 14 calendar days before the performance test is scheduled to begin.
6.B.7(f)	Submission of Pollutant Performance Test Plans (SC Regulation 61-62.1 Section IV(B), 40CFR63.7(c)(2)(iv), 40CFR63.7(c)(2)(v)), 63.1207(e)(1)(i) and 40CFR63.1207(e)(1)(ii)) Giant Cement shall submit Pollutant Performance Test Plans to the Manager of the Source Evaluation Section, Bureau of Air Quality for approval as specified by paragraphs (f)(1) through (f)(3) of this condition. The Department may request additional relevant information after the submittal of a plan. (f)(1) Giant Cement shall submit Comprehensive Performance Test Plans one(1) calendar year before a test is scheduled to begin. (f)(2) Giant Cement shall submit Confirmatory Performance Test Plans and other Pollutant Performance Test Plans required by a Federal Standard 60 calendar days before a test is scheduled to begin. (f)(3) Giant Cement shall submit all other Pollutant Performance Test Plans (i.e. State Only) 45 calendar days before a test is scheduled to begin.
6.B.7(g)	Comprehensive and Confirmatory Test Plan Public Notice (40CFR63.1207(e)(2)) After the Department has approved a Comprehensive or Confirmatory Test Plan, Giant Cement shall make the test plans available to the public for review. It must issue a public notice announcing the approval of the test plans and the location where the test plans are available for review.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(h)	Petitions for Time Extension if the Department Fails to Approve or Deny Comprehensive or Confirmatory Test Plans (40CFR63.1207(e)(3)(i)) Giant Cement may petition the Department to obtain a time extension to conduct any initial, periodic, comprehensive or confirmatory performance tests. Giant Cement may not petition the Department for a time extension if the Department has issued a notification of intention to deny the test plan(s). Giant Cement must make a good faith effort to accommodate the Department's comments on the test plans.
6.B.7(i)	Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans (SC Regulation 61-62.1 Section IV(C), SC Regulation 61-62.5 Section IV(E), 40CFR63.7(a), 40CFR63.7(c)(2)(i), 40CFR63.7(c)(2)(ii), 40CFR63.7(c)(2)(iii) and 40CFR63.1207(f)(1)(ii) through 40CFR63.1207(f)(1)(xxvii)) The Comprehensive Performance Test Plan shall include the applicable information specified by paragraphs (i)(1) through (i)(66), a test program summary, the test schedule, data quality objectives and both an internal and external QA program. Data quality objectives are the pretest expectations of precision, accuracy and completeness of data. The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision (i.e. the sampling and analysis of replicate samples). The external QA program shall include, at a minimum, application of plans for a test method performance audit during the performance test. The performance audits consist of blind audit samples provided by the Department and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities. For any other required Pollutant Performance Tests, their test plans shall include the applicable information specified by this condition. (i)(1) An identification for organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) that are present in each hazardous waste feedstream. Giant Cement does not need to analyze for organic hazardous air pollutants that would reasonably not be expected to be found in the feedstream. Giant Cement shall identify any constituents that it excludes from analysis and explain the basis for excluding them. The feedstream analysis must be conducted according to the applicable requirements of this permit. The Department may approve on a case-by-case basis a hazardous waste feedstream analysis for organic hazardous air pollutants in lieu of the feedstream analysis if the reduced analysis is sufficient to ensure that the POHCs used to demonstrate compliance with the applicable DRE standard continue to be representative of the organic hazardous air pollutants in hazardous waste feedstreams. (i)(2) An approximate quantification of organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) in the hazardous waste feedstreams, within the precision produced by analytical procedures specified by condition 6.B.26(u). (i)(3) A description of blending procedures, if applicable, prior to firing the hazardous waste feedstream, including a detailed analysis of the materials prior to blending and blending ratios. (i)(4) The manufacturer's name and model number of the hazardous waste combustor (existing Kiln or New Kiln System). (i)(5) The type of hazardous waste combustor (existing Kiln or New Kiln System). (i)(6) The maximum design capacity in appropriate units. (i)(7) A description of the feed system for each feedstream.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(i) (Continued)	Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans (continued) (i)(8) The capacity of each feed system. (i)(9) A description of AWFCO. (i)(10) A description of the design, operation and maintenance practices for any air pollution control system. (i)(11) A description of the design, operation, and maintenance practices of any stack gas monitoring and pollution control monitoring systems. (i)(12) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis. (i)(13) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors. (i)(14) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor (New Kiln) to meet the emission standards. (i)(15) A description of, and planned operating conditions for, any emission control equipment that will be used. (i)(16) A determination of the hazardous waste residence time. (i)(17) If Giant Cement requests to extrapolate metal feedrate limits from Comprehensive Performance Test levels, it shall contain a description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards, documentation of the historical range of normal (i.e., other than during compliance testing) metals feedrates for each feedstream and documentation that the level of spiking recommended during the performance test will mask sampling and analysis imprecision and inaccuracy to the extent that the extrapolated feedrate limits adequately assure compliance with the emission standards. (i)(18) If Giant Cement does not continuously monitor regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems, it shall include documentation of the expected levels of regulated constituents in those feedstreams. (i)(19) Documentation justifying the duration of system conditioning required to ensure the combustor (existing Kiln or New Kiln System) has achieved steady-state operations under performance test operating conditions. (i)(20) If Giant Cement is not required to conduct performance testing to document compliance with the mercury, semivolatile metal, low volatile metal, or hydrochloric acid/chlorine gas emission standards it shall include documentation of compliance with the provisions for a waiver of a performance test. (i)(21) If Giant Cement proposes to use a surrogate for measuring or monitoring gas flowrate, it must document that the surrogate adequately correlates with gas flowrate.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(i) (Continued)	<u>Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans (continued)</u> (i)(22) Documentation of the temperature location measurement. (i)(23) For purposes of calculating semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and ash feedrate limits, Giant Cement shall include a description of how itwill handle performance test feedstream analytical results that determines these constituents are not present at detectable levels. (i)(24) Other information as the Department reasonably finds necessary to determine whether to approve the performance test plan. (i)(25) Facility name, address, and telephone number, and name of facility contact. (i)(26) Facility permit number and source identification number. (i)(27) Name, address and telephone number of the company contracted to perform the source test. (i)(28) Name, address and telephone number of the laboratory contracted to perform the analytical analysis of test samples. (i)(29) Description and overall purpose of the tests (i.e. demonstrate compliance, establish emission factors). (i)(30) Citation of any applicable State or Federal regulation or permit condition requiring the tests. (i)(31) Description of the process including a description of each phase of batch or cyclic processes and the time required to complete each phase. (i)(32) Process design rates and normal operating rates. (i)(33) Proposed operating rate and conditions for the test. (i)(34) Methods including proposed calculations, equations, and other related information that will be used to demonstrate and verify the operating rate during the test. (i)(35) Description of any air pollution control equipment. (i)(36) Description of any stack gas or opacity monitoring systems. (i)(37) Description of all air pollution control monitors (i.e. pressure gauges, flow indicators, cleaning cycle timers, electrostatic precipitator voltage meters) when applicable. (i)(38) A list of process and air pollution control operating parameters that will be recorded during the tests, the responsible party who will record these readings, and the frequency at which readings will be recorded. (i)(39) Identification of any risks associated with sampling location and accessibility, toxic releases, electrical hazards, or any other unsafe conditions, and a plan of action to correct or abate these hazards.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(i) (Continued)	<u>Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans (continued)</u> (i)(40) List of all necessary or required safety equipment including respirators, safety glasses, hard hats, safety shoes, hearing protection, and other protective equipment. (i)(41) Description of sampling and analytical methods to be used. (i)(42) Number of tests to be conducted and the number of runs comprising a test. (i)(43) Duration of each test run. (i)(44) Description of minimum sampling volumes for each test run. (i)(45) Location where samples will be recovered. (i)(46) Explanation of how blank and recovery check results and analytical non-detects will be used in final emission calculations. (i)(47) Maximum amount of time a sample will be held after collection prior to analysis. i)(48) Method of storing and transporting samples. (i)(49) Schematics of sampling sites (include stack dimensions and distances upstream and downstream from disturbances). (i)(50) A description of all emission points, including fugitive emissions, associated with the process to be tested, and when applicable, the method that will be used to measure or include these emissions during the Pollutant Performance Test. (i)(51) Procedure for verifying absence of cyclonic or non-parallel stack gas flow. (i)(52) Citation of the QA/QC procedures specified in the EPA Reference Methods and the EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III. (i)(53) Chain-of-custody procedures and copies of chain-of-custody forms. (i)(54) Procedure for conditioning particulate matter filters (before and after testing). (i)(55) Procedure for conducting leak checks on vacuum lines, pitot tubes, flexible bags, orsats, etc. (i)(56) Equipment calibration frequencies, ranges, and acceptable limits. (i)(57) Minimum detection limits of analytical instrumentation. (i)(58) Names, addresses and responsible persons of all sub-contracting laboratories and a description of analytical methods to be used, chain-of-custody procedures and QA/QC measures.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(i) (Continued)	<u>Required Content of the Comprehensive Performance Test Plan and other Pollutant Performance Test Plans (continued)</u> (i)(59) QA/QC measures associated with the collection and analysis of process or raw material samples and the frequency at which these samples will be collected. (i)(60) Methods for interference and matrix effects checks, and number of replicate analyses. (i)(61) Methods and concentrations for internal standards (standards additions prior to extraction). (i)(62) Methods and concentrations for surrogate standards (standards additions to collection media prior to sampling). (i)(63) Methods for recovery checks, field blanks, lab blanks, reagent blanks, proof rinse blanks and analytical blanks. (i)(64) Proposed range of recoveries for data acceptability and method of data interpretation if sample recovery is not within the proposed range. (i)(65) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction. (i)(66) If the emissions averaging provision of 40CFR 63.1204(d) will be used, Giant Cement shall provide notification in the initial and subsequent comprehensive performance test plan. It shall also include the information required by 40CFR 63.1204(d)(ii)(B).

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(j)	Required Content of the Confirmatory Performance Test Plan (SC Regulation 61-62.1 Section IV(C), SC Regulation 61-62.5 Section IV(E), 40CFR63.7(a), 40CFR63.7(c)(2)(i), 40CFR63.7(c)(2)(ii), 40CFR63.7(c)(2)(iii) and 40CFR63.1207(f)(2)(i) through 63.1207(f)(2)(x)) The Confirmatory Performance Test Plan shall include the applicable information in paragraphs (j)(1) through (j)(8), the applicable information as specified by condition 6.B.7(d), a test program summary, the test schedule, data quality objectives and both an internal and external QA program. Data quality objectives are the pretest expectations of precision, accuracy and completeness of data. The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision (i.e. the sampling and analysis of replicate samples). The external QA program shall include, at a minimum, application of plans for a test method performance audit during the performance test. The performance audits consist of blind audit samples provided by the Department and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities. (j)(1) A description of Giant Cement's normal applicable operating parameter levels established to maintain compliance with the Dioxin/Furan emission limitation and an explanation of how these normal levels were determined. (j)(2) A description of Giant Cement's normal chlorine operating levels and an explanation of how these normal levels were determined. (j)(3) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis. (j)(4) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors. (j)(5) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the dioxin/furan emission standard. (j)(6) A description of, and planned operating conditions for, any emission control equipment that will be used. (j)(7) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction. (j)(8) Other information as the Department reasonably finds necessary to determine whether to approve the performance test plan.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(k)	Conduct of Comprehensive, Confirmatory and other Pollutant Performance Tests (SC Regulation 61-62.1 Section IV(D)(5), 40CFR63.7(e)(1), 40CFR63.1207(g)(1) and 40CFR63.1207(g)(2)) Unless approved otherwise by the Department, Giant Cement shall ensure that all Comprehensive, Confirmatory and other Pollutant Performance Tests are conducted while a source is operating at the maximum expected production rate, other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Examples of the operating parameters that may effect emission rates are the type and composition of raw materials and fuels, isolation of control equipment modules, product types and dimensions, thermal oxidizer combustion temperature and atypical control equipment settings. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made. Upon request, Giant Cement shall make available to the Department such records as may be necessary to determine the conditions of performance tests.
6.B.7(l)	Existing Kiln and New Kiln System Chlorine Feedrate During Comprehensive Performance Tests (40CFR63.1207(g)(1)(A)) Giant Cement shall feed normal (or higher) levels of chlorine to each existing Kiln and the New Kiln System (when placed in operation) while testing for Dioxin/Furan emissions during the Comprehensive Performance Test.
6.B.7(m)	PMCD Cleaning Cycle During Comprehensive Performance Testing (40CFR63.1207(g)(1)(C)) Giant Cement shall conduct the particulate matter, semivolatile metal, and low volatile metal performance tests when the PMCD undergoes its normal (or more frequent) cleaning cycle.
6.B.7(n)	Modes of Existing Kiln and New Kiln System Operation During Comprehensive Performance Tests (40CFR63.1207(g)(1)(ii)) Given that Giant Cement must establish limits for the applicable operating parameters based on operations during the Comprehensive Performance Test, it may conduct testing under two or more operating modes to provide operating flexibility.
6.B.7(o)	Existing Kiln and New Kiln System Steady-State Conditions During Comprehensive Performance Tests (40CFR63.1207(g)(1)(iii)) Prior to obtaining Comprehensive Performance Test data, Giant Cement shall operate under performance test conditions until it reaches steady-state operations with respect to emissions of pollutants that must be measured during the performance test and for the operating parameters for which limits must be established. During system conditioning, Giant Cement shall ensure that each operating parameter for which a limit must be established is held at the level planned for the performance test. Giant Cement shall include documentation in the Comprehensive Performance Test Plan justifying the duration of system conditioning. If Giant Cement recycles collected particulate matter (i.e., cement Kiln dust) into the New Kiln, it must sample and analyze the recycled particulate matter prior to obtaining performance test data for levels of selected metals that must be measured during performance testing to document that the system has reached steady-state conditions (i.e., that metals levels have stabilized). Giant Cement shall document the rationale for selecting metals that are indicative of system equilibrium and include the information in the Comprehensive Performance Test plan. To determine system equilibrium, Giant Cement must sample and analyze the recycled particulate matter hourly for each selected metal, unless it submits in the Comprehensive Performance Test Plan a justification for reduced sampling and analysis and the Department approves in writing a reduced sampling and analysis frequency.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(p)	Existing Kiln and New Kiln System CO (or Hydrocarbon) CEMS Emissions Levels During Confirmatory Tests (40CFR63.1207(g)(2)(i)) Carbon Monoxide (or Hydrocarbon) CEMS emissions levels during Confirmatory Performance Tests must be within the range of the average value to the maximum value allowed. The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste.
6.B.7(q)	Operating Limits Established to Maintain Compliance With the Existing Kiln and New Kiln System Dioxin/Furan Emission Limit During Confirmatory Tests (40CFR63.1207(g)(2)(ii)) Each operating limit established by Giant Cement to maintain compliance with the Dioxin/Furan emission standard shall be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed. The average value is defined as the sum of the rolling average values recorded over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste.
6.B.7(r)	Existing Kiln and New Kiln System Chlorine Feedrates During Confirmatory Performance Tests (40CFR63.1207(g)(2)(iii)) Giant Cement shall feed chlorine to each existing Kiln (if still in operation) and the New Kiln System (when placed in operation) at normal feedrates or greater during Confirmatory Performance Tests.
6.B.7(s)	Alternative Existing Kiln and New Kiln System Operation During Confirmatory Tests (40CFR63.1207(g)(2)(v)) The Department may approve an alternative range to that required by conditions 6.B.9(p) and 6.B.9(q) if Giant Cement documents in the Confirmatory Performance Test Plan that it may be problematic to maintain the required range during the test. In addition, when making the finding of compliance, the Department may consider test conditions outside of the range specified in the test plan based on a finding that Giant could not reasonably maintain the range specified in the test plan and considering factors including whether the time duration and level of the parameter when operations were out of the specified range were such that operations during the confirmatory test are determined to be reasonably representative of normal operations. In addition, the Department will consider the proximity of the emission test results to the standard.
6.B.7(t)	Existing Kiln and New Kiln System Operating Conditions During Subsequent Comprehensive Performance Testing (40CFR63.1207(h)) Current established operating parameter limits are waived during subsequent Comprehensive Performance Testing. Current operating parameter limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Department) under an approved test plan or if the source records the results of the pretesting. Pretesting means operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrochloric acid/chlorine gas is being performed and operations to reach steady-state operating conditions prior to stack emissions testing.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(u)	Time Extension for Subsequent Comprehensive and Confirmatory Performance Tests (40CFR63.1207(i)) After the initial Comprehensive Performance Test, Giant Cement may request up to a one(1) year time extension for conducting a Comprehensive or Confirmatory Performance Test to consolidate performance testing with other state or federally required emission testing, or for other reasons deemed acceptable by the Department. If the Department grants a time extension for a Comprehensive Performance Test, the deadlines for commencing the next comprehensive and confirmatory tests are based on the date that the subject Comprehensive Performance Test commences. Giant must submit in writing to the Department any request under this paragraph for a time extension for conducting a performance test. Giant must include in the request for an extension a description of the reasons for requesting the time extension and the date by which It will commence performance testing. The Department will notify Giant in writing of approval or intention to deny approval of its request for an extension within 30 calendar days after receipt of sufficient information to evaluate the request. The 30-day approval or denial period will begin after Giant has been notified in writing that its application is complete. The Department will notify Giant in writing whether the application contains sufficient information to make a determination within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that it submits. When notifying Giant that its application is not complete, the Department will specify the information needed to complete the application. The Department will also provide notice of opportunity for Giant to present, in writing, within 30 calendar days after notification of the incomplete application, additional information or arguments to the Department to enable further action on the application. Before denying any request for an extension for performance testing, the Department will notify Giant in writing of the its intention to issue the denial, together with a notice of the information and findings on which the intended denial is based and a notice of opportunity for Giant to present in writing, within 15 calendar days after notification of the intended denial, additional information or arguments to the Department before further action on the request. The Department's final determination to deny any request for an extension will be in writing and will set forth specific grounds upon which the denial is based. The final determination will be made within 30 calendar days after the presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.
6.B.7(v)	Failure of a Comprehensive Performance Test (40CFR63.1207(l)(1) and 40CFR63.1207(l)(3)) The provisions of this condition do not apply to the initial comprehensive performance test if Giant Cement conducts the test prior to September 30, 2003 (or a later compliance date approved under an Extension of Compliance). If Giant Cement has failed to demonstrate compliance with the applicable emission limitations for a particular mode of operation then prior to submitting a revised Notification of Compliance, it may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing under revised operating conditions and only for a maximum of 720 hours (renewable at the discretion of the Department) for that particular mode of operation. Giant Cement shall conduct a Comprehensive Performance Test under revised operating conditions following the requirements for performance testing of this section and submit to the Department a Notification of Compliance subsequent to the new Comprehensive Performance Test. Giant Cement may petition the Department to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. It must specify operating requirements, including limits on operating parameters, that Giant Cement determines will ensure compliance with the applicable Kiln emission standards based on available information including data from the failed performance test. The Department will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(w)	Failure of a Confirmatory Performance Test (40CFR63.1207(l)(2) and 40CFR63.1207(l)(3)) If Giant Cement determines (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that it has exceeded the applicable Kiln Dioxin/Furan emission limitation for a mode of operation during a Confirmatory Performance Test, it shall cease burning hazardous waste immediately for that mode of operation. Giant Cement must make this determination within 90 calendar days following completion of the test and submit to the Department for review and approval a test plan to conduct a Comprehensive Performance Test to identify revised limits on the applicable Dioxin/Furan operating parameters for that mode of operation. Giant Cement shall also submit to the Department a Notification of Compliance with the Dioxin/Furan emission limitation. Giant Cement must include in the Notification of Compliance the revised limits on the applicable Dioxin/Furan operating parameters. Until the Notification of Compliance is submitted, Giant Cement shall not burn hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hours (renewable at the discretion of the Department) for that mode of operation. Giant Cement may petition the Department to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. It must specify operating requirements, including limits on operating parameters, that Giant Cement determines will ensure compliance with the applicable Kiln emission standards based on available information including data from the failed performance test. The Department will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.
6.B.7(x)	Waiver of a Pollutant Performance Test (40CFR63.7(h)(1), 40CFR63.7(h)(2), 40CFR63.1207(m)(1), 40CFR63.1207(m)(2), 40CFR63.1207(m)(3) and 40CFR63.1207(m)(4)) Until a waiver of a Pollutant Performance Testing requirement has been granted by the Department, Giant Cement for an affected source remains subject to the applicable performance testing requirements in the relevant standard. Individual performance tests may be waived upon written application to the Department if, in its judgment, the source is meeting the relevant standard(s) on a continuous basis, a source is being operated under an Extension of Compliance or Giant Cement has requested an Extension of Compliance and the Department is still considering that request. During the Comprehensive Performance Test, the tests to document compliance with the mercury, semivolatile metal, low volatile metal or hydrochloric acid/chlorine gas emission standards are waived if Giant Cement determines the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride from all feedstreams, determines the stack gas flowrate and then calculates a MTEC for each standard assuming all mercury, semivolatile metals, low volatile metals, or total chlorine (organic and inorganic) from all feedstreams is emitted. Giant Cement is deemed to be in compliance with an emission standard if the twelve-hour rolling average MTEC does not exceed the emission standard and shall comply with the requirements specified by paragraphs (x)(1) through (x)(3) of this condition. In lieu of the requirements specified by paragraphs (x)(1) through (x)(3) Giant Cement may identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride from all feedstreams that ensures the calculated MTEC is below the applicable emission standard and interlock the minimum gas flowrate limit and maximum feedrate limit to the AWFCO to stop hazardous waste burning when the gas flowrate or mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride feedrate exceeds the limits. (x)(1) Monitor and record the feedrate of mercury, semivolatile metals, low volatile metals, and total chlorine and chloride from all feedstreams. (x)(2) Monitor with a CMS and record in the Facility Operating Record the gas flowrate (either directly or by monitoring a surrogate parameter that Giant Cement has correlated to gas flowrate). (x)(3) Interlock the calculated MTEC to the AWFCO to stop hazardous waste burning when the MTEC exceeds the emission standard.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(y)	Failure of Other Pollutant Performance Tests (SC Regulation 61-62.1 Section IV(G)) For any required Pollutant Performance Tests other than Comprehensive or Confirmatory Performance Tests, within 15 calendar days of the submission of a Final Pollutant Performance Test Report that indicates non-compliance with a relevant standard, Giant Cement shall submit to the Department a written plan. This plan shall include at a minimum the interim actions being taken to minimize emissions pending demonstration of compliance, the corrective actions that have been taken or that are proposed to return the source to compliance, the method that will be used to demonstrate the source has returned to compliance (i.e. retest and proposed date) and any changes necessary to update the site-specific Pollutant Performance Test Plan prior to a retest.
6.B.7(z)	Determination of the Mercury, Semivolatile Metals, Low Volatile Metals or Total Chlorine or Chloride Feedrates For a Waiver of Performance Test (40CFR63.1207(m)(5) and 40CFR63.1207(m)(6)) When Giant Cement determines the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride for purposes of condition 6.B.7(x), it must assume that the analyte is present at the full detection limit when the feedstream analysis determines that the analyte is not detected in the feedstream. Since the New Kiln is a hazardous waste burning cement Kiln Giant Cement may assume that mercury is present in raw material at half the detection limit when the raw material feedstream analysis determines that mercury is not detected.
6.B.7(aa)	Request to Waive Pollutant Performance Tests (40CFR63.7(h)(3)) If a request is made for an Extension of Compliance, the application for a waiver of an initial Pollutant Performance Test shall accompany the information required for the request for an Extension of Compliance. If no Extension of Compliance is requested or if Giant Cement has requested an Extension of Compliance and the Department is s till considering that request, the application for a waiver of an initial Pollutant Performance Test shall be submitted at least 60 calendar days before scheduled date of the performance test if the site-specific test Pollutant Performance Test Plan is not submitted. If an application for a waiver of a subsequent performance test is made, the application may accompany any required Compliance Progress Report, Compliance Status Report or Excess Emissions and CMS Performance but it shall be submitted at least 60 calendar days before the scheduled date of the performance test if the site-specific Pollutant Performance Test Plan is not submitted. Any application for a waiver of a performance test shall include information justifying Giant Cement's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.
6.B.7(bb)	Department Approval of the Request to Waive a Pollutant Performance Test (40CFR63.7(h)(4) and 40CFR63.7(h)(5)) The Department will approve or deny a request for a waiver of a Pollutant Performance Test when it approves or denies an Extension of Compliance, approves or disapproves a site-specific Pollutant Performance Test Plan, makes a determination of compliance following the submission of a required Compliance Status Report or Excess Emissions and CMS Performance Report or makes a determination of suitable progress towards compliance following the submission of a Compliance Progress Report, whichever is applicable. Approval of any request to waive a Pollutant Performance Test shall not abrogate the Department's authority under the Clean Air Act or in any way prohibit the Department from later canceling the waiver. The cancellation will be made only after notice is given to Giant Cement.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(cc)	Final Written Reporting of Pollutant Performance Test Results (SC Regulation 61-62.1 Section IV(F) and 40CFR63.7(g)(1)) Giant Cement shall submit a Final Written Report of the final Pollutant Performance Test results to the Department by the close of business on the 30th calendar day following the completion of the test, unless an alternative date has been requested in and approved with the site-specific Pollutant Performance Test Plan prior to testing or is otherwise specified in a relevant Federal or State standard. The Final Pollutant Performance Test Report for each site-specific Pollutant Performance Test Plan shall contain, at a minimum, the applicable information specified in paragraphs (cc)(1) through (cc)(18). (cc)(1) Summary of the results. (cc)(2) Emission calculations and emission rates in units of the applicable standard, permit limit, etc. (cc)(3) Allowable emission rates in units of the applicable standard, permit limit, etc. (cc)(4) Source compliance status. (cc)(5) Process operating rates. (cc)(6) Methods including actual calculations, equations and other related information that were used to demonstrate and verify the operating rate during the performance test. (cc)(7) Chain of custody records. (cc)(8) Certification of all reference standards used. (cc)(9) Signature of a responsible facility representative who can verify process operating rates and parameters. (cc)(10) Legible copies of all raw laboratory data (for example, filter tare and final weights, titrations, chromatograms, spectrograms, analyzer measurements, etc.). (cc)(11) Legible copies of all raw field data (for example, strip charts, field data forms, field calibration forms, etc. (cc)(12) Legible copies of applicable stack gas or opacity monitoring system readings identified in the approved site-specific Pollutant Performance Test Plan. (cc)(13) Legible copies of all applicable process and air pollution control operating parameter readings identified in the approved site-specific Pollutant Performance Test Plan. (cc)(14) Results of all calibrations and QA/QC measures and checks identified in the approved site-specific Pollutant Performance Test Plan. (cc)(15) Results of performance audits. (cc)(16) Description of any deviations from the proposed process operations as approved in the site-specific Pollutant Performance Test Plan during testing. (cc)(17) Description of any deviations from approved sampling methods/procedures and analytical procedures. (cc)(18) Description of any problems encountered during sampling and analysis and an explanation of how each was resolved.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(dd)	Pollutant Performance Test Method Audit Program (SC Regulation 61-62.1 Section IV(E) and 40CFR63.7(c)(4)) Giant Cement shall analyze performance audit samples during each Comprehensive and Confirmatory Performance Test. Giant Cement shall request performance audit materials 30 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the Department. The Department will have sole discretion to require any subsequent remedial actions of Giant Cement based on the performance audit results. If the Department fails to provide the required performance audit materials to Giant Cement in time to analyze the performance audit samples during a performance test, the requirement to conduct a performance audit is waived for that performance test. Waiver under this condition of the requirement to conduct a performance audit for a particular performance test does not constitute a waiver of the requirement to conduct a performance audit for future required performance tests.
6.B.7(ee)	Pollutant Performance Testing Facilities (SC Regulation 61-62.1 Section IV(D)(6) and 40CFR63.7(d)) Since Giant Cement will be required to conduct Pollutant Performance Tests, it shall at the Department's request provide the applicable performance testing facilities as specified by paragraphs (ee)(1) through (ee)(6) of this condition. (ee)(1) Sampling ports adequate for test methods applicable to such source. This includes constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures (ee)(2) Safe sampling platform(s) and/or sites(s). (ee)(3) Safe access to sampling platform(s) and/or site(s). (ee)(4) Utilities for sampling and testing equipment. (ee)(5) Department access to the facility to observe the performance tests. (ee)(6) Equipment and supplies necessary for the safe testing of a source.
6.B.7(ff)	Reduction of COMS Data During a Pollutant Performance Test (40CFR63.6(h)(7)(iii)) For the purposes of determining compliance with an opacity emission standard during a required Pollutant Performance Test using COMS data, the COMS data shall be reduced to six(6)-minute averages over the duration of the mass emission performance test.
6.B.7(gg)	Proper Operation of a COMS During a Pollutant Performance Test (40CFR63.6(h)(7)(iv)) If Giant Cement uses a COMS for compliance purposes it is responsible for demonstrating that it has complied with the CMS performance evaluation requirements, that the COMS has been properly maintained, operated, and data quality-assured and that the resulting data have not been altered in any way.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(hh)	Conduct of Pollutant Performance Tests and Reduction of Data (40CFR63.7(e)(2) and 40CFR63.90) Pollutant Performance tests shall be conducted and the data obtained from a Pollutant Performance Test reduced in accordance with the applicable test methods and procedures unless the Department determines otherwise as specified by paragraphs (hh)(1) through (hh)(4) of this condition. (hh)(1) The Department specifies or approves, in specific cases, the use of a test method with minor changes in methodology Such changes may be approved in conjunction with approval of the site-specific Pollutant Performance Test Plan. A minor change to a test method is defined as a modification to a federally enforceable test method that does not decrease the stringency of the emission limitation or standard, has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the test method) and is site-specific, made to reflect or accommodate the operational characteristics, physical constraints, or safety concerns of an affected source. (hh)(2) The Department approves the use of an intermediate or major change or alternative to a test method the results of which the Department has determined to be adequate for indicating whether a specific affected source is in compliance. A intermediate change to test method is defined as a within-method modification to a federally enforceable test method involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally enforceable test method. In order to be approved, an intermediate change must be validated according to 40CFR63 Appendix A Method 301 to demonstrate that it provides equal or improved accuracy and precision. A major change to a test method is defined as a modification to a federally enforceable test method that uses "unproven technology or procedures" (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required test method is unsuitable). A major change to a test method may be site-specific, or may apply to one or more sources or source categories, and will almost always set a national precedent. In order to be approved, a major change must be validated according to 40CFR63 Appendix A Method 301. (hh)(3) The Department approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors. (hh)(4) The Department waives the requirement for Pollutant Performance Tests because, Giant Cement for an affected source, has demonstrated by other means to the Department's satisfaction that it is in compliance with the relevant standard.
6.B.7(ii)	Statement in Comprehensive Test Plan of Intentions to Comply with the Provisions for a Waiver of a Performance Test (40CFR63.1207(m)(7)) Giant Cement shall state in the Comprehensive and Confirmatory Test Plans that it submits for Department review and approval that it intends to comply with the provisions for the waiver of a performance test. Giant Cement shall also include in the test plan documentation that any proposed surrogate for gas flowrate adequately correlates with the gas flowrate.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(jj)	Use of COMS Data in Lieu of 40CFR60 Appendix A Method 9 Observations During a Pollutant Performance Test (40CFR63.6(h)(7)(ii) and 40CFR63.6(h)(7)(v)) Whenever an opacity emission test method has not been specified in an applicable subpart or Giant Cement is required to conduct 40CFR60 Appendix A Method 9 observations for an affected source, it may submit, for compliance purposes, COMS data results produced during any required Pollutant Performance Test in lieu of Method 9 data. If Giant Cement elects to submit COMS data for compliance with an opacity emission standard, it shall notify the Department in writing of that decision simultaneously with the notification of the date that a Pollutant Performance Test is scheduled to begin. Once Giant Cement has notified the Department to that effect, the COMS data results will be used to determine opacity compliance during subsequent Pollutant Performance Tests unless Giant Cement notifies the Department in writing to the contrary no later than with the notification of the date that a subsequent Pollutant Performance Test is scheduled to begin. Except as provided in this condition, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that Giant Cement for an affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, met 40CFR60 Appendix B Performance Specification 1 and that the resulting data have not been altered in any way.
6.B.7(kk)	Calculation of Hazardous Waste Residence Time (40CFR63.1206(b)(11)) Giant Cement shall calculate the hazardous waste residence time and include the calculation in the Comprehensive Performance Test Plan and record it in the Facility Operating Record. It must also provide the hazardous waste residence time in the Documentation of Compliance and the Notification of Compliance.
6.B.7(ll)	Additional Pollutant Performance Testing (40CFR63.7(a)(3)) The Department reserves the right to require Pollutant Performance Testing of any affected source within Giant Cement that it deems to be necessary. This includes all sources for which a particulate matter emission limit has been specified and there exists an accurate and approved EPA method for determining particulate matter emissions.
6.B.7(mm)	Required Number of Comprehensive , Confirmatory and Other Performance Test Runs (40CFR63.7(e)(3), 40CFR63.1206(b)(12) and 40CFR63.1349) Giant Cement shall conduct a minimum of three runs of a Comprehensive Performance Test, Confirmatory Performance Test and other required Performance Tests to document compliance with the emission standards of 40CFR63 Subpart EEE and 40CFR63 Subpart LLL (i.e. New Clinker Cooler). It must also document compliance with the emission standards based on the arithmetic average of the emission results of each run, except that it must document compliance with the DRE standard for each run of the Comprehensive Performance Test individually. Upon receiving approval from the Department, results of a test run may be replaced with results of an additional test run as specified in paragraphs (mm)(1) through (mm)(4) of this condition. (mm)(1) A sample is accidentally lost after the testing team leaves the site. (mm)(2) Conditions occur in which one of the three runs must be discontinued because of forced shutdown. (mm)(3) Extreme meteorological conditions occur. (mm)(4) Other circumstances occur that are beyond Giant Cement's control.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(nn)	Demonstration of Benzene-Containing Waste Treatment Process Performance (40CFR61.13(b), 40CFR61.348(c), 40CFR61.348(d), 40CFR61.348(f), 40CFR61.355(d), 40CFR61.355(e) and 40CFR61.355(f)) If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) and if a Kiln is used as a Benzene-Containing Treatment Process, then it shall conduct an initial performance test within 180 calendar days of the determination date to demonstrate that the Benzene-Waste Treatment Process (existing Kiln if still in operation or New Kiln System when placed in operation) achieves the selected performance specification specified by condition 5.E.4(g). The performance test shall use the appropriate test methods and procedures specified in 40CFR61.355(d), 40CFR61.355(e) or 40CFR61.355(f). The treatment process (existing Kiln if still in operation or New Kiln System when placed in operation) is exempt from the performance test requirements provided that Giant Cement documents that the treatment process (existing Kiln if still in operation or New Kiln System when placed in operation) is in compliance with other regulatory requirements as specified by paragraphs (nn)(1) through (nn)(4) of this condition. After the initial performance test is complete and as long as the total annual benzene quantity is equal to or greater than 10 Mg/yr then Giant Cement shall include this test in the Comprehensive Performance Test. Records of the test results shall be maintained as specified by condition 6.B.7(pp). (nn)(1) The treatment process is an industrial furnace burning hazardous waste for energy recovery for which Giant Cement has been issued a final permit under 40CFR270 and complies with the requirements of 40CFR266 Subpart D. (nn)(2) The waste stream is treated by a means or to a level that meets benzene-specific treatment standards in accordance with the Land Disposal Restrictions under 40CFR 268 and the treatment process is designed and operated with a Closed-Vent System and control device meeting the requirements of 40CFR61.349. (nn)(3) The benzene containing waste stream is treated by a means or to a level that meets benzene-specific effluent limitations or performance standards in accordance with the Effluent Guidelines and Standards under 40CFR401 through 40CFR464 and the treatment process is designed and operated with a Closed-Vent System and control device meeting the requirements of 40CFR61.349. (nn)(4) The benzene containing waste stream is discharged to an underground injection well for which Giant Cement has been issued a final permit under 40CFR270 and complies with the requirements of 40CFR122.
6.B.7(oo)	Benzene-Containing Waste Treatment Process Performance Certifications (40CFR61.356(e) and 40CFR61.356(e)(1)) When Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr then it shall maintain on-site and on-file for the life of the Benzene-Containing Waste Treatment unit (existing Kiln if still in operation or New Kiln System when placed in operation), a statement certifying that the unit is designed to operate at the documented performance level when a benzene-containing waste and/or waste stream entering the unit is at the highest waste stream flow rate and benzene content expected to occur. This statement shall contain the name, title, date and signature of the responsible official who is certifying its accuracy.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(pp)	Records of Benzene-Containing Waste Treatment Process Performance Demonstrations (40CFR61.356(e) and 40CFR61.356(e)(3)) If Giant Cement is required to conduct a performance test in accordance with condition 6.B.7(nn) to determine Benzene-Containing Waste Treatment process performance, then it shall maintain records of all test information necessary to demonstrate unit performance. The test information shall include the information specified by paragraphs (pp)(1) through (pp)(5) , kept on-site and on-file for the life of the unit and made available to Department personnel upon request. (pp)(1) A description of the Benzene-Containing Waste Treatment unit including the type of treatment process, unit manufacturer name and model number. (pp)(2) For each benzene-containing waste and/or waste stream entering and exiting a unit, a description of its type (e.g., sludge, slurry, etc.), the design flow rate and benzene content. (pp)(3) Documentation describing the test protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the unit performance. The description of the test protocol shall include sampling locations, sampling method, sampling frequency and analytical procedures used for sample analysis. (pp)(4) Records of unit operating conditions during each test run including all key process parameters. (pp)(5) All test results.
6.B.7(qq)	Pollutant Performance Test for Existing Clinker Cooler PM Emissions (SC Regulation 62.5 Standard 4 Section XII(A)(2), 40CFR63.7(g)(3), 40CFR63.1349(b)(1)(i) 40CFR63.1349(b)(1)(ii) and 40CFR63.1349(b)(1)(iii)) Until the existing clinker coolers are removed from service, Giant Cement shall demonstrate compliance with the Clinker Cooler PM emission limit specified by condition 5.E.4(h) . It shall conduct a performance test for each existing clinker cooler using 40CFR60 Appendix A Method 5. Each performance test shall consist of three(3) separate runs under the conditions that exist when each existing clinker cooler is operating at the representative performance conditions in accordance with condition 6.B.7(k). Each run shall be conducted for at least one(1) 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. A determination of the PM collected in the impingers ("back half") of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of this subpart. However, this shall not preclude the Department from requiring a determination of the "back half" for other purposes. Suitable methods shall be used to determine the Kiln or inline Kiln/raw mill feed rate, except for fuels, for each run and the emission rate (E) of PM shall be computed for each run using the equation specified by equation (qq)(1) of this condition. Pollutant Performance Tests for PM emissions from each Clinker Cooler shall be repeated every 24 months from the date of the previous performance test. Giant Cement shall conduct each performance test according to applicable Pollutant Performance Test conditions and requirements specified by this permit. A copy of the test results shall also be kept on-site and on-file for a calendar period of five(5) years from the date testing was completed and made available to Department personnel upon request. (qq)(1) $E = ((C_s)(Q_{sd}))/P$ where E = Emission rate of particulate matter, kg/Mg of Kiln feed, C_s = Concentration of PM in kg/dscm, Q_{sd} = volumetric flow rate of effluent gas, dscm/hr and P = total Kiln feed (dry basis), Mg/hr.

MONITORING AND REPORTING CONDITIONS (POLLUTANT PERFORMANCE TESTING)	
Condition Number	**Condition**
6.B.7(rr)	Data in Lieu of Conducting the Initial Comprehensive Performance Test (40CFR63.1207(c)(2)) Giant Cement may submit a request to the Department that previous emissions test data serve as documentation of initial compliance with the emission standards of this permit in lieu of conducting an initial Comprehensive Performance Test provided that the previous testing meets the requirements specified by paragraphs (rr)(1) through (rr)(4) of this condition. Giant Cement must submit data in lieu of conducting the initial Comprehensive Performance Test in lieu of (i.e., if the data are in lieu of all performance testing) or with the notification of performance test. (rr)(1) The previous testing was initiated after 54 months prior to the compliance date. This date in lieu of test age restriction does not apply for the duration of the interim standards (i.e., the standards published in the Federal Register on February 13, 2002. It also does not apply until the EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001 and does not apply to DRE data provided that Giant Cement does not feed hazardous waste at a location in the combustion system other than the normal flame zone. (rr)(2) The previous testing results in data that meet quality assurance objectives (determined on a site-specific basis) such that the results demonstrate compliance with the applicable standards. (rr)(3) The previous testing was in conducted in conformance with the requirements of condition 6.B.7(k). (rr)(4) The previous testing is sufficient to establish the applicable operating parameter limits.
6.B.7(ss)	Initial Pollutant Performance Test for Visible Emissions from Sources Subject to 40CFR63.1348 (40CFR63.7(g)(3), 40CFR63.1349(b)(2) and 40CFR63.1349(c)) Within 180 calendar days after a new source becomes subject to 40CFR63.1348 and within 180 calendar days after June 14, 2002 for the existing sources subject to 40CFR63.1348 (unless a source is removed from service) Giant Cement shall conduct an initial Pollutant Performance Test for visible emissions from that equipment. The initial performance test shall be conducted in accordance with 40CFR60 Appendix A Method 9 and under the conditions that exist when the affected sources are operating at the highest load or capacity level reasonably expected to occur. The maximum six(6)-minute average opacity exhibited during the test period shall be used to determine whether an affected source is in initial compliance with the relevant standard. The duration of the Method 9 test shall be three(3) hours (30 six(6)-minute averages), except that the test duration may be reduced to one(1)- hour if there are no individual readings greater than 10% opacity and no more than three readings of 10% for the first one(1)-hour period. Giant Cement shall conduct each performance test according to the applicable Pollutant Performance Test conditions of this permit. A copy of the test results shall also be kept on-site and on-file for a calendar period of five(5) years from the date testing was completed and made available to Department personnel upon request. This Method 9 test shall be repeated every 60 months from the date that the previous Method 9 test was completed.
6.B.7(tt)	Pollutant Performance Test for Rotary Kiln and Precalciner Coal Mill NO_x Emissions (SC Regulation 62.5 Standard 4 Section XII(A)(2), SC Regulation 61-62.99 Subpart B Section 99.44(b)(1) and SC Regulation 61-62.99 Subpart B Section 99.44(c)(3)) Unless Giant Cement complies with one of the Alternative NO_x Emission Monitoring requirements identified in condition 6.B.24(ppp), Giant Cement shall conduct a Pollutant Performance Test for NO_x emissions from each existing Kiln (if still in operation). Giant Cement may also select to conduct a Pollutant Performance Test for NO_x emissions from the New Kiln System (when placed in operation) unless Giant Cement complies with one of the Alternative NOx Emission Monitoring requirements identified in condition 6.B.24(ppp). The Pollutant Performance Test for NO_x emissions from each existing Kiln (if still in operation) and the New Kiln System (when placed in operation and if the performance testing option is selected) shall be repeated every 12 months from the date of the previous test. Giant Cement shall conduct each performance test according to applicable Pollutant Performance Test conditions and requirements specified by this permit. A copy of the test results shall also be kept on-site and on-file for a calendar period of five(5) years from the date testing was completed and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (PERIODIC VISIBLE EMISSIONS MONITORING OF SOURCES SUBJECT TO 40CFR63.1348)	
Condition Number	**Condition**
6.B.8(a)	Visible Emissions Monitoring of the Sources Subject to 40CFR63.1348 After Initial Visible Emissions Test has been Completed (40CFR63.1350(a)(4)) After the initial visible emissions test required by condition 6.B.7(ss) is complete, Giant Cement shall monitor the new sources and the existing sources (unless a source is removed from service) listed in Tables 6.46 through 6.58 for visible emissions, except for those sourced identified in Condition 6.B.8(b), by conducting while the affected sources are in operation, a monthly one(1)-minute visible emissions test in accordance with 40CFR60 Appendix A Method 22 and follow the procedure specified in paragraphs (a)(1) through (a)(4) of this condition. The Method 9 test shall begin within one hour of any observation of visible emissions. The requirement to conduct Method 22 visible emissions monitoring does not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. A totally enclosed conveying system transfer point is defined as a conveying system transfer point that is enclosed on all sides, top, and bottom. All Method 22 and Method 9 visible observations shall be documented and recorded in a log. This log shall include the date and time of each Method 22 test, if applicable the date and time of the Method 9 test, whether any Method 22 emissions were observed and if applicable the Method 9 opacity of the visible emissions. If Method 22 visible emissions are observed then the time the corrective actions specified in the operations and maintenance plan were initiated shall also be recorded in the log. This log shall be kept on-site and all entries kept for a calendar period of five(5) years from the date of log entry. (a)(1) If no visible emissions are observed in six consecutive monthly tests for any affected source, Giant Cement may decrease the frequency of testing from monthly to semiannually for that affected source. If visible emissions are observed during any semiannual test, then testing of that affected source shall resume on a monthly basis and that schedule maintained until no visible emissions are observed in six consecutive monthly tests. (a)(2) If no visible emissions are observed during the semiannual test for any affected source, Giant Cement may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, then testing of that affected source shall resume on a monthly basis and that schedule maintained until no visible emissions are observed in six consecutive monthly tests. (a)(3) If any partially enclosed or unenclosed conveying system transfer point is located in a building, Giant Cement has the option to conduct a Method 22 test according to the requirements of paragraphs (a)(1) and (a)(2) of this condition for each such conveying system transfer point located within the building, or for the building itself. (a)(4) If visible emissions from a building are monitored, the requirements of paragraphs (a)(1) and (a)(2) of this condition apply to the monitoring of the building. In addition to the requirements of paragraphs (a)(1) and (a)(2), Giant Cement shall also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

MONITORING AND REPORTING CONDITIONS (PERIODIC VISIBLE EMISSIONS MONITORING OF SOURCES SUBJECT TO 40CFR63.1348)	
Condition Number	**Condition**
6.B.8(b)	Visible Emissions Monitoring of a Finish Mill's Sweep and Air Separator PMCD After the Initial Visible Emissions Test has been Completed (40CFR63.1350(e)) After the initial visible emissions test required by condition 6.B.7(ss) is complete, Giant Cement for each Finish Mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD in accordance with the procedures of 40CFR60 Appendix A Method 22. The Method 22 monitoring shall be conducted while the affected source is operating at normal operating conditions. The duration of the Method 22 test shall be six(6) minutes. If visible emissions are observed during any Method 22 test, Giant Cement shall initiate, within one(1)-hour, the corrective actions specified in the site specific Operations and Maintenance Plan. Within 24 hours of the end of the Method 22 test in which visible emissions were observed, Giant Cement shall conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, Giant Cement shall conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with 40CFR60 Appendix A Method 9. The duration of the Method 9 test shall be 30 minutes. All Method 22 and Method 9 visible observations shall be documented and recorded in a log. This log shall include the date and time of each Method 22 test, if applicable the date and time of the Method 9 test, whether any Method 22 emissions were observed and if applicable the Method 9 opacity of the visible emissions. If Method 22 visible emissions are observed then the time the corrective actions specified in the operations and maintenance plan were initiated shall also be recorded in the log. This log shall be kept on-site and all entries kept for a calendar period of five(5) years from the date of log entry.

MONITORING AND REPORTING CONDITIONS NOTIFICATION AND DOCUMENTATION OF COMPLIANCE	
Condition Number	**Condition**
6.B.9(a)	Submittal of Notification of Compliance After Completion of Comprehensive Performance Test (40CFR63.1207(j)(1) and 40CFR63.1207(j)(4)) Within 90 calendar days of completion of a Comprehensive Performance Test, Giant Cement shall postmark a Notification of Compliance documenting compliance or noncompliance with the emission standards and CMS requirements, and identify operating parameter limits. Upon postmark of the Notification of Compliance, Giant Cement shall comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance. Giant Cement may submit a written request to the Department for a time extension documenting that, for reasons beyond its control, that it may not be able to meet the 90 calendar day deadline for submitting the Notification of Compliance after completion of testing. The Department will determine whether a time extension is warranted.
6.B.9(b)	Submittal of Notification of Compliance After Completion of Confirmatory Test (40CFR63.1207(j)(2) and 40CFR63.1207(j)(4)) Within 90 calendar days of completion of a Confirmatory Performance Test, Giant Cement shall postmark a Notification of Compliance documenting compliance or noncompliance with the applicable Dioxin/ Furan emission standard. Giant Cement may submit a written request to the Department for a time extension documenting that, for reasons beyond its control, that it may not be able to meet the 90 calendar day deadline for submitting the Notification of Compliance after completion of testing. The Department will determine whether a time extension is warranted.

MONITORING AND REPORTING CONDITIONS NOTIFICATION AND DOCUMENTATION OF COMPLIANCE	
Condition Number	**Condition**
6.B.9(c)	Notification of Compliance Status Content Requirements (40CFR63.9(h), 40CFR63.1206(c)(1)(ii) and 63.1207(j)(3)) When a source becomes subject to 40CFR63 Subpart DD, 40CFR63 Subpart EEE or 40CFR63 Subpart LLL and each time a Notification of Compliance Status is required to be submitted, Giant Cement shall submit to the Department a Notification of Compliance Status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The Notification of Compliance Status shall contain the applicable information listed in paragraphs (c)(1) through (c)(8) of this condition. The operating requirements specified in the Notification of Compliance will be incorporated in the Title V permit through the use of a Section 502(b)(10) change or a minor permit modification. (c)(1) The methods that were used to determine compliance. (c)(2) The results of any performance tests, opacity or visible emission observations, CMS performance evaluations, and/or other monitoring procedures or methods that were conducted. (c)(3)The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods. (c)(4) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard. (c)(5) An analysis demonstrating whether the affected source is a major source or an area source (using the emissions data generated for this notification). (c)(6) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method). (c)(7) A statement by Giant Cement for the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements. (c)(8) Operating requirements including, but not limited to, the operating requirements in 40CFR63.1206(c) and 40CFR63.1209.
6.B.9(d)	Failure to Submit a Timely Notification of Compliance (40CFR63.1207(k)) If Giant Cement fails to postmark a Notification of Compliance by the specified date, it shall cease hazardous waste burning immediately. Prior to submitting a revised Notification of Compliance, Giant Cement may burn hazardous waste only for the purpose of pretesting or Comprehensive Performance Testing and only for a maximum of 720 hours (renewable at the discretion of the Department). Giant Cement shall submit to the Department a Notification of Compliance subsequent to a new Comprehensive Performance Test before resuming hazardous waste burning.

MONITORING AND REPORTING CONDITIONS NOTIFICATION AND DOCUMENTATION OF COMPLIANCE	
Condition Number	**Condition**
6.B.9(e)	Interim Burning of Hazardous Waste Prior to Submitting a Notification of Compliance (40CFR63.1207(l)(3)) Giant Cement may petition the Department to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. It must specify operating requirements, including limits on operating parameters, that Giant determines will ensure compliance with the emission standards of 40CFR63 Subpart EEE based on available information including data from the failed performance test. The Department will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.
6.B.9(f)	40CFR63 Subpart EEE Documentation of Compliance (40CFR63.1211(c)) By September 30, 2003, for the existing Kilns (if still in operation) and no later than 180 calendar days after the startup of the New Kiln System, Giant Cement shall have developed a Documentation of Compliance for each which identifies the applicable emission standards of 40CFR63 Subpart EEE and operating parameters limits that will ensure compliance with the applicable emission limitations. It shall be recorded in the Facility Operating Record and include a signed and dated certification that all required CEMS and CMS are installed, calibrated and continuously operating in compliance with the applicable requirements. The certification shall also be based on an engineering evaluation prepared under Giant Cement's direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation and considered at a minimum the design, operation, and maintenance characteristics of the combustor (Kiln), emissions control equipment, the types, quantities and characteristics of feedstreams and available emissions data that Giant Cement is in compliance with the applicable emission standards and limits on the operating parameters under 40CFR63.1209 ensure compliance with the applicable emission standards of 40CFR63 Subpart EEE. Giant Cement shall comply with the emission standards and operating parameter limits specified in the documentation of compliance. This condition does not apply if Giant Cement submits a Notification of Compliance before September 30, 2003, for the existing Kilns and before the startup of the New Kiln System.

MONITORING AND REPORTING CONDITIONS OPERATION, MAINTENANCE AND COMPLIANCE	
Condition Number	**Condition**
6.B.10(a)	40CFR63 Subpart LLL Written Operations and Maintenance Plan (40CFR63.6(e)(1)(i), 40CFR63.1350(a) and 40CFR63.1350(b)) When a source becomes subject to the applicable provisions of 40CFR63 Subpart LLL, Giant Cement shall prepare for that source a written operations and maintenance plan. Each source's plan shall be submitted to the Department for review and approval no later than 180 days after the source becomes subject to 40CFR63 Subpart LLL unless the source already has a Department approved plan. Each plan shall include the applicable information listed in paragraphs (a)(1) through (a)(3) of this condition. Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard. (a)(1) The corrective actions to be taken when required by conditions 6.B.8(a) and 6.B.8(b). (a)(2) 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 40CFR63.1348. (a)(3) Procedures to be used to periodically monitor affected sources subject to opacity standards under 40CFR63.1346 and 40CFR63.1348. Such procedures shall include the provisions of condition 6.B.8(b).

MONITORING AND REPORTING CONDITIONS OPERATION, MAINTENANCE AND COMPLIANCE	
Condition Number	**Condition**
6.B.10(b)	40CFR63 Subpart EEE Operation and Maintenance Plan (40CFR63.6(e)(1)(i) and 40CFR63.1206(c)(7)(i)) By September 30, 2003, for the existing Kilns (if still in operation) and by the startup of the New Kiln System, Giant Cement shall have prepared and at all times be operating according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor (Kiln), including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants. The plan(s) shall prescribe how Giant Cement will operate and maintain the combustor (Kiln) in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test. This plan ensures compliance with the operation and maintenance requirements of 40CFR63.6(e) and minimizes emissions of pollutants, AWFCO and malfunctions. Giant Cement shall also record the plan in the Facility Operating Record.
6.B.10(c)	Changes in the Design, Operation, or Maintenance of an Existing Kiln and the New Kiln System that May Adversely Affect Compliance With Any 40CFR63 Subpart EEE Emission Standard that is not Monitored With a CEMS (40CFR63.1206(b)(5)(i) and 40CFR63.1206(b)(5)(iii)) For the purposes of this condition change is defined as any change in the design, operation, or maintenance practices that were documented in the Comprehensive Performance Test Plan, Notification of Compliance, or the 40CFR63 Startup, Shutdown and Malfunction Plan. If Giant Cement plans to change the design, operation, or maintenance practices of an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) in a manner that may adversely affect compliance with any applicable 40CFR63 Subpart EEE emission standard that is not monitored with a CEMS, it shall notify the Department at least 60 calendar days prior to the change, unless it documents the circumstances that dictate that such prior notice is not reasonably feasible. The notification shall include a description of the changes and which emission standards may be affected and a Comprehensive Performance Test schedule and test plan under) that will document compliance with the affected emission standard(s). Giant Cement must conduct a new Comprehensive Performance Test to document compliance with the affected emission standard(s) and establish operating parameter limits and submit to the Department a Notification of Compliance. After the change and prior to submitting the Notification of Compliance, Giant Cement must not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of the Department) and only for the purposes of pretesting or comprehensive performance testing. Giant Cement may petition the Department to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. It must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information. The Department will review, modify as necessary, and approve if warranted the interim operating requirements.
6.B.10(d)	Changes in the Design, Operation, or Maintenance of an Existing Kiln and the New Kiln System that Will Not Affect Compliance With Any 40CFR63 Subpart EEE Emission Standard that is not Monitored With a CEMS (40CFR63.1206(b)(5)(ii) and 40CFR63.1206(b)(5)(iii)) For the purposes of this condition change is defined as any change in the design, operation, or maintenance practices that were documented in the Comprehensive Performance Test Plan, Notification of Compliance, or the 40CFR63 Subpart EEE Startup, Shutdown and Malfunction Plan. If Giant Cement determines that a change to the design, operation, or maintenance practices of an existing Kiln (if still in operation) and the New Kiln System will not adversely affect compliance with the applicable 40CFR63 Subpart EEE emission standards or operating requirements, it shall document the change in the Facility Operating Record upon making such change. Giant Cement must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and Startup, Shutdown and Malfunction Plan to reflect these changes.

MONITORING AND REPORTING CONDITIONS OPERATION, MAINTENANCE AND COMPLIANCE	
Condition Number	**Condition**
6.B.10(e)	40CFR63 Subpart EEE Kiln Operating Requirements (40CFR63.1206(c)(1)) Giant Cement shall operate each existing Kiln (if still in operation) and the New Kiln System (when placed in operation) only under the operating requirements specified in the Documentation of Compliance or the Notification of Compliance except during performance tests under approved test plans and startups, shutdowns and malfunctions. The Documentation of Compliance and the Notification of Compliance must contain operating requirements. Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of 40CFR63 Subpart EEE. The operating requirements in the Notification of Compliance are applicable requirements for purposes of 40CFR70 and 40CFR71 and will be incorporated in the Title V permit.
6.B.10(f)	Alternative Operation of the Kilns According to 40CFR63 Subpart LLL or Other Requirements (40CFR63.1206(b)(1)(ii)) Giant Cement may submit a request to the EPA for temporary authorization to operate its existing Kilns (if still in operation) and the New Kiln System (when placed in operation) according to 40CFR63 Subpart LLL or other requirements. Once approved by the EPA, Giant Cement may operate its Kilns according to the applicable requirements of 40CFR63 Subpart LLL or other requirements provided that hazardous waste is not in an existing Kiln's or the New Kiln System's combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time). Giant Cement shall also document in the Facility Operating Record that it is complying with all applicable operating requirements and emission standards of 40CFR63 Subpart LLL or other approved emission standards in lieu of the applicable operating requirements and emission standards of 40CFR63 Subpart EEE except the modes of operation requirements of 40CFR63.1209(q).

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-01 AND FUTURE UNIT F-01 QUARRY/MARL HANDLING EQUIPMENT)	
Condition Number	**Condition**
6.B.11(a)	Conveying Saturated and Unsaturated Materials on the Quarry Conveyor Belts (40CFR60.672(b), 40CFR60.672(h) and 40CFR60.676(g)) If Giant Cement subsequently conveys unsaturated materials on one or all of the Quarry Conveyor Belts which normally convey saturated materials it shall submit a report of this change within 30 days following such change to the Department. The effected conveyor is then subject to the 10% opacity limit specified in 40CFR60.672(b) and the emission test requirements of 40CFR60.11. Likewise, if Giant Cement conveys saturated materials on one or all of the Quarry Conveyor Belts that normally conveys unsaturated material it shall submit a report of this change within 30 days following such change to the Department. The affected conveyor is then subject to the no visible emission limit specified in 40CFR60.672(h). If Giant Cement conveys unsaturated materials on one or all of the Quarry Conveyor Belts and is subject to the 10% opacity limit as specified in 40CFR60.672(b), it shall use the procedures outlined in 40CFR60.675(c) to determine compliance with this opacity limit for the affected conveyor belt.
6.B.11(b)	Physical or Operational Change in Quarry Operations (40CFR60.7(a)(4)) Giant Cement shall submit a notification of any physical or operational change to the Department which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40CFR60.14(e). This notice shall be postmarked within 60 days or as soon as practicable before the change is commenced and include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Department may request additional relevant information subsequent to this notice.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-01 AND FUTURE UNIT F-01 QUARRY/MARL HANDLING EQUIPMENT)	
Condition Number	**Condition**
6.B.11(c)	Quarry Equipment Replacement (40CFR60.670(d) ,40CFR60.671, 40CFR60.676(a)) If Giant Cement replaces a piece of quarry equipment that is subject to the provisions of 40CFR60 Subpart OOO with a piece of equipment of equal or lesser size than the original piece, the replacement piece is exempt from the initial source test requirements as outlined in 40CFR60.672. Giant Cement shall also submit to the Department, the information contained in paragraphs (c)(1) through (c)(4) of this condition. The replacement piece of equipment is still subject to the opacity or no visible emission standards as applicable. If the entire production line is replaced then source testing must be conducted as specified in 40CFR60.672. Size is defined as the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a convey or belt; and the rated capacity in tons of a storage bin. (c)(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station the rated capacity in tons per hour of the existing facility being replaced and the rated capacity in tons per hour of the replacement equipment. (c)(2) For a screening operation the total surface area of the top screen of the existing screening operation being replaced and the total surface area of the top screen of the replacement screening operation. (c)(3) For a conveyor belt the width of the existing belt being replaced and the width of the replacement conveyor belt. (c)(4) For a storage bin the rated capacity in tons of the existing storage bin being replaced and the rated capacity in tons of replacement storage bins.
6.B.11(d)	Visible Emission Monitoring of Quarry Equipment Processing Unsaturated Materials (SC Regulation 61-62.70.6(a)(3)(i)(B)) If a quarry conveyor belt or quarry crusher processes unsaturated materials then Giant Cement shall monitor for visible emissions by conducting while the affected source(s) are in operation a weekly visible emissions test in accordance with 40CFR60 Appendix A Method 9, 40CFR60.675(c) and 40CFR60.11(b). All visible observations shall be documented and dated in a log. This log shall include the observation date, equipment identification, whether any visible emissions were observed and their opacity. This log shall be kept on-site and all log entries kept for a calendar period of five(5) years from the date of log entry. If visible emissions exceed the opacity limits specified in condition 5.E.1 then Giant Cement shall locate and correct the problem(s) causing the exceedance immediately. The source of any excess visible emissions and the actions taken to eliminate them shall also be recorded in the log.
6.B.11(e)	Quarry Equipment Inspections of Quarry Equipment Processing Unsaturated Materials (40CFR70.6(a)) If a quarry conveyor belt or quarry crusher processes unsaturated materials then Giant Cement shall conduct weekly equipment inspections and perform maintenance as necessary. All inspections shall be documented if any problems are found. This documentation shall include the date and time of inspection, the equipment type and its identification, clearly identify any problems(s) and list the corrective action(s) taken. All documented inspections shall be kept on-site and on-file for a calendar period of five(5) years from the date of inspection and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-13 AND FUTURE UNIT ID F-11 STEAM BOILER)	
Condition Number	**Condition**
6.B.12(a)	Permitted Steam Boiler Fuels (SC Regulation 61-62.5 Standard 2) Giant Cement is permitted to burn only natural gas and No.2 Fuel Oil with a sulfur content less than 0.15% as Steam Boiler Fuels. The use of any other substances as Steam Boiler fuel is prohibited without prior written approval from the Department. Giant Cement shall keep monthly records of the types of fuel used, sulfur content certifications for the Steam Boiler and the quantities used in each. These records shall be kept on-site and on-file for a calendar period of five(5) years from the initial recording date and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-03 AND FUTURE UNIT ID F-02 (COAL/COKE CRUSHING AND PROCESSING EQUIPMENT)	
Condition Number	**Condition**
6.B.13(a)	Visible Emission Monitoring of Uncontrolled Coal/Coke Crushing and Processing Equipment (SC Regulation 61-62.70.6(a)(3)(i)(B)) Giant Cement shall monitor for visible emissions from the 2 Coal Feeders (CH-3), 2 Coal Hoppers (CH-4), Coal Radial Stacker CH-7, Coal Storage Silo CH-16, Coal Conveyor Belt CH-13 and Coal Conveyor Belt CH-27 by observing while the affected source(s) are in operation a weekly visible emissions test. If visible emissions are observed, then a visible emission test shall be performed in accordance with 40CFR60 Appendix A Method 9. All visible observations shall be documented and dated in a log. This log shall include the observation date, equipment identification, whether any visible emissions were observed and their opacity. This log shall be kept on-site and all log entries kept for a calendar period of five(5) years from the date of log entry. If visible emissions exceed the applicable visible emission limits then Giant Cement shall locate and correct the problem(s) causing the exceedance immediately. The source of any excess visible emissions and the actions taken to eliminate them shall also be recorded in the log.
6.B.13(b)	Continuous Monitoring of Coal Mill Exhaust Gas Temperature (40CFR60.253(a)) Giant Cement shall install, calibrate, maintain and continuously operate a monitoring device for the measurement of the temperature of the gas stream at the exit of the Coal Mill Heater on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ±1.7°C (±3°F).

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(a)	Transfer of Benzene-Containing Wastes into Containers by Pumping (40CFR61.345(a)(3)) If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) then when a benzene-containing waste is transferred into a container by pumping, Giant Cement shall perform the transfer using a submerged fill pipe. The submerged fill pipe outlet shall extend to within two fill pipe diameters of the bottom of the container while the container is being loaded. During loading of the benzene-containing waste, the cover shall remain in place and all openings shall be maintained in a closed, sealed position except for those openings required for the submerged fill pipe, those openings required for venting of the container to prevent physical damage or permanent deformation of the container or cover and any openings vented through a Closed-Vent System to a control device.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(b)	Inspection of Benzene-Containing Waste Containers (40CFR61.345(b)) If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) then it shall visually inspect each cover and all openings of benzene-containing waste containers initially and quarterly thereafter to insure that they are closed and gasketed properly. All inspections shall be documented if any problems are found. This documentation shall include the date and time of inspection, container identification, clearly identify and problems found and list the corrective action(s) taken. All documented benzene-containing waste container inspections shall be kept on-site and on-file for a calendar period of five(5) years from the date of inspection and made available to Department personnel upon request.
6.B.14(c)	Air Pollution Controls for Containers Storing Benzene-Containing Wastes (40CFR61.341, 40CFR61.345(a), 40CFR61.345(a)(1), 40CFR61.345(a)(4), 40CFR61.345(b), 40CFR61.345(c), 40CFR61.350 and 40CFR61.356(h)) A container for the purposes of this condition is defined as a portable unit used to hold material. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars. If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) then for containers in which benzene-containing wastes have been placed, Giant Cement shall install, operate and maintain a cover on each container used to handle, transfer, or store benzene-containing wastes. The cover and all openings (e.g., bungs, hatches, and sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, performed initially and thereafter (if applicable) at least once per year by the methods specified in 40CFR61.355(h). Except for containers vented through a Closed-Vent System to a control device, each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection, or sampling. If the cover and Closed-Vent System operate such that the container is maintained at a pressure less than atmospheric pressure, Giant Cement may operate the system with an opening that is not sealed and kept closed at all times if the purpose of the opening is to provide dilution air to reduce the explosion hazard, the opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background and the pressure is monitored continuously to ensure that the pressure in the container remains below atmospheric pressure. Each cover and all openings shall be visually inspected initially and quarterly thereafter to ensure that they are closed and gasketed properly. When a broken seal, gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but no later than 15 calendar days after identification. Delay of repair for a broken seal, gasket or other problem is allowed if the repair is technically impossible without a complete or partial facility or unit shutdown and the repair shall occur before the end of the next facility or unit shutdown. Giant Cement shall maintain a record for each test of no detectable emissions. Each record shall include the date and time of the test, background level measured during the test and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action(s) taken, and the date the corrective action was completed.
6.B.14(d)	Inspection Requirements for Containers Using Level 3 Container Air Pollution Controls (40CFR63.926(b)) If Giant Cement uses Level 3 Container Air Pollution Controls, then it shall inspect and monitor the Closed-Vent Systems and control devices in accordance with the requirements of this permit.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(e)	Required Air Pollution Controls For Containers Having a Design Capacity greater than 0.46 m^3 (121.51 gallons) and in Light-Material Service (40CFR63.681 and 40CFR63.688(b)(3)) A container in light-material service is defined as a container that is used to manage an off-site material for which the vapor pressure of one or more of the organic constituents in the off-site material is greater than 0.3 kilopascals (kPa) at 20°C and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight. Giant Cement shall control air emissions from containers with a design capacity greater than 0.46 m^3 (121.51 gallons) in light-liquid service in accordance with the Standards for Level 2 Container Air Pollution Controls. As an alternative to meeting the Standards for Level 2 Container Air Pollution Controls, Giant Cement may choose to control air emissions from the container in accordance with the standards for Level 3 Container Air Pollution Controls.
6.B.14(f)	Standards for Level 1 Container Air Pollution Controls (40CFR63.921, 40CFR63.922(b), 63.922(c) and 63.922(f)) A container for the purposes of this condition is defined as a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars. For containers required to use Level 1 Container Air Pollution Controls, Giant Cement shall select one(1) of the container air pollution control options as specified by paragraphs (f)(1) through (f)(3) of this condition. A container used to meet the requirements of either paragraph (f)(2) or (f)(3) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the regulated-material to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability, the effects of contact with the material or its vapor managed in the container; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for container on which the cover is installed. (f)(1) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation. Giant Cement for an affected container may select to meet the applicable requirements specified in 49CFR178 (Specifications for Packagings) or 49CFR179 (Specifications for Tank Cars). No exceptions to the 49CFR178 or 49CFR179 regulations are allowed except for a lab pack that is managed in accordance with the requirements of 49CFR178 Giant Cement may comply with the exceptions for those packagings specified in 49CFR 173.12(b). Giant Cement may also select to manage the regulated material in the container in accordance with the applicable requirements specified in 49CFR107 Subpart B (Exemptions), 49CFR172 (Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements), 49CFR173 (Shippers, General Requirements for Shipments and Packaging) and 49CFR 180 (Continuing Qualification and Maintenance of Packagings). (f)(2) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum, a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a bulk cargo container equipped with a screw-type cap). (f)(3) An open-top container in which an organic vapor-suppressing barrier is placed on or over the regulated-material in the container such that no regulated-material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(g)	Transfer of Regulated Material into or out of a Container Using Level 2 Container Air Pollution Controls (40CFR63.923(c)) Transfer of regulated-material into or out of a container using Level 2 Container Air Pollution Controls shall be conducted in such a manner as to minimize exposure of the regulated-material to the atmosphere, to the extent practical, considering the physical properties of the regulated-material and good engineering and safety practices for handling flammable, ignitable, explosive, or other hazardous materials. Examples of container loading procedures that meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the regulated-material is filled, with subsequent purging of the transfer line before removing it from the container opening.
6.B.14(h)	Standards for Level 2 Container Air Pollution Controls (40CFR63.921, 40CFR63.923(b) and 40CFR63.923(f)) A container for the purposes of this condition is defined as a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars. For containers required to use Level 2 Container Air Pollution Controls, Giant Cement shall select one(1) of the container air pollution control options as specified by paragraphs (h)(1) through (h)(3) of this condition. (h)(1) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation. Giant Cement for an affected container may select to meet the applicable requirements specified in 49CFR178 (Specifications for Packagings) or 49CFR179 (Specifications for Tank Cars). No exceptions to the 49CFR178 or 49CFR179 regulations are allowed except for a lab pack that is managed in accordance with the requirements of 49CFR178 Giant Cement may comply with the exceptions for those packagings specified in 49CFR 173.12(b). Giant Cement may also select to manage the regulated material in the container in accordance with the applicable requirements specified in 49CFR107 Subpart B (Exemptions), 49CFR172 (Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements), 49CFR173 (Shippers, General Requirements for Shipments and Packaging) and 49CFR 180 (Continuing Qualification and Maintenance of Packagings). (h)(2) A container that has been demonstrated to operate with no detectable organic emissions. No detectable organic emissions is defined as no escape of organics to the atmosphere as determined using the procedure specified in 40CFR63.925(a). (h)(3) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40CFR60 Appendix A Method 27 in accordance with the procedure specified in 40CFR63.925(b).
6.B.14(i)	Required Air Pollution Controls for Containers Having a Design Capacity greater than 0.1 m^3 (26.41 gallons) and less than or equal to 0.46 m^3 (121.51 gallons) (40CFR63.688(b)(1)) Giant Cement shall control air emissions from containers with a design capacity greater than 0.1 m^3 (26.41 gallons) and less than or equal to 0.46 m^3 (121.51 gallons) in accordance with the Standards for Level 1 Container Air Pollution Controls. As an alternative to meeting the Standards for Level 1 Container Air Pollution Controls, Giant Cement may choose to control air emissions from the container in accordance with the standards for either Level 2 or Level 3 Container Air Pollution Controls.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(j)	Opening of a Closure Device or Cover for the Purpose of Adding Material to a Container Using Level 1 or Level 2 Container Air Pollution Controls (40CFR63.922(d), 40CFR63.922(d)(1), 40CFR63.923(d) and 40CFR63.923(d)(2)) Whenever a regulated-material is in a container using Level 1 or Level 2 Container Air Pollution Controls, Giant Cement shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position. Opening of a closure device or cover is allowed for the purpose of adding material to a container in one continuous operation or for when discrete quantities or batches of material intermittently are added to the container over a period of time. In the case when the container is filled to the intended final level in one continuous operation, Giant Cement shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation. In the case when discrete quantities or batches of material intermittently are added to a container over a period of time, Giant Cement shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either: the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaves the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.
6.B.14(k)	Standards for Level 3 Container Air Pollution Controls (40CFR63.921 and 40CFR63.924) A container for the purposes of this condition is defined as a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars. For containers required to use Level 3 Container Air Pollution Controls, Giant Cement shall select one(1) of the container air pollution control options as specified by paragraphs (k)(1) and (k)(2) of this condition. Safety devices may be installed and operated as necessary on any container, enclosure, Closed-Vent System, or control device used to comply with this section. A safety device is defined as a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions to prevent physical damage or permanent deformation to equipment by venting gases or vapors during unsafe conditions resulting from an unplanned, accidental, or emergency event. A safety device shall not be used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of a unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the equipment as determined by Giant Cement based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. (k)(1) A container that is vented directly through a Closed-Vent System to a control device designed and operated in accordance with the requirements of 40CFR63.693. (k)(2) A container that is vented inside an enclosure which is exhausted through a Closed-Vent System to a control device. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in 40CFR52.741 Appendix B Procedure T (Criteria for and Verification of a Permanent or Temporary Total Enclosure). The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. Giant Cement shall perform the verification procedure for the enclosure as specified in Procedure T Section 5.0 (Criteria for and Verification of a Permanent or Temporary Total Enclosure) initially when the enclosure is first installed and, thereafter, annually. The Closed-Vent System and control device shall be designed and operated in accordance with the requirements of 40CFR63.693.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(l)	Opening of a Closure Device or Cover for the Purpose of Removing Material From a Container Using Level 1 or Level 2 Container Air Pollution Controls (40CFR63.921, 40CFR63.922(d), 40CFR63.922(d)(2), 40CFR63.923(d) and 40CFR63.923(d)(2)) Whenever a regulated-material is in a container using Level 1 or Level 2 Container Air Pollution Controls, Giant Cement shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position. Opening of a closure device or cover is allowed for the purpose of removing material from a container in order to empty a container to meet the definition of an empty container. Opening of a closure device or cover is also allowed for when discrete quantities or batches of material intermittently are removed from container over a period of time and the container does not meet the definition of an empty container. An empty container may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container). In the case when discrete quantities or batches of material are removed from the container but the container does not meet the definition of an empty container, Giant Cement shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes, or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first. An empty container is defined as a container for which the container meets the conditions for an empty container specified in 40CFR261.7(b) or all regulated-material has been removed from the container except for any regulated-material that remains on the interior surfaces of the container as clingage or in pools on the container bottom due to irregularities in the container.
6.B.14(m)	Inspection Requirements for Containers using Level 1 or Level 2 Container Air Pollution Controls when a Regulated-Material is already in the Container at the time that Giant Cement first Accepts Possession of the Container and the Container is not Empty (40CFR62.921, 40CFR63.922(e), 40CFR63.923(e) , 40CFR63.926(a)(1) and 40CFR63.926(a)(3)) In the case when a regulated-material already is in a container using Level 1 or Level 2 Container Air Pollution Controls, at the time that Giant first accepts possession of the container at its facility site and the container is not empty, within 24 hours after the container has been accepted, Giant Cement shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. This inspection of the container shall be conducted on or before the date that the container is accepted at the facility (i.e., the date that the container becomes subject to the standards under 40CFR63 Subpart PP). For the purpose of this requirement, the date of acceptance is the date of signature of the facility owner or operator on the manifest or shipping papers accompanying the container. When a defect is detected, Giant Cement must either empty the regulated-material from the defective container or repair the defective container. If Giant Cement elects to empty the regulated-material from the defective container, it shall remove the regulated-material from the defective container to meet the definition of an empty container and transfer the removed regulated-material to either a container that meets the applicable standards of 40CFR63 Subpart PP or to a tank, process, or treatment unit that meets the applicable standards of 40CFR63 Subpart DD. Transfer of the regulated- material shall be completed no later than five(5) calendar days after detection of the defect. The emptied defective container must be either repaired, destroyed, or used for purposes other than management of regulated-material. If Giant elects not to empty the regulated- material from the defective container, it shall repair the defective container. First efforts at repair of the defect must be made no later than 24 hours after detection and repair must be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within five(5) calendar days, then the regulated-material must be emptied from the container and the container shall not be used to manage regulated-material until the defect is repaired. An empty container is defined as a container for which the container meets the conditions for an empty container specified in 40CFR261.7(b); or all regulated-material has been removed from the container except for any regulated-material that remains on the interior surfaces of the container as clingage or in pools on the container bottom due to irregularities in the container.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(n)	Other Allowable Openings of a Closure Device, Cover or Spring-Loaded Pressure-Vacuum Relief Valve, Conservation Vent, or Similar Type of Pressure Relief Device Which Vents to the Atmosphere (40CFR63.901, 40CFR63.922(d)(3), 40CFR63.922(d)(4), 40CFR63.922(d)(5), 40CFR63.923(d)(3), 40CFR63.923(d)(4) and 40CFR63.923(d)(5)) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal pressure operating range determined by Giant Cement based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations. Opening of a safety device is allowed at any time conditions require it to do so to avoid an unsafe condition. For the purposes of this condition, a safety device is defined as a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions to prevent physical damage or permanent deformation to equipment by venting gases or vapors during unsafe conditions resulting from an unplanned, accidental, or emergency event. A safety device shall not be used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of a unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the equipment as determined by Giant Cement based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.
6.B.14(o)	Required Air Pollution Controls For Containers Having a Design Capacity greater than 0.46 m^3 (121.51 gallons) and not in Light-Material Service (40CFR63.681 and 40CFR63.688(b)(2)) A container in light-material service is defined as a container that is used to manage an off-site material for which the vapor pressure of one or more of the organic constituents in the off-site material is greater than 0.3 kilopascals (kPa) at 20°C and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight. Giant Cement shall control air emissions from containers with a design capacity greater than 0.46 m^3 (121.51 gallons) not in light-material service in accordance with the Standards for Level 1 Container Air Pollution Controls. As an alternative to meeting the Standards for Level 1 Container Air Pollution Controls, Giant Cement may choose to control air emissions from the container in accordance with the standards for either Level 2 or Level 3 Container Air Pollution Controls.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CONTAINERS)	
Condition Number	**Condition**
6.B.14(p)	Inspection Requirements for Containers Using Container Level 1 or Level 2 Air Pollution Controls Fully or Partially Filled With Regulated-Materials And Remain Unopened On-Site For a Calendar Period of One Year or More (40CFR63.926(a)(2) and 40CFR63.926(a)(3)) In the case when a container filled or partially filled with regulated-material remains unopened at Giant Cement's facility site for a period of one(1) calendar year or more, Giant Cement shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every calendar year, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. When a defect is detected, Giant Cement must either empty the regulated-material from the defective container or repair the defective container. If Giant Cement elects to empty the regulated-material from the defective container, it shall remove the regulated-material from the defective container to meet the definition of an empty container and transfer the removed regulated-material to either a container that meets the applicable standards of 40CFR63 Subpart PP or to a tank, process, or treatment unit that meets the applicable standards of 40CFR63 Subpart DD. Transfer of the regulated- material shall be completed no later than five(5) calendar days after detection of the defect. The emptied defective container must be either repaired, destroyed, or used for purposes other than management of regulated-material. If Giant elects not to empty the regulated- material from the defective container, it shall t repair the defective container. First efforts at repair of the defect shall be made no later than 24 hours after detection and repair must be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the regulated-material must be emptied from the container and the container shall not be used to manage regulated-material until the defect is repaired. An empty container is defined as a container for which the container meets the conditions for an empty container specified in 40CFR 261.7(b); or all regulated-material has been removed from the container except for any regulated-material that remains on the interior surfaces of the container as clingage or in pools on the container bottom due to irregularities in the container.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (LIQUID WASTE FUEL STORAGE TANKS)	
Condition Number	**Condition**
6.B.15(a)	Records of Liquid Waste Fuel Storage Tank Dimensions and Capacity (40CFR60.116b(b)) Giant Cement shall keep on-site and on-file for the 52,000 gallon Liquid Waste Fuel Storage Tank (K-666) and each of the three(3) 80,000 gallon Liquid Waste Fuel Storage Tanks (K-801, K-802, K-803) a record showing the dimension of each tank and an analysis showing the capacity of each tank. These records shall be kept on-site and on-file for the life of each tank and shall be made available to Department personnel upon request.
6.B.15(b)	Liquid Waste Fuel Storage Tank Inspections (40CFR61.343(c), 40CFR63.695(b)(3)(i) and 40CFR63.695(b)(3)(ii)) Giant Cement shall visually inspect the fixed roof and the closure devices of each Liquid Waste Fuel Storage Tank yearly except as specified by condition 6.B.20(a) to check for defects that could result in air emissions. If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) then it shall inspect the fixed roof and closure devices of each Liquid Waste Fuel Storage Tank quarterly except as specified by condition 6.B.22(a). Defects include, but are not limited to, visible cracks, holes or gaps in the roof sections or between the roof and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (LIQUID WASTE FUEL STORAGE TANKS)	
Condition Number	**Condition**
6.B.15(c)	Repair of Liquid Waste Fuel Storage Tank Defects (40CFR61.343(d), 40CFR61.350(a), 40CFR61.350(b), 40CFR63.695(b)(3)(iii), 40CFR63.695(b)(3)(iv) and 40CFR63.695(b)(4)) Within 45 calendar days of detecting a Liquid Waste Fuel Storage Tank defect found during an inspection, Giant Cement shall either repair the defect or empty the tank and remove it from service. If within this 45 calendar day period the defect cannot be repaired or the tank cannot be removed from service without disrupting operations at the plant site, Giant Cement is allowed two(2) 30 calendar day extensions. If Giant Cement elects to use a 30 calendar day extension, it shall prepare and maintain documentation describing the defect, explaining why alternative storage capacity is not available and specify a schedule of actions that will ensure that the control equipment will be repaired or the tank emptied as soon as possible. When a defect is detected during an inspection of a tank that has been emptied and degassed, the defect shall be repaired before the tank is refilled. Delay of repair is allowed if the repair is technically impossible without a complete or partial facility or unit shutdown. The repair shall occur before the end of the next facility or unit shutdown. If Giant Cement is in compliance with the requirements of this condition, it also considered to be in compliance with the repair requirements of 40CFR61 Subpart FF if the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy).
6.B.15(d)	Records of Liquid Waste Fuel Storage Tank Inspections (40CFR61.356(g), 40CFR63.695(b)(3)(iv) and 40CFR63.696(e)) Giant Cement shall keep on-site and on-file a record for each tank inspection that includes the information specified by paragraphs (d)(1) through (d)(7) of this condition. These records shall be kept on-site and on-file for a calendar period of five(5) calendar years from the date of inspection and made available to Department personnel upon request. In the event that repair of a defect is delayed, Giant Cement shall also record the reason for the delay and the date that completion of repair of the defect is expected. If Giant Cement is in compliance with the requirements of this condition, it also considered to be in compliance with the tank inspection recordkeeping requirements of 40CFR61 Subpart FF if the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy). (d)(1) The date of tank inspection. (d)(2) A tank identification number (or other unique identification description). (d)(3) Each defect detected during the tank inspection. (d)(4) The location of each defect detected. (d)(5) A description of each defect detected. (d)(6) The date of detection of each defect (d)(7) A description of the corrective action(s) taken to repair each defect.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (LIQUID WASTE FUEL STORAGE TANKS)	
Condition Number	**Condition**
6.B.15(e)	Liquid Waste Fuel Storage Tank Design Requirements (40CFR60.112b(a)(3), 40CFR63.685(b)(1), 40CFR63.685(d)(3) and 40CFR63.685(g)(1)) Each Liquid Waste Fuel Storage Tank shall be covered by a fixed roof and vented directly through a Closed-Vent System to a control device. The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in each tank. Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions. The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed. The Closed-Vent System and control device shall be designed and operated in accordance with the requirements of 40CFR63.693.
6.B.15(f)	Liquid Waste Fuel Storage Tank Operational Requirements (40CFR63.681 and 40CFR63.685(g)(2)) Whenever an off-site material is being stored in a Liquid Waste Fuel Storage Tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device. Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed as specified by paragraphs (f)(1) and (f)(2) of this condition. Opening of a safety device is allowed at any time conditions require it to do so to avoid an unsafe condition. For the purpose of this condition, a safety device is defined a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions to prevent physical damage or permanent deformation to equipment by venting gases or vapors during unsafe conditions resulting from an unplanned, accidental, or emergency event. A safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of a unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the equipment as determined by Giant Cement based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive or hazardous materials. (f)(1) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, Giant Cement shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank. (f)(2) To remove accumulated sludge or other residues from the bottom of a tank.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (WASTE TRANSFER SYSTEMS)	
Condition Number	**Condition**
6.B.16(a)	Control of Air Emissions from Waste Transfer Systems (40CFR63.689(c)) Giant Cement shall control air emissions from its current and new Waste Transfer Systems by using one of requirements as appropriate for the transfer system as specified in paragraphs (a)(1) through (a)(3) of this condition. (a)(1) A waste transfer system that uses covers. (a)(2) A waste transfer system that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi- permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed flange). (a)(3) A waste transfer system that is enclosed and vented through a closed- vent system to a control device. The transfer system shall be designed and operated such that an internal pressure in the vapor headspace in the enclosure is maintained at a level less than atmospheric pressure when the control device is operating and the Closed-Vent System and control device are designed and operated in accordance with applicable requirements of this permit.
6.B.16(b)	Required Inspections for Waste Transfer Systems Equipped with Covers (40CFR63.689(d)(6) and 40CFR63.695(d)) Giant Cement shall visually inspect each cover and its closure devices to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover sections or between the cover and its mounting; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case when a transfer system is buried partially or entirely underground, inspection is required only for those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., access hatches, etc.) and can be opened to the atmosphere. Giant Cement shall perform an initial inspection following installation of each cover. Thereafter, Giant Cement shall perform the inspections annually except as provided for in condition 6.B.20(a). In the event that a defect is detected, Giant Cement shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection. Repair of a defect may be delayed beyond 45 calendar days if Giant Cement determines that repair of the defect requires emptying or temporary removal from service of the transfer system and no alternative transfer system is available at the site to accept the material normally handled by the system. In this case, Giant Cement shall repair the defect the next time the process or unit that is generating the material handled by the transfer system stops operation. Repair of the defect shall be completed before the process or unit resumes operation. All inspections shall be documented if any problems are found. This documentation shall include the date and time of inspection, clearly identify any problems and list the corrective action(s) taken. All documented inspections shall be kept on-site and on-file for a calendar period of five(5) years from the date of inspection and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (WASTE TRANSFER SYSTEMS)	
Condition Number	**Condition**
6.B.16(c)	Requirements for Waste Transfer Systems Equipped with Covers (40CFR63.689(d)) A Waste Transfer System using covers shall meet the requirements specified in paragraphs (c)(1) through (c)(5) of this condition. (c)(1) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the off-site material as it is conveyed by the transfer system except for the openings at the inlet and outlet to the transfer system through which the off-site material passes. The inlet and outlet openings used for passage of the off-site material through the transfer system shall be the minimum size required for practical operation of the transfer system. (c)(2) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section joints or between the interface of the cover edge and its mounting. (c)(3) Except for the inlet and outlet openings to the transfer system through which the off-site material passes, each opening in the cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device. (c)(4) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the material or its vapors conveyed in the transfer system; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the transfer system on which the cover is installed. (c)(5) Whenever an off-site material is in the transfer system, the cover shall be installed with each closure device secured in the closed position. Opening of closure devices or removal of the cover is allowed to provide access to the transfer system for performing routine inspection, maintenance, repair, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a hatch or remove the cover to repair conveyance equipment mounted under the cover or to clear a blockage of material inside the system. Following completion of the activity, Giant Cement shall promptly secure the closure device in the closed position or reinstall the cover, as applicable. Opening of a safety device is allowed at any time conditions require it to do so to avoid an unsafe condition.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CLOSED-VENT SYSTEMS)	
Condition Number	**Condition**
6.B.17(a)	Inspection and Monitoring Requirements for Closed-Vent Systems Designed to Operate at a Pressure below Atmospheric Pressure (40CFR63.695(c)(2)(i) and 40CFR63.695(c)(2)(ii)) For closed-vent systems designed to operate at a pressure below atmospheric pressure, Giant Cement shall visually inspect the Closed-Vent System to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping; loose connections; or broken or missing caps or other closure devices. This inspection shall be performed at initial startup following installation of the Closed-Vent System. Thereafter, the inspections shall be performed annually except as provided for in condition 6.B.20(a).
6.B.17(b)	Closed-Vent System Design Requirements (40CFR60.112b(a)(3)(i), 40CFR61.349(a) and 40CFR63.693(c)(1)) The vent stream required to be controlled from each Liquid Waste Fuel Storage Tank shall be conveyed to the control device using one(1) of the Closed-Vent System design specifications as listed in paragraphs (b)(1) and (b)(2) of this condition. If Giant Cement is in compliance with the requirements of this condition, it also considered to be in compliance with the Closed-Vent System design requirements of 40CFR61 Subpart FF if the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy). (b)(1) A Closed-Vent System that is designed to operate with no detectable organic emissions using the procedure specified in 40CFR63.694(k). (b)(2) A Closed-Vent System that is designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one(1) pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the Closed-Vent System when the control device is operating.
6.B.17(c)	Inspection and Monitoring Requirements for Closed Vent Systems Designed to Operate with No Detectible Organic Emissions (40CFR63.695(c)(1)(i) and 40CFR63.695(c)(1)(ii)) For Closed-Vent Systems designed to operate with no detectible organic emissions, Giant Cement shall visually inspect Closed-Vent System joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) at initial startup and then annually to check for defects that could result in air emissions. Giant Cement shall monitor a component or connection using the procedures specified in 40CFR63.694(k) to demonstrate that it operates with no detectable organic emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted). Closed-Vent System components or connections other than those specified in this condition shall also be monitored annually using the procedures specified in 40CFR63.694(k) to demonstrate that components or connections operate with no detectable organic emissions.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CLOSED-VENT SYSTEMS)	
Condition Number	**Condition**
6.B.17(d)	Records of Closed-Vent System Inspections (40CFR63.695(c)(1)(iv), 40CFR63.695(c)(2)(iv) and 40CFR63.696(e)) Giant Cement shall keep on-site and on-file a record for each Closed-Vent System inspection that includes the information specified by paragraphs (d)(1) through (d)(6) of this condition. These records shall be kept on-site and on-file for a calendar period of five(5) calendar years from the date of inspection and made available to Department personnel upon request. In the event that repair of a defect is delayed, Giant Cement shall also record the reason for the delay and the date that completion of repair of the defect is expected. (d)(1) The date of the Closed-Vent System inspection. (d)(2) Each defect detected during the Closed-Vent System inspection. (d)(3) The location of each defect detected. (d)(4) A description of each defect detected. (d)(5) The date of detection of each defect. (d)(6) A description of the corrective action(s) taken to repair each defect.
6.B.17(e)	Repair of Closed-Vent System Defects (40CFR63.695(c)(1)(iii), 40CFR63.695(c)(2)(iii) and 40CFR63.695(c)(3)) Giant Cement shall make first efforts at repair of a Closed-Vent System defect found during an inspection no later than five(5) calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection. Repair of a defect may be delayed beyond 45 calendar days if either completion of the repair is technically infeasible without the shutdown of the process or unit that vents to a Closed-Vent System or Giant Cement determines that the air emissions resulting from the repair of the defect within the specified period would be greater than the fugitive emissions likely to result by delaying the repair until the next time the process or unit that vents to the Closed-Vent System is shutdown. In this case, Giant Cement shall repair the defect the next time the process or unit that vents to the closed- vent system is shutdown. Repair of the defect shall be completed before the process or unit resumes operation.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (CLOSED-VENT SYSTEMS)	
Condition Number	**Condition**
6.B.17(f)	Closed-Vent System Bypass Devices (40CFR63.693(c)(2)) In situations when a Closed-Vent System includes bypass devices that could be used to divert a vent stream from the Closed-Vent System to the atmosphere at a point upstream of the control device inlet, each bypass device shall be equipped with either a flow indicator or a seal or locking device. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, or pressure relief valves needed for safety reasons are not subject to the requirements of this condition. If a flow indicator is used, the indicator shall be installed at the entrance to the bypass line used to divert the vent stream from the Closed-Vent System to the atmosphere. The flow indicator must indicate a reading at least once every 15 minutes. Giant Cement shall maintain records of the information specified by paragraphs (f)(1) through (f)(3) of this condition for the flow indicator. If a seal or locking device is used, the bypass line valve shall be secured in the non-diverting position with a car-seal or a lock-and-key type configuration. The seal or locking device must be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the non-diverting position such that the bypass device cannot be moved to the diverting position without breaking the seal or removing the lock. Giant Cement shall visually inspect the seal or closure mechanism monthly to determine that the bypass line valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. All records required by this condition shall be kept on-site and on-file for a calendar period of five(5) years from the date of record and made available to Department personnel upon request. (f)(1) Hourly records of whether the flow indicator was operating and whether flow was detected at any time during the hour. (f)(2) Records of all periods when flow is detected. (f)(3) Records for all periods when the flow indicator is not operating.
6.B.17(g)	Closed-Vent System Performance Certifications (40CFR61.356(f) and 40CFR61.356(f)(1)) Once the total annual benzene quantity is equal to or greater than 10 Mg/yr, Giant Cement shall maintain on-site and on-file for the life of the Closed-Vent System, a statement certifying that it is designed to operate at the documented performance level when a benzene-containing waste management unit vented to the control device is or would be operating at the highest load or capacity expected to occur. This statement shall contain the name, title, date and signature of the responsible official who is certifying its accuracy.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (EQUIPMENT LEAKS)	
Condition Number	**Condition**
6.B.18(a)	Equipment Leaks (40CFR63.691(b)) For sources subject to condition 6.B.18(b), Giant Cement shall select to control the HAP emitted from equipment leaks in accordance with the applicable provisions specified in 40CFR61 Subpart V (National Emission Standards for Equipment Leaks) or 40CFR63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants from Equipment Leaks). Giant Cement shall document in the Facility Operating Record the subpart selected. It shall also document the change if it changes the subpart used.
6.B.18(b)	Affected Source for Equipment Leaks (40CFR63.680(c)(3) and 40CFR63.681)) For Giant Cement's off-site waste management operation, the affected source for equipment leaks is the entire group of equipment components for which each component meets all of the requirements specified in (b)(1) through (b)(3) of this condition. If any one of those requirements do not apply to an equipment component, then that component is not part of the affected source for equipment leaks. (b)(1) The equipment component is a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, or instrumentation system. (b)(2) The equipment component contains or contacts off-site material having a total HAP concentration equal to or greater than 10% by weight. (b)(3) The equipment component is intended to operate for 300 hours or more during a calendar year in off-site material service. Off-site material service is defined as any time when a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, or instrumentation system contains or contacts off-site material.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)	
Condition Number	**Condition**
6.B.19(a)	Establishment of Vapor Incinerator (Kiln) Minimum and/or Maximum Operating Temperature (40CFR63.695(e)(3) and 40CFR63.695(e)(3)(i)) During the Comprehensive Performance Test, Giant Cement shall establish a minimum operating temperature value, maximum operating temperature value or both, as appropriate, to define the range of conditions at which each existing Vapor Incinerator (existing Kiln) (if still in operation) and the New Vapor Incinerator (New Kiln System) (when placed in operation) must be operated to continuously achieve the selected Vapor Incinerator performance requirement. The minimum or maximum operating temperature value must be established based on values measured during the performance test to demonstrate Vapor Incinerator (Kiln) performance and supplemented, as necessary, by the Vapor Incinerator (Kiln) design specifications, manufacturer recommendations or other applicable information.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)	
Condition Number	**Condition**
6.B.19(b)	Vapor Incinerator (Kiln) Continuous Temperature Monitoring (40CFR61.354(a)(2), 40CFR61.354(c)(1), 40CFR63.695(e)(1) and 40CFR63.695(e)(2)) When an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) is used as a Vapor Incinerator, Giant Cement shall ensure that it complies with the selected Vapor Incinerator performance specification by calibrating, maintaining and operating a temperature monitoring system to continuously monitoring its operating temperature. Using the data recorded by the temperature monitoring system, Giant Cement shall calculate the daily average value for the operating temperature of each Vapor Incinerator (Kiln) for each operating day. If operation of each Vapor Incinerator (Kiln) is continuous, the operating day is a 24-hour period. If Vapor Incinerator (Kiln) operation is not continuous, the operating day is the total number of hours of operation per 24-hour period. Valid data points must be available for 75% of the operating hours in an operating day to compute the daily average. Giant Cement shall inspect the recorded temperature data at least once during the operating day to ensure that the Vapor Incinerator is operating properly.
6.B.19(c)	Records of Carbon Adsorption System and Vapor Incinerator (Kiln) Planned Routine Maintenance (40CFR63.696(g)) Giant Cement shall record, on a semiannual basis, a description of the planned routine maintenance that is anticipated to be performed for the Carbon Adsorption System and each existing Vapor Incinerator (existing Kiln) (if still in operation) and the New Vapor Incinerator (New Kiln System) (when placed in operation) during the next six(6) months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods. A description of the planned routine maintenance that was performed for the Carbon Adsorption System and each Vapor Incinerator (Kiln) during the previous six(6) months shall also be recorded. This description shall include the type of maintenance performed and the total number of hours during these six(6) months that the Carbon Adsorption System or each Vapor Incinerator did not meet the selected Vapor Incinerator performance requirement due to planned routine maintenance. Records of this information shall be kept on-site and on-file for a calendar period of five(5) years from the initial recording date and made available to Department personnel upon request.
6.B.19(d)	Bypassing of all Vapor Incinerators (Kilns) and the Carbon Adsorption System for Performing Routine Maintenance on the Closed-Vent System (40CFR63.693(b)(3)) In the event that all the existing Vapor Incinerators (existing Kilns) (if still in operation), the New Vapor Incinerator (New Kiln System) (when placed in operation) and the Carbon Adsorption System need to be bypassed for the purpose of performing planned routine maintenance of the Closed-Vent System in situations when routine maintenance cannot be performed during periods that the emission point vented to a Vapor Incinerator (Kiln) and the Carbon Adsorption System is shutdown, the total time on an annual basis that all control devices are bypassed to perform routine maintenance and emissions vented to the atmosphere shall not exceed 240 hours per each calendar year. All control devices may also be bypassed for the purpose of correcting a malfunction of the closed- vent system, Carbon Adsorption System or a Vapor Incinerator (Kiln). Giant Cement shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected. A log shall be maintained that details the bypassing of all control devices. This log shall include the starting date and time of each bypass, the reason for each bypass, the ending date and time of each bypass, the total number of hours for each bypass and a running total of the number of hours of all bypasses. The log shall also indicate the starting and ending date of each calendar year. At the end of each calendar year the total number of hours of all bypasses shall be reset to zero. In situations when the Closed-Vent System includes bypass devices that could be used to divert a vent stream from the Closed-Vent System to the atmosphere at a point upstream of the control device inlet, each bypass device shall be equipped with either a flow indicator, seal or locking device.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)	
Condition Number	**Condition**
6.B.19(e)	Vapor Incinerator (Kiln) Operating Temperature Excursions (40CFR63.695(e)(4), 40CFR63.695(e)(5), 40CFR63.695(e)(6) and 40CFR63.695(e)(7)) A Vapor Incinerator (Kiln) operating temperature excursion is determined to have occurred when the temperature monitoring data or lack of monitoring data result in any one of the criteria specified in paragraphs (e)(1) through (e)(3) of this condition. When multiple operating parameters are monitored for a Vapor Incinerator (Kiln) and during the same operating day more than one of these operating parameters meets an excursion criterion specified in paragraphs (e)(1) through (e)(3) of this condition, then a single excursion is determined to have occurred for the Vapor Incinerator (Kiln) for that operating day. For each excursion, except as specified in this condition, Giant Cement shall be deemed to have failed to have applied control in a manner that achieves the required operating parameter limits. Failure to achieve the required operating parameter limits is a violation of 40CFR63 Subpart DD. An excursion is not a violation nor does it count toward the number of allowed excused excursions when the excursion occurs during a period of startup, shutdown or malfunction when the affected source is operated during such period in accordance with its Startup, Shutdown and Malfunction Plan or during periods of non-operation of the unit or the process that is vented to the Vapor Incinerator (Kiln) (resulting in cessation of HAP emissions to which the monitoring applies). For each Vapor Incinerator (Kiln) one(1) excused excursion is allowed per semiannual period for any reason. Nothing in this condition shall be construed to allow or excuse an operating temperature excursion caused by any activity that violates other applicable provisions. (e)(1) A Vapor Incinerator (Kiln) operating temperature excursion occurs when the daily average value of the monitored operating temperature is less than the minimum operating temperature limit (or, if applicable, greater than the maximum operating temperature limit) established for the Vapor Incinerator operating temperature in accordance with the requirements of condition 6.B.19(a). (e)(2) A Vapor Incinerator (Kiln) operating excursion occurs when the period of Vapor Incinerator (Kiln) operation is four(4) hours or greater in an operating day and the monitored operating temperature data is insufficient to constitute a valid hour of data for at least 75% of the operating hours. Monitoring operating temperature data is insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour. (e)(3) A Vapor Incinerator (Kiln) operating temperature excursion occurs when the period of Vapor Incinerator operation is less than four(4) hours in an operating day and more than one(1) of the hours during the period does not constitute a valid hour of data due to insufficient monitoring data. Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour.
6.B.19(f)	Summary Report of All Vapor Incinerator (Kiln) Operating Temperature Excursions (40CFR61.357(d)(7), 40CFR61.357(d)(7)(ii) and 40CFR63.697(b)(4)) Giant Cement shall submit a semiannual Summary Report of all Vapor Incinerator (Kiln) operating temperature excursions. If the total annual benzene quantity is greater than or equal to 10 Mg/yr (11 tpy) then the Summary Report shall be submitted quarterly. The summary report shall include a description of Vapor Incinerator (Kiln) operating temperature excursions that have occurred during the reporting period. For each excursion caused when the daily average value of the monitored Vapor Incinerator (Kiln) operating temperature is less than the minimum operating temperature (or, if applicable, greater than the maximum operating temperature), the report shall include the daily average values of the monitored operating temperature, the applicable operating temperature limits and the date and duration of the period that the exceedance occurred. For each excursion caused by lack of monitoring data, the report shall include the date and duration of period when the monitoring data were not collected and the reason why the data were not collected.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)	
Condition Number	**Condition**
6.B.19(g)	Management of Used Carbon from the Carbon Adsorption System (40CFR63.693(d)(4)(ii)) Giant Cement shall regenerate, reactivate or burn the spent carbon removed from the Carbon Adsorption System by using one(1) of the options listed in paragraphs (g)(1) through (g)(7) of this condition. (g)(1) Regenerated or reactivated in a thermal treatment unit equipped with and operating air emission controls in accordance with 40CFR63.693. (g)(2) Regenerated or reactivated in a thermal treatment unit for which the owner or operator has been issued a final permit under 40CFR270 that implements the requirements of 40CFR 264, Subpart X. (g)(3) Regenerated or reactivated in a thermal treatment unit equipped with and operating organic air emission controls in accordance with a national emission standard for hazardous air pollutants under another subpart in 40CFR63 or 40CFR61. (g)(4) Burned in a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40CFR270 that implements the requirements of 40CFR264, Subpart O. (g)(5) Burned in a boiler or industrial furnace for which the owner or operator has been issued a final permit under 40CFR270 that implements the requirements of 40CFR266 Subpart H. (g)(6) Burned in a boiler or industrial furnace for which the owner or operator has designed and operates the unit in accordance with the interim status requirements of 40CFR266 Subpart H. (g)(7) Burned in a hazardous waste incinerator for which the owner or operator has designed and operates the incinerator in accordance with the interim status requirements of 40CFR265 Subpart O.
6.B.19(h)	Records of Unexpected Carbon Adsorption System and Vapor Incinerator (Kiln) Malfunctions (40CFR63.696(h)) Giant Cement shall record the information specified in paragraphs (h)(1) through (h)(3) of this condition for those unexpected Carbon Adsorption System, existing Vapor Incinerator (existing Kiln) (if still in operation) and New Vapor Incinerator (New Kiln System) (when placed in operation) malfunctions that would require the Carbon Adsorption System or a Vapor Incinerator (Kiln) not to meet the selected Vapor Incinerator performance requirement. Records of this information shall be kept on-site and on-file for a calendar period of five(5) years from the initial recording date and made available to Department personnel upon request. (h)(1) The occurrence and duration of each malfunction of the Carbon Adsorption System or a Vapor Incinerator. (h)(2) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the Closed-Vent System to the Carbon Adsorption System or a Vapor Incinerator while it is not properly functioning. (h)(3) Actions taken during periods of malfunction to restore the malfunctioning Carbon Adsorption System or a Vapor Incinerator (Kiln) to its normal or usual manner of operation.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (VAPOR INCINERATOR AND CARBON ADSORPTION SYSTEM)	
Condition Number	**Condition**
6.B.19(i)	Carbon Adsorption System Operating Parameters (40CFR61.354(e) and 40CFR63.693(d)(3)(iii)) Giant Cement shall keep a log on-site that details the usage of the carbon in the Carbon Adsorption System units. This log shall include the date, start-up time, shut down time and the number of hours that the units were operated during solvent and tank farm operations.(i.e. solvent tank truck and railcar processing) A running total of use hours for the current carbon contained in each unit shall also be maintained in the log. A running total of all yearly Carbon Adsorption System usage hours shall also be recorded. Each log entry shall be kept for a period of five(5) years from the date of entry and the log shall be made available to Department personnel upon request. Giant Cement shall monitor the carbon adsorption system units for breakthrough once an hour after the carbon exceeds 29 total hours of use for one unit or 58 total hours of use for two units connected in series. After this period, Giant Cement shall monitor until breakthrough occurs and this monitoring shall be recorded in the log. The sampling time, inlet concentration, outlet concentration and percentage of removal shall be recorded in the log. The percentage of removal shall be calculated as specified in paragraph (i)(1) of this condition. The monitoring method to be used shall be 40CFR60 Appendix A Method 21 and Giant Cement shall follow all method requirements. The hour of breakthrough shall also be recorded in the log. The carbon shall be replaced immediately after breakthrough occurs and the date of carbon replacement recorded in the log. Once the carbon has been replaced the running total of use hours shall be reset to zero(0). Giant Cement also has the option of not monitoring for breakthrough and replacing the carbon once the limit of total use hours have been reached. If the total of use hours for the Carbon Adsorption System exceeds 876 hours in a calendar year (January 1 through December 31 of each year) then Giant Cement shall notify the Department in writing. The Department will then determine if the installation of a continuous monitoring system will be required. (i)(1) $\text{Removal \%} = \dfrac{(\text{Inlet Concentration} - \text{Outlet Concentration})}{\text{Inlet Concentration}}$

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (ALTERNATIVE INSPECTION AND MONITORING INTERVAL)	
Condition Number	**Condition**
6.B.20(a)	Alternative Inspection and Monitoring Intervals for the Liquid Waste Fuel Storage Tanks, Waste Transfer Systems and the Closed-Vent System (40CFR63.695(f)) Following the initial inspection and monitoring of the Liquid Waste Fuel Storage Tanks, Waste Transfer Systems and Closed-Vent System in accordance with the applicable inspection and monitoring requirements, subsequent inspection and monitoring of the affected equipment may be performed at intervals longer than specified in this permit when Giant Cement determines that performing the required inspection or monitoring procedures would expose a worker to dangerous, hazardous or otherwise unsafe conditions. Giant Cement shall prepare and maintain at the plant site written documentation that identifies the specific equipment designated as unsafe to inspect and monitor. The documentation shall include for each piece of equipment designated as such a written explanation of the reasons why it is unsafe to inspect or monitor using the applicable inspection and monitoring requirements. Giant Cement shall develop and implement a written plan and schedule to inspect and monitor the affected equipment using the applicable inspection and monitoring requirements during times when a worker can safely access it. The required inspections and monitoring shall be performed as frequently as practicable but do not need to be performed more frequently than as specified in this permit. A copy of the written plan and schedule shall be maintained at the plant site and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)	
Condition Number	**Condition**
6.B.21(a)	Calculation of Total Annual Benzene Quantity (40CFR61.342(a) and 40CFR61.355(c)(1)(i)(C)) The total annual benzene quantity is defined as the sum of the annual benzene quantity for each waste and/or waste stream at the facility that has a flow-weighted annual average water content greater than 10% or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10%. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Other specific requirements for calculating the total annual benzene waste quantity are specified in paragraphs (a)(1) through (a)(4) of this condition. (a)(1) Wastes that are exempted from treatment shall be included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10% or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10%. (a)(2) The benzene in a material subject to 40CFR61 Subpart FF that is sold shall be included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10%. (a)(3) Benzene in wastes generated by remediation activities conducted at Giant Cement, such as the excavation of contaminated soil, pumping and treatment of groundwater and the recovery of product from soil or groundwater shall not be included in the calculation of total annual benzene quantity. If the total annual benzene quantity is 10 Mg/yr (11 ton/yr) or more, wastes generated by remediation activities are subject to the treatment requirement of condition 6.B.21(m). If Giant Cement is managing remediation waste generated off-site, the benzene in this waste shall be included in the calculation of total annual benzene quantity if the waste streams have an annual average water content greater than 10% or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10%. (a)(4) The total annual benzene quantity shall be determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except the determination for wastes that are received from off-site shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.
6.B.21(b)	Transfer of Benzene-Containing Wastes and/or Waste Streams for Off-Site Treatment (40CFR61.342(f) and 61.356(c)) If the total annual benzene quantity is greater than or equal to 10 Mg/yr (11 tpy) and rather than treating a benzene-containing waste or waste stream on-site, Giant Cement may elect to comply with condition 6.B.21(m) by transferring the waste and/or waste stream off-site to another facility where the waste is treated in accordance with the requirements of condition 6.B.20(m) with the applicable conditions of this permit for each waste management unit that receives or manages the waste and/or waste stream prior to off-site shipment. Giant Cement shall also include with each off-site waste and/or waste stream shipment a notice stating that it contains benzene which is required to be managed and treated in accordance with the provisions of 40CFR61 Subpart FF. Giant Cement shall maintain documentation for each off-site waste and/or waste stream shipment that includes the date shipped off-site, quantity of waste shipped offsite, name and address of the receiving facility and a copy of the notice sent with the shipment.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)	
Condition Number	**Condition**
6.B.21(c)	Content of Report for Total Annual Benzene Quantity (40CFR61.357(a)) Giant Cement shall submit a report to the Department that summarizes the regulatory status of each waste and/or waste stream subject to 40CFR61.342 that is determined by the procedures specified in 40CFR61.355(c) to contain benzene. The report shall contain the total annual benzene quantity determined in accordance with condition 6.B.21(a) and a table identifying each waste and/or waste stream and whether or not it is controlled for benzene emissions in accordance with the requirements of 40CFR61 Subpart FF. For each waste and/or waste stream identified as not being controlled for benzene emissions in accordance with the requirements of 40CFR61 Subpart FF, the information listed in paragraphs (c)(1) through (c)(6) shall be added to the table. (c)(1) Whether or not the water content of the waste stream is greater than 10%. (c)(2) Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate. (c)(3) Annual waste quantity for the waste stream. (c)(4) Range of benzene concentrations for the waste stream. (c)(5) Annual average flow-weighted benzene concentration for the waste stream. (c)(6) Annual benzene quantity for the waste stream.
6.B.21(d)	Frequency of Reporting for the Total Annual Benzene Quantity less than 1 Mg/yr (40CFR61.357(b)) If the total annual benzene quantity is less than 1 Mg/yr (1.1 ton/yr), then Giant Cement shall submit to the Department a report containing the information listed in condition 6.B.21(c) whenever there is a change that could cause the total annual benzene quantity to increase to 1 Mg/yr (1.1 ton/yr) or more. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after change.
6.B.21(e)	Frequency of Reporting for the Total Annual Benzene Quantity Between 1 Mg/yr and 10 Mg/yr (40CFR61.357(c)) If the total annual benzene quantity is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 ton/yr), then Giant Cement shall submit to the Department an annual report containing the information listed condition 6.B.21(c). The report shall also be submitted whenever there is a change that could cause the total annual benzene quantity to increase to 10 Mg/yr (11 ton/yr) or more. If the information in the annual report is not changed in the following year, then Giant Cement may submit a statement to that effect. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period or change.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)	
Condition Number	**Condition**
6.B.21(f)	Frequency of Reporting for the Total Annual Benzene Quantity Equal to or Greater than 10 Mg/yr (40CFR61.357(d), 40CFR61.357(d)(2) and 40CFR61.357(d)(3)) If the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 ton/yr), then Giant Cement shall submit to the Department an annual report containing the information listed condition 6.B.21(c). If the information in the annual report is not changed in the following year, then Giant Cement may submit a statement to that effect. If Giant Cement elects to comply with the requirements of condition 6.B.21(n) for the exemption of wastes, then the report shall also include a table identifying each waste stream chosen for exemption and the total annual benzene quantity in those exempted streams.
6.B.21(g)	Mixing of Benzene-Containing Waste and/or Waste Streams for Treatment (40CFR61.348(a)(3) and 40CFR61.348(a)(4)) If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 tpy) and if Giant Cement elects to comply with the performance specification of 5.E.4(e)(1), then the intentional or unintentional reduction in the benzene concentration of a waste and/or waste stream by dilution of the waste and/or waste stream with other wastes or materials is prohibited. Giant Cement may aggregate or mix together individual waste and/or waste streams to create a combined waste and/or waste stream for the purpose of facilitating treatment to comply with the requirements of condition 5.E.4(e)(2) and 5.E.4(e)(3).
6.B.21(h)	Records that Identify Benzene-Containing Wastes and/or Waste Streams (40CFR61.356(a) and 40CFR61.356(b) and 40CFR61.356(b)(1)) Giant Cement shall maintain records that identify each waste and/or waste stream subject to 40CFR61 Subpart FF and indicate whether or not it is controlled for benzene in accordance with its requirements. In addition, Giant Cement shall also maintain records for each waste and/or waste stream not controlled for benzene emissions in accordance with 40CFR61 Subpart FF including all test results, measurements, calculations and other documentation used to determine waste and/or waste stream identification, water content, whether or not the waste and/or waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration and annual benzene quantity.
6.B.21(i)	Records of Benzene-Containing Wastes and/or Waste Streams Exempt from Treatment (40CFR61.356(b)(2) and 40CFR61.356(b)(2)(ii)) For each benzene-containing waste and/or waste stream exempt from treatment, Giant Cement shall maintain records that shall include all measurements, calculations and other documentation used to determine that the sum of the total annual benzene quantity in all exempt waste streams does not exceed 2.0 Mg/yr (2.2 tpy).
6.B.21(j)	Measurements of Benzene-Containing Waste and/or Waste Stream Concentration After Treatment (40CFR61.354(a)(1) and 40CFR61.356(i)(2)) If Giant Cement elects to comply with the performance specification of 5.E.4(e)(1), then it shall measure the benzene concentration of the waste and/or waste stream exiting the treatment process monthly by collecting and analyzing one or more samples using the procedures specified in 40CFR61.355(c)(3). Giant Cement shall maintain records that include the test date all test results. Records of test results shall be maintained on-site and on-file for a calendar period of five(5) years from the test date and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (BENZENE-CONTAINING WASTES)	
Condition Number	**Condition**
6.B.21(k)	Quarterly Report of Benzene-Containing Waste Treatment Process Exit Concentration Exceedances (40CFR61.357(d) and 40CFR61.357(d)(7)(i)) If Giant Cement elects to comply with the performance specification of 5.E.4(e)(1) , then it shall submit a quarterly report of each period of operation during which the concentration of benzene in the monitored waste stream exiting the treatment process is equal to or greater than 10 ppmw. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period.
6.B.21(l)	Quarterly Certifications of Waste Management Unit and Associated Air Pollution Control Equipment Inspections (40CFR61.357(d)(6)) If the total annual benzene quantity is greater than or equal to 10 Mg/yr (11 tpy), Giant Cement shall submit quarterly certifications to the Department that certify all of the inspections required by this permit for the waste management units and associated air pollution control equipment have been carried out in accordance with the applicable requirements. All certifications shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period.
6.B.21(m)	Treatment Requirements for Benzene-Containing Wastes and/or Waste Streams (40CFR61.342(b) and 40CFR61.342(c)) If Giant Cement determines that the total annual benzene quantity is equal to or greater than 10 Mg/yr (11 ton/yr) and decides not to ship the waste off-site for treatment, then for each waste and/or waste stream that contains benzene, including (but not limited to) organic waste streams that contain less than 10% water and aqueous waste streams, Giant Cement shall remove or destroy the benzene contained in the waste and/or waste stream according to the performance specifications specified in condition 5.E.4(e) and 5.E.19(l). It shall also comply with the applicable conditions of this permit for each waste management unit that receives or manages a benzene-containing waste and/or waste stream prior to and during its treatment.
6.B.21(n)	Exemption of Benzene-Containing Wastes and/or Waste Streams from Treatment Requirements (40CFR61.342(a), 40CFR61.342(c)(2) and 40CFR61.342(c)(3)) If the total annual benzene quantity is less than 10 Mg/yr (11 ton/yr) then Giant Cement is exempt from the treatment requirements of condition 6.B.23(m). An individual benzene-containing waste and/or waste stream is exempt from the treatment requirements specified in condition 6.B.21(m) provided that Giant Cement demonstrates initially and, thereafter, annually that the flow-weighted annual average benzene concentration for the waste and/or waste stream is less than 10 ppmw as determined by the procedures specified in 40CFR61.355(c)(2) or 40CFR61.355(c)(3). An individual waste and/or waste stream is also exempt from treatment provided that Giant Cement demonstrates initially and, thereafter, annually that the total annual benzene quantity in all waste streams chosen for exemption does not exceed 2.0 Mg/yr (2.2 ton/yr) as determined using the procedures of 40CFR61.355(j) and the total annual benzene quantity in a waste and /or waste stream chosen for exemption is determined for the year in which the waste is generated.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (WASTE MATERIALS RECEIVED FROM OFF-SITE)	
Condition Number	**Condition**
6.B.22(a)	Waste Materials Received from Off-Site Not Subject To 40CFR63 Subpart DD (40CFR63.680(b)(2) and 40CFR258.2) A waste material received from off-site is not subject to the requirements of 40CFR63 Subpart DD if it meets any of the criteria specified by paragraphs (a)(1) through (a)(6) of this condition. (a)(1) The material is household waste. For the purpose of this condition, household waste is defined as any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). (a)(2) The material is a waste that is generated as a result of implementing remedial activities required under the RCRA corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), Comprehensive Environmental Response, CERCLA authorities, or similar Federal or State authorities. (a)(3) The material is a waste containing HAP that is generated by residential households (e.g., old paint, home garden pesticides) and subsequently is collected as a community service by government agencies, businesses, or other organizations for the purpose of promoting the proper disposal of this waste. (a)(4) The material is a waste that is transferred from a chemical manufacturing plant or other facility for which the management of the waste at the facility is required either under 40CFR63 Subpart F or under another 40CFR63 subpart to meet the air emission control standards for process wastewater specified in 40CFR 63.132 through 40CFR63.147 and the owner or operator of the facility from which the waste is transferred has complied with the provisions of 40CFR 63.132(g)(1)(ii) and 40CFR62.132(g)(2). (a)(5) The material is a waste that is transferred from a chemical manufacturing plant, petroleum refinery or coke by-product recovery plant which is subject to 40CFR 61 Subpart FF and for which the waste is generated at a facility that is not exempt under the provisions of 40CFR 61.342(a) from meeting the air emission control standards of 40CFR61 Subpart FF and the owner or operator of the facility from which the waste is transferred has complied with the provisions of 40CFR61.342(f)(2). (a)(6) The material is a hazardous waste that is stored for 10 days or less at a transfer facility in compliance with the provisions of 40CFR 263.12.
6.B.22(b)	Exemption of Certain Off-Site Materials From 40CFR63 Subpart DD (40CFR63.680(d)) Giant Cement is exempt from the requirements of 40CFR63, Subpart DD in situations when the total annual quantity of the HAP contained in the off-site material received at the plant site is less than 1 Mg/yr. To qualify for and maintain the exemption, Giant Cement shall prepare an initial determination of the total annual HAP quantity in the off-site material received at the plant site. This determination shall be based on the total quantity of the HAP listed in 40CFR63, Subpart DD, Table 1 as determined at the point-of- delivery for each off-site material waste and/or waste stream. Giant Cement shall prepare a new determination whenever the extent of changes to the quantity or composition of the off-site material received at the plant site could cause the total annual HAP quantity in the off-site material received at the plant site to exceed the limit of 1 Mg/yr. Documentation shall be maintained to support the determination of the total annual HAP quantity in the off-site material received at Giant Cement. The documentation must include the basis and data used for determining the HAP content of the off-site material. This documentation shall be maintained on-site and on-file for a calendar period of five (5) years from the creation date and made available to Department personnel upon request.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (WASTE MATERIALS RECEIVED FROM OFF-SITE)	
Condition Number	**Condition**
6.B.22(c)	Waste Materials Received from Off-Site Subject to 40CFR63 Subpart DD (40CFR63.680(b)(1) and 63.681)) Waste materials received from off-site are subject to the requirements 40CFR63 Subpart DD if the material meets all of the criteria specified paragraphs in (c)(1) through (c)(3) of this condition. If any one of these criteria do not apply to a material, then it is not subject to 40CFR63 Subpart DD. (c)(1) The material is a waste, used oil, or used solvent. Used oil is defined as any oil refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Used solvent is defined as a mixture of aliphatic hydrocarbons or a mixture of one and two ring aromatic hydrocarbons that has been used as a solvent and as a result of such use is contaminated by physical or chemical impurities. A waste is defined as a material generated from industrial, commercial, mining, or agricultural operations or from community activities that is discarded, discharged, or is being accumulated, stored, or physically, chemically, thermally, or biologically treated prior to being discarded or discharged. (c)(2) The waste, used oil, or used solvent is not produced or generated within the plant site, but the material is delivered, transferred, or otherwise moved to the plant site from a location outside the boundaries of the plant site. (c)(3) The waste, used oil, or used solvent contains one or more of the hazardous air pollutants (HAP) listed in 40CFR63 Subpart DD Table 1 based on the composition of the material at the point-of-delivery. Point-of-delivery is defined as the point at the boundary or within the plant site where Giant Cement first accepts custody, takes possession, or assumes responsibility for the management of an off-site material stream managed in its waste management operation where the characteristics of an off-site material stream are determined prior to combining the off-site material stream with other off-site material streams or with any other materials.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (EXEMPTION OF OFF-SITE WASTE MATERIAL MANAGEMENT UNITS FROM 40CFR63 SUBPART DD)	
Condition Number	**Condition**
6.B.23(a)	Exemption of Off-Site Waste Material Management Units from 40CFR63 Subpart DD (40CFR63.681 and 40CFR63.683(b)(2)(ii)) At the discretion of Giant Cement, one or a combination of off-site waste material management units may be exempted from the requirements of 40CFR63 Subpart DD when the total annual quantity of HAP contained in the off-site waste materials placed in the units is less than 1 Mg/yr. For the off-site waste material management units selected to be exempted, Giant Cement shall meet the requirements specified by condition 6.B.23(b) and 6.B.23(c). Giant Cement may change the off-site waste material management units selected as exempt by preparing a new designation for the exempt units as required by condition 6.B.23(b) and performing a new determination as required by condition 6.B.23(c). An off-site waste material management unit is defined as a tank, container, surface impoundment, oil-water separator, organic-water separator, or transfer system used to manage waste materials received from off-site.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-04 AND FUTURE UNIT ID F-03) (WASTE FUEL PROCESSING AND STORAGE EQUIPMENT) (EXEMPTION OF OFF-SITE WASTE MATERIAL MANAGEMENT UNITS FROM 40CFR63 SUBPART DD)	
Condition Number	**Condition**
6.B.23(b)	Identification of Designated Exempt Off-Site Waste Material Management Units (40CFR63.683(b)(2)(ii)(A)) Giant Cement shall designate each of the off-site waste material management units that it selects to be exempt by either submitting to the Department a written notification identifying the exempt units or permanently marking the exempt units at its plant site. If Giant Cement selects to prepare and submit a written notification, this notification shall include a site plan, process diagram or other appropriate documentation identifying each of the exempt units. If Giant Cement selects to permanently mark the exempt units, each unit must be marked in such a manner that it can be readily identified as an exempt unit from the other off-site waste material management units located at its plant site.
6.B.23(c)	Determination of Total Annual HAP in the Off-Site Waste Material Placed in the Designated Exempt Off-Site Waste Material Management Units (40CFR63.683(b)(2)(ii)(B)) Giant Cement shall prepare an initial determination of the total annual HAP quantity in the off-site waste material placed in the exempt units. This determination shall be based on the total quantity of the HAP listed in 40CFR63 Subpart DD Table 1 as determined at the point where the off-site material is placed in each exempted unit. Giant Cement shall perform a new determination whenever the extent of changes to the quantity or composition of the off-site waste material placed in the exempted units could cause the total annual HAP content in the off-site waste material to exceed one(1) Mg/yr. Giant Cement shall maintain documentation to support the most recent determination of the total annual HAP quantity and it must include the basis and data used for determining the HAP content of the off-site waste material. This documentation shall be maintained on-site and on-file for a calendar period of five(5) years from the date of creation and made available to Department personnel upon request.
6.B.23(d)	Other Exemptions of Off-Site Waste Material Management Units from 40CFR63 Subpart DD (40CFR63.683(b)(2)(iv)) An off-site waste material management unit is exempt from the requirements of 40CFR63 Subpart DD if the off-site material placed in the unit is a hazardous waste that meets the conditions specified in either paragraphs (d)(1) or (d)(2) of this condition. (d)(1) The hazardous waste meets the numerical organic concentration limits, applicable to the hazardous waste, as listed in 40CFR268.40 Table entitled "Treatment Standards for Hazardous Waste". (d)(2) The organic hazardous constituents in the hazardous waste have been treated by the treatment technology established by the EPA for the hazardous waste in 40CFR268.42(a) or have been removed or destroyed by an equivalent method of treatment approved by the EPA under 40CFR 268.42(b).

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(a)	Continuous Monitoring of Kiln Particulate Matter Emissions (40CFR63.1209(a)(1)(iii)) Giant Cement shall install, calibrate, maintain and operate a CPMS to measure the particulate matter discharged to the atmosphere from each existing Kiln (if still in operation) and the New Kiln System (when placed in operation). However, compliance with the requirements to install, calibrate, maintain and operate the monitor is not required until such time that the EPA promulgates all applicable performance specifications and operational requirements.
6.B.24(b)	Use of a CEMS to Demonstrate Compliance with the Kiln Carbon Monoxide and Hydrocarbon Emission Limits (40CFR63.1209(a)(1)(i)) By September 30, 2003, for the existing Kilns and by the startup of the New Kiln System, Giant Cement shall have chosen to use either a Carbon Monoxide or Hydrocarbon CEMS to demonstrate and monitor compliance with the applicable Carbon Monoxide and Hydrocarbon emission standards. Giant Cement shall also use an oxygen CEMS to continuously correct the Carbon Monoxide or Hydrocarbon level to 7% O2.
6.B.24(c)	Continuous Monitoring of Existing Kiln Visible Emissions (40CFR63.8(c)(4)(i) and 40CFR63.1209(a)(1)(ii)) By September 30, 2003, Giant Cement shall have calibrated, be maintaining and continuously operating in accordance with 40CFR63 Subpart A and 40CFR60 Appendix B Performance Specification 1, a COMS to measure the opacity of the visible emissions discharged into the atmosphere from each existing Kiln. This COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. For this COMS, Giant Cement shall also maintain a log of the span and zero from each calibration of the monitor. This log shall be kept on-site and each log entry kept for a calendar period of five(5) years from the date of entry and made available to Department personnel upon request.
6.B.24(d)	Continuous Monitoring of Existing Clinker Cooler Visible Emissions (40CFR63.8(c)(4)(i), 40CFR63.1350(d)(1) and 40CFR63.1350(d)(3)) Giant Cement shall monitor opacity at each point where emissions are vented from each existing Clinker Cooler. It shall install, calibrate, maintain, and continuously operate a COMS located at the outlet of each existing Clinker Cooler PMCD to continuously monitor the opacity. The COMS shall be installed, maintained, calibrated, and operated as required by 40CFR63 Subpart A and 40CFR60 Appendix B Performance Specification 1. To remain in compliance, the opacity shall be maintained such that the six(6)-minute average opacity for any six(6)-minute block period does not exceed 10%. If the average opacity for any six(6)-minute block period exceeds 10% it constitutes a violation of the standard. This COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
6.B.24(e)	Carbon Monoxide and Hydrocarbon CEMS Performance Specifications (40CFR63.1209(a)(2)) By September 30, 2003, for the existing Kilns and by the startup of the New Kiln System, Giant Cement shall have installed, calibrated, be maintaining and continuously operating a Carbon Monoxide and/or Hydrocarbon CEMS in compliance with the quality assurance procedures provided in the appendix to 40CFR63 Subpart EEE and 40CFR60 Appendix B, Performance Specifications 4B (Carbon monoxide and Oxygen) and 8A (Hydrocarbons).

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(f)	Carbon Monoxide Readings Exceeding The Span (40CFR63.1209(a)(3)) If a Carbon Monoxide CEMS detects a response that results in a on(1)-minute average at or above the 3,000 ppmv span level required by 40CFR60 Appendix B Performance Specification 4B, the one(1)-minute average must be recorded as 10,000 ppmv. The one(1)-minute 10,000 ppmv value must be used for calculating the hourly rolling average carbon monoxide level. Carbon Monoxide CEMS that use a span value of 10,000 ppmv when one(1)-minute Carbon Monoxide levels are equal to or exceed 3,000 ppmv are not subject to the above. Carbon Monoxide CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other Carbon Monoxide CEMS except the calibration drift must be less than 300 ppmv; and calibration error must be less than 500 ppmv.
6.B.24(g)	Petitions To Use CEMS for Other 40CFR 63 Subpart EEE Emission Standards (40CFR63.1209(a)(5)) Giant Cement may petition the Department to use CEMS for compliance monitoring for Particulate Matter, Mercury, Semivolatile Metals, Low Volatile Metals and Hydrochloric Acid/Chlorine Gas in lieu of compliance with the corresponding operating parameter limits.
6.B.24(h)	Calculation of Initial Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS (40CFR63.1209(a)(6)(i)) For both the existing Kilns (if still in operation) and the New Kiln System (when placed in operation), the Carbon Monoxide or Hydrocarbon CEMS must begin recording one(1)- minute and hourly rolling average values within 60 seconds and 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), respectively, from the time at which compliance with 40CFR63 Subpart EEE begins.
6.B.24(i)	Hydrocarbon Readings Exceeding The Span (40CFR63.1209(a)(4)) If a Hydrocarbon CEMS detects a response that results in a one(1)-minute average at or above the 100 ppmv span level required by 40CFR60 Appendix B Performance Specification 8A, the one(1)-minute average must be recorded as 500 ppmv. The one(1)-minute 500 ppmv value must be used for calculating the hourly rolling average Hydrocarbon level. Hydrocarbon CEMS that use a span value of 500 ppmv when one(1)-minute Hydrocarbon levels are equal to or exceed 100 ppmv are not subject to the above. Hydrocarbon CEMS that use a span value of 500 ppmv are subject to the same CEMS performance and equipment specifications when operating in the range of 100 ppmv to 500 ppmv that are provided by Performance Specification 8A for other hydrocarbon CEMS, except as specified in (i)(1) through (i)(5) of this condition. (i)(1) The zero and high-level calibration gas must have a Hydrocarbon level of between 0 and 100 ppmv, and between 250 and 450 ppmv, respectively. (i)(2) The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEM measurement range and must have a resolution of 2.5 ppmv. (i)(3) The CEMS calibration must not differ by more than ±15 ppmv after each 24-hour period of the seven day test at both zero and high levels. (i)(4) The calibration error must be no greater than 25 ppmv. (i)(5) The zero level, mid-level, and high level calibration gas used to determine calibration error must have a hydrocarbon level of 0-200 ppmv, 150-200 ppmv, and 350-400 ppmv, respectively.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(j)	Calculation of Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS Upon Intermittent Operations (40CFR63.1209(a)(6)(ii)) Giant Cement must ignore periods of time when one(1)-minute values are not available for calculating the hourly rolling average for Carbon Monoxide and Hydrocarbon CEMS. When one(1)-minute values become available again, the first one(1)-minute value must be added to the previous 59 values to calculate the hourly rolling average.
6.B.24(k)	Calculation of Rolling Averages for Carbon Monoxide or Hydrocarbon CEMS When the Hazardous Waste Feed is Cutoff (40CFR63.1209(a)(6)(iii)) Giant Cement must continue monitoring Carbon Monoxide and Hydrocarbon emissions when the hazardous waste feed is cutoff if an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) is operating according to the requirements of 40CFR63 Subpart EEE. Giant Cement must not resume feeding hazardous waste if the emission levels exceed the standard.
6.B.24(l)	Operating Parameter Limits for Hydrocarbons (40CFR63.1209(a)(7)) If Giant Cement elects to comply with the applicable Carbon Monoxide and Hydrocarbon emission standard by continuously monitoring Carbon Monoxide with a CEMS, it must demonstrate during the Comprehensive Performance Test that Hydrocarbon emissions do not exceed the Hydrocarbon emissions standard. In addition, the limits that it establishes on DRE operating parameters also ensure that Giant Cement maintains compliance with the Hydrocarbon emission standard. If Giant Cement does not conduct the Hydrocarbon demonstration and DRE tests concurrently, it must establish separate operating parameter limits based on each test and the more restrictive of the operating parameter limits applies.
6.B.24(m)	Other CMS Required by 40CFR63 Subpart EEE (40CFR63.8(c)(3), 40CFR63.1209(b)(1) and 40CFR63.1209(b)(2)) Giant Cement shall use other CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits. Giant Cement must install and operate the other CMS in conformance at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation and calibration of the system.
6.B.24(n)	Calibration of Thermocouples and Pyrometers Required by 40CFR63 Subpart EEE (40CFR63.1209(b)(2)(i)) Giant Cement shall verify the calibration of thermocouples required by 40CFR63 Subpart EEE at a frequency and in a manner consistent with manufacturer specifications, but no less frequent than once per year. Giant Cement shall operate and maintain optical pyrometers required by 40CFR63 Subpart EEE in accordance with manufacturer specifications unless otherwise approved by the Department. Giant Cement shall also calibrate optical pyrometers in accordance with the frequency and procedures recommended by the manufacturer, but no less frequent than once per year, unless otherwise approved by the Department.
6.B.24(o)	Detector Span for Other CMS Required by 40CFR63 Subpart EEE (40CFR63.1209(b)(4)) The span of the non-CEMS CMS detector shall not be exceeded. Giant Cement shall interlock the span limits into the AWFCO.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(p)	Calculation of Rolling Averages for Other CMS Required by 40CFR63 Subpart EEE Upon Intermittent Operations (40CFR63.1209(b)(5)(ii)) Giant Cement shall ignore periods of time when one(1)-minute values are not available for calculating rolling averages for other CMS required by 40CFR63 Subpart EEE. When one(1)-minute values become available again, the first one(1)-minute value must be added to the previous one(1)-minute values to calculate rolling averages.
6.B.24(q)	Calculation of Initial Rolling Averages for Other CMS Required by 40CFR63 Subpart EEE (40CFR63.1209(b)(5)(i)) Other CMS required by 40CFR63 Subpart EEE must begin recording one(1)-minute average values by 12:01 a.m., hourly rolling average values by 1:01 a.m.(e.g., when 60 one(1)-minute values will be available for calculating the initial hourly rolling average) and twelve-hour rolling averages by 12:01 p.m.(e.g., when 720 one(1)-minute averages are available to calculate a 12-hour rolling average), upon compliance with 40CFR63 Subpart EEE.
6.B.24(r)	Calculation of Rolling Averages for Other CMS Required by 40CFR63 Subpart EEE When the Hazardous Waste Feed is Cutoff (40CFR63.1209(b)(5)(iii)) Giant Cement shall continue monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) is operating according to the requirements of 40CFR63 Subpart EEE. Giant Cement must not resume feeding hazardous waste if an operating parameter exceeds its limit.
6.B.24(s)	Feedstream Analysis Plan (40CFR63.1209(c)(2) and 40CFR63.1209(c)(3)) Within 180 calendar days after September 30, 2003, Giant Cement shall have developed a Feedstream Analysis Plan and submitted it to the Department for approval. When the New Kiln System is placed in operation, Giant Cement shall make any changes to this plan as necessary and again submit it to the Department for approval. Once approved, Giant Cement shall implement the plan and record it in the Facility Operating Record. The plan shall specify at a minimum the information specified in paragraphs (s)(1) through (s)(6). (s)(1) The parameters for which Giant Cement will analyze each feedstream to ensure compliance with the operating parameter limits. (s)(2) Whether Giant Cement will obtain the analysis by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information. (s)(3) How Giant Cement will use the analysis to document compliance with applicable feederate limits (e.g., if it blends hazardous wastes and obtains analyses of the wastes prior to blending but not of the blended, as-fired, waste, the plan must describe how it will be determined the pertinent parameters of the blended waste). (s)(4) The test methods which Giant Cement will use to obtain the analyses. (s)(5) The sampling method which Giant Cement will use to obtain a representative sample of each feedstream to be analyzed using sampling methods described in 40CFR266 Appendix IX, or an equivalent method. (s)(6) The frequency with which Giant Cement will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(t)	Monitoring of Existing Kiln and New Kiln System Hazardous Waste Fuel Feedrate Limits (40CFR63.1209(c)(4)) Giant Cement shall monitor and record feedrates as specified by paragraphs (t)(1) through (t)(3) of this condition. (t)(1) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method. (t)(2) Determine and record the mass or volume flowrate of each feedstream by a CMS. If Giant Cement determines flowrate of a feedstream by volume, it must determine and record the density of the feedstream by sampling and analysis (unless it reports the constituent concentration in units of weight per unit volume (e.g., mg/l)). (t)(3) Calculate and record the mass feedrate of the parameter per unit time.
6.B.24(u)	Analysis of Feedstreams (40CFR63.1209(c)(1) and SC Regulation 61-62.5 Standard 7 Avoidance) Prior to feeding any hazardous waste to an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) as fuel, Giant Cement shall obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits. Also, no waste shall be fed to an existing Kiln (if still in operation) that does not meet the requirements of Table 6.50. The requirements of Table 6.50 do not apply to the New Kiln System.

TABLE 6.50 WASTE FUEL COMPOSITION AS FIRED FOR THE EXISITNG KILNS	
Parameter	**Composition**
Heat Content	Greater than 8000 Btu/lb
Total Halogens Content	Less than or equal to 4%
Total Low Volatile Metal Feed Input	120.25 lb/hr
Total Semi-Volatile Metal Feed Input	88.18 lb/hr
Total Nickel (Ni) Feed Input	63.8 lb/hr

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(v)	Waiver of Monitoring of Constituents in Certain Feedstreams (40CFR63.1209(c)(5)) Giant Cement is not required to monitor levels of metals or Chlorine in natural gas feedstreams, process air feedstreams, and feedstreams from vapor recovery systems to document compliance with the applicable feedrate limits provided that it documents in the Comprehensive Performance Test Plan the expected levels of the constituent in the feedstream and it accounts for those assumed feedrate levels in documenting compliance.
6.B.24(w)	Operating Parameters Applicable to Multiple Standards (40CFR63.1209(i)) Giant Cement is required to establish limits on operating parameters based on Comprehensive Performance Testing to ensure it maintains compliance with the emission standards 40CFR63 Subpart EEE. For several parameters, Giant Cement must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE and Dioxin/Furan standards. If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests shall apply.
6.B.24(x)	Establishing a Limit for the Minimum Combustion Chamber Temperature to Remain in Compliance with the DRE Standard (40CFR63.1209(j)(1)) To remain in compliance with the DRE standard, Giant Cement shall establish operating limits during the Comprehensive Performance Test (or during a previous DRE test) for the minimum combustion chamber temperature, unless the limits are based on manufacturer specifications and Giant Cement complies with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). Giant Cement must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. Giant Cement shall document the temperature measurement location in the Comprehensive Test Plan and establish a minimum hourly rolling average limit as the average of the test run averages.
6.B.24(y)	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Remain in Compliance with the DRE Standard (40CFR63.1209(j)(2)) To remain in compliance with the DRE standard, Giant Cement shall establish operating limits during the Comprehensive Performance Test (or during a previous DRE test) for the maximum flue gas flowrate or production rate, unless the limits are based on manufacturer specifications, and Giant Cement complies with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). As an indicator of gas residence time in the control device, Giant Cement must establish and comply with an operating limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that it documents in the Comprehensive Performance Test Plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run and comply with this limit on a hourly rolling average basis.
6.B.24(z)	Establishing an Operating Limit for the Maximum Hazardous Waste Feedrate to Remain in Compliance with the DRE Standard (40CFR63.1209(j)(3)) To remain in compliance with DRE standard, Giant Cement shall establish operating limits during the Comprehensive Performance Test (or during a previous DRE test) for the maximum hazardous waste feedrate, unless the limits are based on manufacturer specifications, and Giant Cement complies with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). Giant Cement must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed. Giant Cement must establish the limits as the average of the maximum hourly rolling averages for each run and comply with the feedrate limit(s) on a hourly rolling average basis.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(aa)	Establishing Operating Limits for the Operation of Waste Firing System to Remain in Compliance with the DRE Standard (40CFR63.1209(j)(4)) To remain in compliance with the DRE standard, Giant Cement shall establish operating limits during the Comprehensive Performance Test (or during a previous DRE test) for the operation of the waste firing system, unless the limits are based on manufacturer specifications and Giant complies with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated). Giant Cement must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.
6.B.24(bb)	Establishing a Limit for the Gas Temperature at the Inlet to a Dry PMCD to Comply with the Dioxin/Furan Emission Limit (40CFR63.1209(k)(1)(i)) To comply with the Dioxin/Furan emission limit, if the combustor (Kiln) is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, Giant Cement shall establish an operating limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. Giant Cement must establish the hourly rolling average limit as the average of the test run averages and base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(cc)	Establishing a Limit for the Minimum Combustion Chamber Temperature to Comply with the Dioxin/Furan Emission Limit (40CFR63.1209(k)(2)) To comply with the Dioxin/Furan emission limit, Giant Cement shall measure the temperature of each existing Kiln's (if still in operation) and the New Kiln System's (when placed in operation) combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. Giant Cement must document the temperature measurement location in the Comprehensive and Confirmatory test plans. Giant Cement must establish the hourly rolling average limit as the average of the test run averages and base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(dd)	Establishing an Operating Limit on the Maximum Flue Gas Flowrate or Production Rate to Comply with the Dioxin/Furan Emission Limit (40CFR63.1209(k)(3)) As an indicator of gas residence time in the control device, Giant Cement, to comply with the Dioxin/Furan emission limit, shall establish and comply with an operating limit on the maximum flue gas flowrate, the maximum production rate, or another parameter it documents in the Comprehensive Performance Test Plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. Giant Cement must comply with this limit on a hourly rolling average basis. Giant Cement must establish the hourly rolling average limit as the average of the maximum hourly rolling averages for each test run and base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(ee)	Establishing Limits for the Maximum Waste Feedrate to Comply with the Dioxin/Furan Emission Limit (40CFR63.1209(k)(4)) To comply with the Dioxin/Furan emission limit, Giant Cement shall establish limits on the maximum pumpable and total (pumpable and nonpumpable) waste feedrate for each location where waste is fed. Giant Cement must establish the limits as the average of the maximum hourly rolling averages for each run and comply with the feedrate limit(s) on a hourly rolling average basis. Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(ff)	Establishing Limits for the Total Mercury Feedrate to Comply with the Mercury Emission Limit (40CFR63.1209(l)(1)(i), 40CFR63.1209(l)(1)(ii) and 40CFR63.1209(l)(1)(iii)) To comply with the Mercury emission limit, Giant Cement shall establish a 12-hour rolling average limit for the total feedrate of Mercury in all feedstreams as the average of the test run averages, unless Mercury feedrate limits are extrapolated from performance test feedrate levels. Giant Cement may request as part of the Comprehensive Test Plan to use the Mercury feedrates and associated emission rates during the Comprehensive Performance Test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Department. The review will consider in particular whether the performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and whether the extrapolated feedrates requested are warranted considering historical metal feedrate data. The Department will review the performance test results in making a finding of compliance to ensure that Giant Cement has interpreted emission test results properly and that the extrapolation procedure is appropriate for the source.
6.B.24(gg)	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Particulate Matter Emission Limit (40CFR63.1209(m)(2)) As an indicator of gas residence time in the control device, Giant Cement, to comply with the particulate matter emission limit shall establish an operating limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that it documents in the site-specific test plan as an appropriate surrogate for gasresidence time, as the average of the maximum hourly rolling averages for each run. Giant Cement must comply with this limit on a hourly rolling average basis. Giant Cement must establish the hourly rolling average limit as the average of the test run averages and base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(hh)	Establishing Operating Limits for the Maximum Inlet Temperature to the Dry PMCD to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards (40CFR63.1209(n)(1)) To comply with the combined Cadmium and Lead and combined Arsenic, Beryllium and Chromium emission standards, Giant Cement shall establish an operating limit on the maximum inlet temperature to the primary dry metals emissions control device (e.g., electrostatic precipitator, baghouse) on an hourly rolling average basis as the average of the test run averages. Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(ii)	Establishing Limits for the Maximum Feedrate of Semivolatile and Low Volatile Metals to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards (40CFR63.1209(n)(2)(i)) Giant Cement shall establish feedrate limits for the combined Cadmium and Lead and combined Arsenic, Beryllium and Chromium as specified in paragraphs (ii)(1) through (ii)(3) of this condition except as provided by condition 6.B.26(jj). Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications. (ii)(1) Giant Cement must establish a 12-hour rolling average limit for the feedrate of Cadmium and Lead, combined, in all feedstreams as the average of the test run averages. (ii)(2) Giant Cement must establish a 12-hour rolling average limit for the feedrate of Arsenic, Beryllium, and Chromium, combined, in all feedstreams as the average of the test run averages. (ii)(3) Giant Cement must establish a 12-hour rolling average limit for the feedrate of Arsenic, Beryllium, and Chromium, combined, in all pumpable feedstreams as the average of the test run averages. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if Giant Cement bases the total feedrate limit solely on the feedrate of pumpable feedstreams.
6.B.24(jj)	Feedrate Extrapolation in Lieu of Establishing Limits for the Maximum Feedrate of Semivolatile and Low Volatile Metals to Comply With the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards (40CFR63.1209(n)(2)(ii)) Giant Cement may request as part of the Comprehensive Performance Test Plan to use the combined Cadmium and Lead and combined Arsenic, Beryllium and Chromium feedrates and associated emission rates during the Comprehensive Performance Test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Department. The review will consider whether the performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate) and whether the extrapolated feedrates that Giant Cement requests are warranted considering historical metal feedrate data. The Department will review the performance test results in making a finding of compliance required to ensure that Giant Cement has interpreted emission test results properly and that the extrapolation procedure is appropriate for its source.
6.B.24(kk)	Establishing Limits for the Maximum Total Chlorine and Chloride Feedrate to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards (40CFR63.1209(n)(4)) Giant Cement shall establish a 12-hour rolling average limit for the feedrate of total Chlorine and Chloride in all feedstreams as the average of the test run averages.
6.B.24(ll)	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Combined Cadmium and Lead and Combined Arsenic, Beryllium and Chromium Emission Standards 40CFR63.1209(n)(5)) As an indicator of gas residence time in the control device and to comply with the combined Cadmium and Lead and combined Arsenic, Beryllium and Chromium emission limits, Giant Cement shall establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that it documents in the Comprehensive Performance Test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. Giant Cement must comply with this limit on a hourly rolling average basis. Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(mm)	Establishing Limits for the Feedrate of Total Chlorine and Chloride to Comply with the Hydrochloric Acid and Chlorine Gas Emission Limit (40CFR63.1209(o)(1)) Giant Cement shall establish a 12-hour rolling average limit for the total feedrate of Chlorine (organic and inorganic) in all feedstreams as the average of the test run averages. Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(nn)	Establishing Operating Limits for the Maximum Flue Gas Flowrate or Production Rate to Comply with the Hydrochloric Acid and Chlorine Gas Emission Limit (40CFR63.1209(o)(2)) As an indicator of gas residence time in the control device and to comply with the Hydrochloric Acid and Chlorine Gas emission standard, Giant Cement shall establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that it documents in the Comprehensive Performance Test Plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. Giant Cement must comply with this limit on a hourly rolling average basis. Giant Cement must base the limits on operations during the Comprehensive Performance Test, unless the limits are based on manufacturer specifications.
6.B.24(oo)	Monitoring of the Maximum Combustion Chamber Pressure (40CFR63.1209(p)) If Giant Cement complies with the requirements for combustion system leaks by maintaining the maximum combustion chamber zone pressure lower than ambient pressure, it shall monitor the pressure instantaneously and the AWFCO must be engaged when negative pressure is not adequately maintained.
6.B.24(pp)	Operating Under Different Modes of Operation (40CFR63.1204(d)(1)(ii) and 40CFR63.1209(q)) If Giant Cement operates under different modes of operation, it must establish operating parameter limits for each mode. Giant Cement must document in the Facility Operating Record when it changes a mode of operation and it begins complying with the operating limits for an alternative mode of operation.
6.B.24(qq)	Retrieval Approach for Calculating Rolling Averages Under Different Modes of Operation (40CFR63.1204(d)(1)(iii) and 40CFR63.1209(q)(2)(i)) When Giant Cement transitions to a different mode of operation, it may select to calculate rolling averages anew using the CMS values previously recorded for that mode of operation (i.e., ignore CMS values subsequently recorded under other modes of operation when Giant Cement transitions back to a mode of operation).
6.B.24(rr)	Start Anew Approach for Calculating Rolling Averages Under Different Modes of Operation (40CFR63.1204(d)(1)(iii) and 40CFR63.1209(q)(2)(ii)) When Giant Cement transitions to a different mode of operation, it may select to calculate rolling averages anew without considering previous recordings. Rolling averages must be calculated as the average of the available one-minute values for the parameter until enough one-minute values are available to calculate hourly or 12-hour rolling averages, whichever is applicable to the parameter. Giant Cement may not transition to a new mode of operation using this approach if the most recent operation in that mode resulted in an exceedance of an applicable emission standard measured with a CEMS or operating parameter limit prior to the hazardous waste residence time expiring.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(ss)	Seamless Transition Approach for Calculating Rolling Averages Under Different Modes of Operation (40CFR63.1204(d)(1)(iii) and 40CFR63.1209(q)(2)(iii)) When Giant Cement transitions to a different mode of operation, it may select to continue calculating rolling averages using data from the previous operating mode provided that both the operating limit and the averaging period for the parameter are the same for both modes of operation.
6.B.24(tt)	Kiln Combustion System Leaks (40CFR63.1206(c)(5)) Giant Cement shall control Kiln combustion system leaks of hazardous air pollutants by keeping the combustion zone sealed to prevent combustion system leaks or maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor. An alternative means of control to provide control of combustion system leaks equivalent to maintenance of combustion zone pressure lower than ambient pressure or other technique(s) which can be demonstrated to prevent fugitive emissions without use of instantaneous pressure limits may be approved by the Department. Giant Cement must specify in the Facility Operating Record the method used for control of combustion system leaks.
6.B.24(uu)	Kiln Operator Training and Certification (40CFR63.1206(c)(6)(i) and 40CFR63.1206(c)(6)(ii)) Giant Cement shall establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the existing Kilns (if still in operation) and the New Kiln System (when placed in operation). Such persons include, but are not limited to, chief facility operators, control room operators, CMS operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor (Kiln), persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the "certification" for personnel, except that, for control room operators, the training and certification program shall be as specified in condition 6.B.24(ww). Giant Cement must ensure that the combustor (Kiln) is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation.
6.B.24(vv)	Maintenance of Kiln Control Room Operator Qualifications (40CFR63.1206(c)(6)(vi) and 40CFR63.1206(c)(6)(vii)) To maintain Kiln control room operator qualification under a site-specific, source developed and implemented training program as specified by condition 6.B.24(uu), control room operators shall complete an annual review or refresher course covering, at a minimum, the topics specified by paragraphs (vv)(1) through (vv)(5) of this condition. This operator training shall also be recorded in the Facility Operating Record. (vv)(1) Update of regulations. (vv)(2) Combustor operation, including startup and shutdown procedures, waste firing and residue handling. (vv)(3) Inspection and maintenance. (vv)(4) Responses to malfunctions or conditions that may lead to malfunction. (vv)(5) Operating problems encountered by the operator.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.26(ww)	Kiln Control Room Operator Training (SC Regulation 61-62.5 Standard 3 Section IX, 40CFR63.1206(c)(6)(iv), 40CFR63.1206(c)(6)(v) and 40CFR63.1206(c)(6)(vii)) Giant Cement shall train and certify existing Kiln (if still in operation) and New Kiln System (when placed in operation) control room operators under a site-specific, source-developed and implemented program that contains the requirements as specified by paragraph (ww)(1) through (ww)(11) or a State program. This operator training and certification program shall also be recorded in the Facility Operating Record. (ww)(1) The operator training program shall address environmental concerns, including types of emissions. (ww)(2) The operator training program shall address basic combustion principles, including products of combustion. (ww)(3) The operator training program shall address the operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures. (ww)(4) The operator training program shall address combustion controls and CMS. (ww)(5) The operator training program shall address the operation of air pollution control equipment and factors affecting its performance. (ww)(6) The operator training program shall address inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices. (ww)(7) The operator training program shall address actions to correct malfunctions or conditions that may lead to a malfunction. (ww)(8) The operator training program shall address residue characteristics and handling procedures. (ww)(9) The operator training program shall address applicable Federal, state, and local regulations, including OSHA workplace standards. (ww)(10) The operator training program shall include an examination designed and administered by the instructor. (ww)(11) The operator training program shall include written material covering the training course topics that may serve as reference material following completion of the course.
6.B.26(xx)	Ducting of Kiln Combustion Gases During AWFCO (40CFR63.1206(c)(3)(ii)) During an AWFCO, Giant Cement shall continue to duct combustion gasses to the air pollution control system while hazardous waste remains in an existing Kiln's (if still in operation) and the New Kiln System's (when placed in operation) combustion chamber (i.e., if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).
6.B.24(yy)	Restarting Waste Feed to a Kiln After AWFCO (40CFR63.1206(c)(3)(iii)) Giant Cement shall continue to monitor during the AWFCO the established operating parameter limits and the emissions required to be monitored by a CEMS. Giant Cement must not restart the hazardous waste feed to an existing Kiln (if still in operation) and the New Kiln System (when placed in operation) until the operating parameters and emission levels are within the specified limits.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(zz)	Automatic Waste Feed Cutoff (AWFCO) (40CFR63.1206(c)(3)(i)) By September 30, 2003, for the existing Kilns (if still in operation) and by startup for the New Kiln System (when placed in operation), Giant Cement shall operate the hazardous waste combustor (Kiln) with a functioning system that immediately and automatically cuts off the hazardous waste feed for the events listed in paragraphs (zz)(1) through (zz)(6) of this condition except as provided by condition 6.B.24(eee). (zz)(1) When operating parameter limits are exceeded. (zz)(2) When an emission standard monitored by a CEMS is exceeded. (zz)(3) When the allowable combustion chamber pressure is exceeded. (zz)(4) When the span value of any CMS detector, except a CEMS, is met or exceeded. (zz)(5) Upon malfunction of a CMS monitoring an operating parameter limit or an emission level. (zz)(6) When any component of the AWFCO fails.
6.B.24(aaa)	Failure of the AWFCO (40CFR63.1206(c)(3)(iv)) If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of an operating parameter required to be interlocked with the AWFCO system, Giant Cement will be considered to have failed to comply with the AWFCO requirements.
6.B.24(bbb)	Corrective Measures After AWFCO (40CFR63.1206(c)(3)(v)) If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in a Kiln's combustion chamber (i.e., whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), Giant Cement shall investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the Facility Operating Record.
6.B.24(ccc)	Excessive Exceedance Reporting for AWFCO (40CFR63.1206(c)(3)(vi)) For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in an existing Kiln's (if still in operation) and the New Kiln System's (when placed in operation) combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, Giant Cement shall submit to the Department a written report within five(5) calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken. On a case-by-case basis, the Department may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period.
6.B.24(ddd)	AWFCO Testing (40CFR63.1206(c)(3)(vii)) The AWFCO system and associated alarms shall be tested weekly to verify operability, unless Giant Cement documents in the Facility Operating Record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operability testing must be conducted at monthly. Giant Cement must document and record in the Facility Operating Record AWFCO operability test procedures and results.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID C-05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(eee)	Ramping Down the Waste Feed During AWFCO (40CFR63.1206(c)(3)(viii)) Giant Cement may ramp down the waste feedrate of pumpable hazardous waste over a period not to exceed one(1) minute, except if the AWFCO is triggered by an exceedance of the minimum combustion chamber temperature, maximum hazardous waste feedrate, or any hazardous waste firing system operating limits that may be established for the combustor (Kiln). If Giant Cement elects to ramp down the waste feed, it must document ramp down procedures in the 40CFR63 Subpart EEE Operations and Maintenance plan. The procedures must specify that the ramp down begins immediately upon initiation of AWFCO and the procedures must prescribe a genuine ramping down. If an emission standard or operating limit is exceeded during the ramp down, Giant Cement is considered to have failed to comply with the emission standards or operating requirements of 40CFR63 Subpart EEE.
6.B.24(fff)	Permitted Kiln Fuels (SC Regulation 61-62.5 Standard 2, SC Regulation 61-62.5 Standard 3 Section V(J) and SC Regulation 61-62.5 Standard 8) Giant Cement is permitted to burn only coal, coke, natural gas, on-site generated specification used oil, virgin fuel oil, on-specification used oil, off-specification oil, hazardous solid wastes, hazardous liquid wastes, hazardous sludge wastes, non-regulated solid wastes, non-regulated liquid wastes and non-regulated sludge wastes as existing Kiln (if still in operation) and New Kiln System (when placed in operation) fuels. Other on-site generated materials such as absorbent pads and wipes are also permitted for burning in the Kilns. A generator waste characterization profile of each hazardous and non-regulated waste and/or waste stream used as a Kiln fuel shall be kept on-site and on-file. Each profile shall include the waste's and/or waste stream's composition, a section listing the SC Regulation 62.5 Standard 8 compounds that Giant Cement cannot accept and generator certification that the waste and/or waste stream does not contain any of those compounds. The generator waste characterization form shall be filled out completely and signed by the generator certifying that the information presented is complete, accurate and correct. These profiles shall be maintained for each current waste and/or waste stream used as a Kiln fuel and do not have to be sent to the Department for approval prior to accepting the waste and/or waste stream. If in the event Giant Cement no longer uses a waste and/or waste stream as a Kiln fuel, then its generator profile shall be maintained on-site and on-file for a calendar period of five(5) years from the last date that it was used as a Kiln fuel. Only coal, coke, natural gas, No.2 Fuel Oil, No.6 Fuel Oil and on-specification used oil may be used during the startup and shutdown of the a Kiln.
6.B.24(ggg)	Analysis of Kiln Waste Fuels for SC Regulation 62.5 Standard 8 Compounds (SC Regulation 61-62.70.6(a)(3)(i)(B)) During each quarter of the calendar year, Giant Cement shall analyze composite samples of all wastes received during a 10 calendar day period within each quarter. Giant Cement is only required to analyze composite samples of all wastes received during this 10 calendar day period and not all wastes received during the subject quarter. Samples from the solid and liquid waste fuels shall be composited and analyzed separately. The sampling shall take place during routine operation at the facility such that a representative sample will be obtained (i.e., three to four existing Kilns operating (if still in operation), New Kiln System operating (when placed in operation), normal receipt of fuel shipments).The composite samples shall be composited over the 10 calendar day period. Giant Cement shall notify the Department by letter of the dates that it intends to composite at least five(5) calendar days before the start date of compositing. The subsequent analysis of the composite samples shall be conducted according to EPA Method SW-846 and quantify any constituent identified in SC Regulation 62.5 Standard 8. Results of this analysis shall be kept on-site and on-file for a calendar period of five(5) years from the date of the analysis and made available to Department personnel upon request. Results of this analysis shall also be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 45 calendar days after the testing has been completed.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID 05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(hhh)	Records of Existing Kiln Slurry Feed Rates and Existing Kiln Clinker Production Rates (SC Regulation 61-62.70.6(a)(3)(i)(B)) Giant Cement shall record for each existing Kiln (if still in operation) the daily slurry feed rate and clinker production rate. All daily existing Kiln slurry feed rates and production rates shall be documented and recorded in a log. This log shall include the date, existing Kiln identification and its daily slurry feed rate and clinker production rate. This log shall be kept on-site, made available to Department personnel upon request and all entries kept for a calendar period of five(5) years from the date of initial log entry.
6.B.24(iii)	Use of COMS to Demonstrate Compliance with the New Kiln System and New Clinker Cooler Visible Emission Limit (40CFR63.8(c)(4)(i), 40CFR63.1209(a)(1)(ii), 40CFR63.1350(d)(1) and 40CFR63.1350(d)(3)) When the New Kiln System and New Clinker Cooler are placed into operation and since they both will exhaust at a common emission point, Giant Cement shall continuously monitor visible emissions from that point (Main Stack). It shall install, calibrate, maintain, and continuously operate a COMS located on the Main Stack to monitor opacity. The COMS shall be installed, maintained, calibrated, and operated as required by 40CFR63 Subpart A and 40CFR60 Appendix B Performance Specification 1. To remain in compliance, the opacity shall be maintained such that the six(6)-minute average opacity for any six(6)-minute block period does not exceed the appropriate New Kiln System/New Clinker Cooler visible emission limit. If the average opacity for any six(6)-minute block period exceeds the appropriate New Kiln System/New Clinker Cooler visible emission limit , it constitutes a violation of the standard. This COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. Also for this COMS, Giant Cement shall also maintain a log of the span and zero from each calibration of the monitor. This log shall be kept on-site and each log entry kept for a calendar period of five(5) years from the date of entry and made available to Department personnel upon request.
6.B.24(jjj)	Emissions Averaging Using a Time-Weighted Average Basis for the New Kiln System (40CFR63.1204(d)(2)(i)) Giant Cement may comply with the applicable New Kiln System (when placed into operation) mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emission standards on a time-weighted average basis. It shall calculate the time-weighted average emission concentration as specified by equation (jjj)(1) of this condition. (jjj)(1) Ctotal = {Cmill-off x (Tmill-off /(Tmill-off + Tmill-on))} + {Cmill-on x (Tmill-on /(Tmill-off + Tmill-on))} Ctotal = time-weighted average concentration of a regulated constituent considering both raw mill on time and off time. Cmill-off = average performance test concentration of regulated constituent with the raw mill off-line. Cmill-on = average performance test concentration of regulated constituent with the raw mill on-line. Tmill-off = time when kiln gases are not routed through the raw mill. Tmill-on = time when kiln gases are routed through the raw mill.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID 05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(kkk)	Records of New Kiln System Feed Rates and New Kiln System Clinker Production Rates (SC Regulation 61-62.70.6(a)(3)(i)(B)) Giant Cement shall record for the New Kiln System (when placed in service) the daily feed rate and clinker production rate. All daily New Kiln System feed and production rates shall be documented and recorded in a log. This log shall include the date, daily feed rate and clinker production rate. This log shall be kept on-site, made available to Department personnel upon request and all entries kept for a calendar period of five(5) years from the date of initial log entry.
6.B.24(lll)	Compliance With Emissions Averaging Using a Time-Weighted Average Basis (40CFR63.1204(d)(2)(ii)) If Giant Cement elects to use the time-weighted average basis as specified in condition 6.B.26(jjj), it shall document in the Facility Operating Record compliance with the emission standards on an annual basis by using the equation provided by that condition. Compliance must be based on one-year block averages beginning on the day that Giant Cement submits the initial Notification of Compliance.
6.B.24(mmm)	Department Notification of Compliance With Emission Averaging Using a Time-Weighted Average Basis (40CFR63.1204(d)(2)(iii)) If Giant Cement elects to document compliance with one or more New Kiln System (when placed in service) emission standards using a time-weighted average basis as specified by condition 6.B.26(jjj), then it shall notify the Department in the initial Comprehensive Performance Test Plan. It must include historical raw mill operation data in the performance test plan to estimate future raw mill down-time and document in the performance test plan that estimated emissions and estimated raw mill down-time will not result in an exceedance of an emission standard on an annual basis. Giant Cement must also document in the Notification of Compliance that an emission standard will not be exceeded based on the documented emissions from the performance test and predicted raw mill down-time.
6.B.24(nnn)	Monitoring of Raw Materials and Adjustments to the New Kiln System's PSD CO and VOC Emission Limits (SC Regulation 61-62.5 Standard 7) The New Kiln System's PSD CO and VOC emission limits are based on the content of the raw materials to be used by Giant Cement. Giant Cement shall monitor raw material content on a semiannual basis for the first two(2) years of New Kiln System operation and annually thereafter. The Department reserves the right to request raw material testing at any time that conditions warrant or to increase the frequency of testing. The method of testing shall also be approved by the Department. Records of the material testing shall be maintained on-site and on-file for a calendar period of five(5) years from the test date and made available to Department personnel upon request. Annual reports including all recorded parameters and calculated values shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period. If in the future the raw material changes, the PSD VOC and CO emission limitations in this permit may be reviewed and revised as appropriate. In no event shall revised PSD CO and VOC emission limitations allow greater emissions than the limitations specified by this permit. The intent of this condition is not to remove operational and process flexibility from Giant Cement, but to show a realistic permit limit relative to actual operation.

MONITORING AND REPORTING CONDITIONS (CURRENT UNIT ID 05 AND FUTURE UNIT ID F-04 CEMENT CLINKER PRODUCTION EQUIPMENT) (KILNS AND CLINKER COOLERS)	
Condition Number	**Condition**
6.B.24(ooo)	Total NO_X Emissions Recordkeeping and Reporting (SC Regulation 61-62.99 Subpart B Section 99.44(a)(2) and SC Regulation 61-62.99 Subpart B Section 99.44(c)(1)) Giant Cement shall produce and maintain the records as specified in paragraphs (ooo)(1) through (ooo)(4) of this condition. It shall also submit a report to the Department by October 31 of each year documenting the total NO_X emissions for the control periods defined in this condition. For the control period that starts on May 31, 2004, the report shall document the total emissions from May 31 through September 30. For all subsequent control periods, the report shall document the total NO_X emissions from May 1 through September 30. These records shall be aintained on-site and on-file for a calendar period of five(5) calendar years and made available to Department personnel upon request. (ooo)(1) The emissions, in pounds of NO_X/ton of clinker produced, from each affected kiln. (ooo)(2) The date, time, and duration of any startup, shutdown or malfunction in the operation of any of the cement kilns or the emissions monitoring equipment. (ooo)(3) The results of any performance testing (ooo)(4) Daily cement kiln production records.
6.B.24(ppp)	Alternative NO_X Emission Monitoring (SC Regulation 61-62.99 Subpart B Section 99.42(a)(2), SC Regulation 61-62.99 Subpart B Section 99.44(b)(2) and SC Regulation 61-62.99 Subpart B Section 99.44(b)(3)) As an alternative to the Pollutant Performance Test specified by condition 6.B.7(tt), Giant Cement can also comply with SC Regulation 61-62.99 Subpart B Section 99.44(b) by the continuous monitoring of a process parameter that it has demonstrated to the Department and EPA is related to NO_X emissions. If Giant Cement chooses to comply through the use of an operational control technique, then it shall submit a compliance monitoring plan. Unless otherwise authorized by the Department and EPA, this monitoring plan must demonstrate that the operational control technique achieves at least a 30% reduction in NO_X emissions from uncontrolled levels. Giant Cement may request that the Department and EPA approve a rate of NO_X emission reductions less than 30%. If the Department and EPA concur that the proposed reduction rate is appropriate, the Department and EPA may authorize a reduction rate lower than 30%.

PART 7.0 ADDITIONAL CONDITIONS

A. SPECIFIC CONDITIONS

SPECIFIC CONDITIONS	
Condition Number	**Condition**
7.A.1	Applicability of Regulations Giant Cement is subject to all applicable provisions of 40CFR60 Subpart A, 40CFR60 Subpart Kb, 40CFR60 Subpart Y, 40CFR60 Subpart OOO, 40CFR61 Subpart A, 40CFR61 Subpart FF, 40CFR63 Subpart A, 40CFR63 Subpart DD, 40CFR63 Subpart EEE and 40CFR63 Subpart LLL except as specified by condition 7.A.2. It is also subject to all applicable provisions of the SC State Air Pollution Control Standards. In the event of any wording discrepancy between the terms of this permit and Federal requirements found at 40CFR60, 40CFR61 or 40CFR63, the language found at 40CFR60, 40CFR61 and 40CFR63 shall control.
7.A.2	Applicability of the Existing Kilns and the New Kiln System to 40CFR63 Subpart LLL or Other Requirements (Federal Register Volume 64 Page 31900 and Federal Register Volume 66 Pages 35145 and 35146) Since each existing Kiln (if still in service) and the New Kiln System (when placed in service) is subject to 40CFR63 Subpart EEE, they are not subject to the applicable requirements of 40CFR63 Subpart LLL except as specified by condition 6.B.10(f). Giant Cement shall comply with the applicable 40CFR63 Subpart EEE emission standards and requirements for all existing Kilns (if still in service) and the New Kiln System (when placed in service) operations including when burning virgin fuels and/or any waste that is not designated as a hazardous waste exclusively from hazardous waste fuels.
7.A.3	Conduct of Non-Enclosed Operations (SC Regulation 61-62.5 Standard 4 Section X) All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. Giant Cement shall maintain dust control of the premises and any roadway it owns or controls by paving, or other suitable measures. Oil treatment is prohibited. All crushing, drying, classification and like operations shall employ a suitable control device acceptable to the Department and shall discharge no more particulate matter than that specified in this permit.
7.A.4	Prohibited Activities (40CFR63.4(a)(1)) Giant Cement shall not operate any affected source subject to 40CFR63 Subpart EEE and 40CFR63 Subpart LLL in violation of the applicable requirements of those subparts. Affected sources subject to and in compliance with either an Extension of Compliance or an Exemption from Compliance are not in violation of the applicable requirements. An Extension of Compliance can be granted by the EPA, Department or by the President of the United States under Clean Air Act Section 112(i)(4).
7.A.5	Circumvention (40CFR60.12 and 40CFR63.4(b)) Giant Cement shall not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere and the use of gaseous diluents to achieve compliance with a relevant standard for visible emissions.

B. OPERATIONAL FLEXIBILITY [SC Regulation 61-62.70.7(e)(5)]

No proposed reasonably anticipated operating scenarios identified in the permittee's Part 70 Application.

C. COMPLIANCE SCHEDULE [SC Regulation 61-62.70.5(c)(8)]

Not applicable at this time.

D. PERMIT SHIELD [SC Regulation 61-62.70.6(f)]

A copy of the "applicability determination" Giant Cement submitted with it's Part 70 permit application is included as Attachment C. Compliance with the terms and conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance. The permittee shall also be shielded from any non-applicable requirements as agreed upon by the Department as specified in Attachment C.

Nothing in the permit shield or in any Part 70 permit shall alter or affect the provisions of Section 303 of the Act, Emergency Orders, of the Clean Air Act; the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance; the applicable requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act; or the ability of EPA to obtain information from a source pursuant to Section 114 of the Clean Air Act. In addition, the permit shield shall not apply to emission units in noncompliance at the time of permit issuance, minor permit modifications (SC Regulation 61-62.70.7(e)(2)), group processing of minor permit modifications (SC Regulation 61-62.70.7(e)(3)), or operational flexibility (SC Regulation 61-62.70.7(e)(5)), except as specified in SC Regulation 61-62.70.7(e)(5)(iii).

ATTACTMENT A

Modeled Emission Rates
Giant Cement Company
TV-0900-0002

(permit updated 6/8/06)

EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
E21_01 – Main Baghouse/Bypass Vent	25.556	25.556	539.58	431.50	1048.3	0.172	25.556	539.58
BOILER – Steam Boiler	0.0794	0.0397	1.063	0.294	0.079		0	0
COALWEST – West Coal Mill	5.397	2.699	0.0015	0.126	0.213		0	0
COALEAST – East Coal Mill	5.397	2.699	0.0015	0.126	0.213		0	0
PKGPORT – Packing Machine #3	1.190	0.595					0	
PKGBUFF – Packing Machine #2	1.190	0.595					0	
FINMILL5 – Finish Mill #5	5.397	2.698					0	
FINMILL6 – Finish Mill #6	6.508	3.254					0	
FINMILL7 – Finish Mill #7	6.508	3.254					0	
FINFDR6 – Finish Mill #6 Feeder	0.397	0.198					0	
FINFDR7 – Finish Mill #7 Feeder	0.397	0.198					0	
SILOS2 – Silo Bank #2	1.508	0.754					0	
SILOS3 – Silo Bank #3	1.508	0.754					0	
DUST67 – Finish Mill #6 & 7 Dust Tank	0.0238	0.0119					0.012	
CONV45 – Kiln #4 & 5 Clinker Handling	3.095	1.548					0	
BLKLDGW – Silo #3 West Bulk Loading	0.317	0.159					0	
BLKLDGE – Silo #3 East Bulk Loading	0.317	0.159					0	

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EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
SILO1P – Silo Bank #1 Portland	0.476	0.238					0	
SILO1M – Silo Bank #1 Masonry	0.476	0.238					0	
SILO1B – Silo Bank #1 Bluff	0.0159	0.0079					0	
F03_01 – Raw Meal Transfer Conveyor Dust Collector	0.201	0.201					0.201	
G07_01 – Homo Silo Dust Collector	0.937	0.937					0.937	
H02_01 – Homo Silo Discharge Bucket Elevator Vent	0.301	0.301					0.301	
H22_01 – Kiln Feed Bin Dust Collector	0.402	0.402					0.402	
H34_01 – Fly Ash Silo Dust Collector	0.464	0.464					0.464	
H41_01 – Fly Ash Dosing Dust Collector	0.155	0.155					0.155	
K12_78 – Kiln Dust Bin Dust Collector	0.181	0.181					0.181	
L19_01 – Clinker Silo Dust Collector	0.552	0.552					0.552	
L21_01 – Clinker Handling Transfer Point Dust Collector	0.523	0.523					0.523	
M10_01 – Clinker Additives to Conveyor Dust Collector	0.371	0.371					0.371	
M11_01 – Clinker Additives Dust Collector	0.250	0.250					0.250	
N23_01 – Finish Mill & Cement Transfer Dust Collector	0.402	0.402					0.402	
S3_20_01 – Coke/Coal Dust Collector 1	0.217	0.217					0.217	
S3_21_01 – Coke/Coal Dust Collector 2	0.217	0.217					0.217	

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Modeled Emission Rates
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EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
N40_01 – Finish Mill Discharge/Separator Dust Collector	8.095	8.095					8.095	
X09 – Marl Bin for Finish Mill 6/7	0.952	0.952					0.952	
CONVC – Conveyor Belt C	1.825	0.913						
LIMNSTN – Limestone Silo	1.587	0.794						
METERBIN – Metering Bin/Carbon Dust Tan	0.00685	0.00342						
CRUSHER – Quarry Marl Crusher	0.0603	0.0302					0.0302	
P59 – Crusher	0.00952	0.00476					0	0
MARLTRP2 – Marl Belt Transfer Point #2	0.00952	0.00476					0.0048	
MARLTRP1 – Marl Belt Transfer Point #1	0.00952	0.00476					0.0048	
MARLTRP3 – Marl Belt Transfer Point #3	0.00952	0.00476					0.0048	
HAMMIL – Hammer Mill	0.0603	0.0302					0	
GYPHOPR – Gypsum Hopper	0.290	0.145					0.1452	
PUG45 – Pug Mill #4 & 5	1.135	0.754					0	
COLSILO – Coal Silo	0.413	0.206					0	
COLHOPR – Coal Hopper	0.0397	0.0198					0	
COLBLT13 – Coal Belt Ch #13	0.420	0.210					0	
CLBTCH27 – Coal Belt Ch #27	0.560	0.280					0	

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Modeled Emission Rates
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EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
COLRADST – Coal Radial Stacker	1.111	0.556					0	
COLUNBIN – Coal Unloading Bin	0.0794	0.0397					0	
CLFDRCH5 – Coal Feeder & Ch #5	0.841	0.421					0	
D25_D27	0.0352	0.0167					0.0167	
D29_D13	0.0332	0.0156					0.0156	
L07_L09	0.294	0.139					0.1389	
L10_L05	0.138	0.0652					0.0652	
D27&D28	0.129	0.0611					0.0611	
D13	0.0225	0.0105					0.0105	
D13_D14	0.0402	0.0189					0.0189	
GYPBIN1	0.00040	0.00019					0	
GYPBIN2	0.00053	0.00025						
SRC2	0.0155	0.00211						
SRC3	0.0155	0.00211						
SRC4	0.0155	0.00211						
SRC5	0.0155	0.00211						
SRC7	0.0327	0.0155						

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EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
SRC9	0.00444	0.00211						
SRC10	0.00444	0.00211						
SRC11	0.00356	0.00169						
SRC12	0.04595	0.0217						
SRC13	0.04595	0.0217						
SRC14	0.01635	0.00772						
SRC15	0.01635	0.00772						
SRC16	0.01635	0.00772						
SRC17	0.0918	0.0435						
SRC18	0.0918	0.0435						
SRC19	0.873	0.435						
SRC20	0.00444	0.00211						
SRC21	0.01127	0.005325					0	
COOLER2 – Clinker Cooler #2							-3.80	
COOLER3 – Clinker Cooler #3							-3.80	
COOLER4 – Clinker Cooler #4							-5.00	
COOLER5 – Clinker Cooler #5							-2.97	

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EMISSION RATES	NAAQS						PSD	
SOURCE IDENTIFICATION	TSP (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_2 (lb/hr)	CO (lb/hr)	LEAD (lb/hr)	PSD - PM_{10} (lb/hr)	PSD - SO_2 (lb/hr)
FIN12 – Finish Mill #1 & 2							-0.595	
FIN34 – Finish Mill #3 & 4							-1.19	
KILNS45 – Kilns #4 & 5							-29.05	-889.7
KILNS23 – Kilns #2 & 3							-26.43	-682.4
PKGMAS1 – Packing Machine #1							-0.595	
PKGMAS2 – Packing Machine #4							-1.19	
CLNKEAST – East Clinker Tower							-1.55	
CONVBC – Conveyor Belt B & C							-0.317	
DRYER – Marl Dryer Scrubber							-2.50	-32.5
DRYERBH – Marl Dryer Baghouse							-0.298	
DUST23 – Kiln # 2 & 3 Dust Bin Loading							-0.0*	
CLBTCH14 – Coal Belt Ch #14							-0.210	
KLNAFEDS – Kiln Ancillary Feed System							-0.0*	
PRTCRSHR – Portable Rock Crusher							-0.0*	
PUGSILOS – Pug Mill Silos							-0.733	
PUG23 – Pug Mill #2 & 3							-0.709	
FACILITY TOTAL	**90.453**	**65.250**	**540.646**	**432.046**	**1048.81**	**0.172**	**-40.632**	**-1065.02**

ATTACTMENT A

Modeled Emission Rates
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MODELING EXEMPTIONS	
SOURCE IDENTIFICATION	**EXEMPTION BASIS**
Apron Feeder w/dump hopper (221-AF-01, 221-DH-01)	Emissions less than 1.0 lb/hr
Crusher (221-RC-01)	Emissions less than 1.0 lb/hr
Belt Conveyor (221-BC-01)	Emissions less than 1.0 lb/hr

ATTACHMENT B

Insignificant Activities
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

The following tables contain a list of activities which are considered insignificant pursuant to South Carolina Regulation 61-62.70.5(c). Sources listed below are not exempt from any otherwise applicable state or federal requirements including, but not limited to, opacity standards, ambient air quality standards, and air toxic standards.

TABLE 1. INSIGNIFICANT CURRENT AND FUTURE QUARRY/MARL HANDLING EQUIPMENT (CURRENT UNIT ID C-01 AND FUTURE UNIT ID F-01)

Equipment Description	Equip ID	Design Capacity (tph)	Equipment Manufacture Date	Basis
Hammer Mill Quarry Crusher	Q-201	825	1958	Insignificant Emissions and not subject to 40CFR60 Subpart OOO
Wobbler Feeder	Q-200	825	1958	Insignificant Emissions and not subject to 40CFR60 Subpart OOO
Crusher Breaker Plate	Q-202	825	1958	Insignificant Emissions and not subject to 40CFR60 Subpart OOO
Marl Crane	R-5	1,500	1962	Insignificant Emissions and not subject to 40CFR60 Subpart OOO

TABLE 2. INSIGNIFICANT CURRENT AND FUTURE WASTEWATER STORAGE EQUIPMENT

Equipment Description	Equip ID	Install Date	Design Capacity (gallon)	Basis
West Wastewater Clay Storage Tank System	R-1	1952	90,000 Total	Insignificant emissions and this tank tanks does not store cement raw materials or products and therefore is not subject to 40CFR63 Subpart LLL
East Wastewater Clay Storage Tank System	R-2	1952	90,000 Total	Insignificant emissions and this tank tanks does not store cement raw materials or products and therefore is not subject to 40CFR63 Subpart LLL
Wash Basin Storage Tank	R-901	1956	543,110	Insignificant emissions and this tank tanks does not store cement raw materials or products and therefore is not subject to 40CFR63 Subpart LLL

TABLE 3. INSIGNIFICANT CURRENT AND FUTURE MISCELLANEOUS STORAGE TANKS

Equipment Description	Equip ID	Install Date	Design Capacity	Basis
Grinding Aid Storage Tank	F-624A	1963	735 gallon (2.782 m^3)	Tank size
Grinding Aid Mix Tank	F-133	1994	2,250 gallon (8.517 m^3)	Tank size
Waste Lube Tank	G-153	1980	250 gallon (0.946 m^3)	Tank size
Waste Lube Tank	G-152	1980	500 gallon (1.892 m^3)	Tank size

ATTACHMENT B

Insignificant Activities
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TABLE 4. INSIGNIFICANT CURRENT AND FUTURE MISCELLANEOUS STORAGE TANKS				
Equipment Description	**Equip ID**	**Install Date**	**Design Capacity**	**Basis**
Motor Oil Storage Tank	G-159	1993	800 gallon (3.028 m^3)	Tank Size
Hydraulic Oil Storage Tank	G-158	1993	800 gallon (3.028 m^3)	Tank Size
Transmission Fluid Storage Tank	G-157	1993	500 gallon (1.892 m^3)	Tank Size
Gasoline Storage Tank	G-155	1989	1,000 gallon (3.786 m^3)	Tank Size
Quarry Diesel Fuel Storage Tank	Q-160	1974	7,490 gallon (28.36 m^3)	Tank Size
Cement Additive Storage Tank (Stores plasticizer)	F-132	1952	12,000 gallon (45.426 m^3)	Tank Size
Cement Additive Storage Tank (Stores retarder)	F-132	1989	19,400 gallon (73.438 m^3)	This tank is not subject to 40CFR60 Subpart Kb because components of the grinding aid are not VOL's.
Cement Additive Storage Tank (Stores grinding aid)	F-131	1989	18,000 gallon (68.14 m^3)	This tank is not subject to 40CFR60 Subpart Kb because components of the grinding aid are not VOL's.
Cement Additive Storage Tank (Stores grinding aid)	533-GT-30	2005	20,000 gallon (75.71 m^3)	This tank is not subject to 40CFR60 Subpart Kb because components of the grinding aid are not VOL's.
No.2 Fuel Oil Storage Tank	K-170	1987	10,000 gallon (37.855 m^3)	Tank Size

ATTACHMENT C

Applicable and Non-Applicable Federal and State Regulations
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

The following tables contain the Federal and South Carolina air pollution regulations, which were specified in the Part 70, permit application and determined as applicable and non-applicable by the Department as of the date of this permit issuance. This attachment may be revised by the Department in the event of a change in the nature or emission of pollutants at the source or promulgation of new or revised regulations.

ATTACHMENT C

Applicable and Non-Applicable Federal and State Regulations
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

TABLE 1. STATE REGULATIONS			
Regulation	**Applicable**	**Not Applicable**	**Reason**
62.1 Section I (Definitions)	X		Definitions
62.1 Section II (Permit Requirements)	X		Cement manufacturing equipment are sources of air contaminants.
62.1 Section III (Emissions Inventory)	X		Giant Cement must periodically conduct an emissions inventory.
62.1 Section IV (Source Tests)	X		Giant Cement's Kilns, clinker coolers and raw material dryer are required to be tested.
62.2 (Prohibition of Open Burning)	X		Open burning prohibited at the plant
62.3 (Air Pollution Episodes)	X		Giant Cement is required to comply
62.4 (Hazardous Air Pollutant Conditions)	X		Giant Cement's manufacturing equipment is a source of HAP's and fugitive dust.
61-62.5 Standard 1 Fuel Burning Operations	X		Giant Cement has a steam boiler to which these regulations apply.
61-62.5 Standard 2 Ambient Air Quality Standards	X		Giant Cement's manufacturing equipment emits criteria pollutants and it demonstrated compliance with this standard using air dispersion modeling.
61-62.5 Standard 3 Waste Combustion and Reduction	X		If anything other than virgin fuel is burned then this standard applies. Giant Cement uses hazardous and non-hazardous wastes as Kiln fuels which are other than virgin fuels.
61-62.5 Standard 4 Emissions from Process Industries	X		Giant Cement's Kilns, clinker coolers and raw material dryer are specified as subject to this regulation.
61-62.5 Standard 5 Volatile Organic Compounds		X	This standard specifies certain process industries. Cement plants are not specified therefore this is not applicable.
61-62.5 Standard 5 (LAER)	X		Giant Cement's New Kiln System VOC emissions will be 100 tpy over the baseline.
62.5 Standard 6 Alternative Emission Limitation Options		X	Giant Cement has not requested any alternative emission limitations and so this is not applicable.
62.5 Standard 7 Prevention of Significant Deterioration	X		Giant Cement's existing plant is subject but has taken waste fuel input limits to remove themselves from applicability. The plant modifications are subject to a PSD review for VOC and CO emissions.
62.5 Standard 8 (Toxic Air Pollutants)	X		Giant Cement's manufacturing existing and new equipment emits and will emit toxic air pollutants. It has demonstrated compliance with this regulation using air dispersion modeling.
62.6 Section I Control of Fugitive Particulate Matter In Non-Attainment Areas		X	Giant Cement is located in an attainment area
62.6 Section II Control of Fugitive Particulate Matter In Problem Areas		X	Giant Cement is not located in a problem area

ATTACHMENT C

Applicable and Non-Applicable Federal and State Regulations
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

TABLE 2. STATE REGULATIONS			
Regulation	**Applicable**	**Not Applicable**	**Reason**
62.6 Section III Control of Fugitive Particulate Matter Statewide	X		Giant Cement's manufacturing equipment is a source of fugitive dust.
62.7 (Good Engineering Practice Stack Height)	X		Giant Cement's existing Kilns and the New Kiln System emit through stacks
62.63 National Emission Standards for Hazardous Air Pollutants	X		Giant Cement is a major HAP source
62.68 (Chemical Accident Prevention Provisions)	X		Giant Cement stores liquid hazardous waste fuels on-site.
62.70 (Title V Operating Permit Program)	X		Giant Cement's emissions are greater than the Title V thresholds.
62.72 (Acid Rain Program)		X	A cement plant is not a source type listed in the applicability section of this regulation.

TABLE 3. FEDERAL REGULATIONS (40CFR60 NEW SOURCE PEFORMANCE STANDARDS)			
Subpart	**Applicable**	**Not Applicable**	**Reason**
40CFR60 Subpart A (General Provisions)	X		Giant Cement is subject to 40CFR60 Subpart Kb, 40CFR60 Subpart Y and 40CFR60 Subpart OOO.
40CFR60 Subpart F Standards of Performance for Cement Plants		X	This subpart does not apply for sources complying with 40CFR63 Subpart LLL and 40CFR63 Subpart EEE. Giant Cement is complying with 40CFR63 Subpart LLL and will comply with 40CFR63 Subpart EEE.
40CFR60 Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X		Giant Cement has Liquid Waste Fuels Storage Tanks that will store volatile organic liquids.
40CFR60 Subpart Y Standards of Performance for Coal Preparation Plants	X		Giant Cement has coal preparation equipment subject to the provisions of this subpart.
40CFR60 Subpart OOO Standards of Performance For Nonmetallic Mineral Processing Plants	X		Giant Cement has quarry and marl handing equipment subject to this subpart.
Other New Source Performance Standards		X	All other New Source Performance Standards of 40CFR60 except 40CFR Subpart Kb, 40CFR60 Subpart Y and 40CFR60 Subpart OOO do not apply because they apply to other types of sources. Giant is either not a type of source or does not operate equipment covered by those New Source Performance Standards.

ATTACHMENT C

Applicable and Non-Applicable Federal and State Regulations
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

TABLE 4. FEDERAL REGULATIONS (40CFR61 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS)			
Subpart	**Applicable**	**Not Applicable**	**Reason**
Subpart A (General Provisions)	X		Giant Cement is subject to 40CFR61 Subpart FF.
40CFR61 Subpart V	X		40CFR63 Subpart DD gives Giant Cement the option of choosing this subpart to control equipment leaks. It also gives Giant the option of choosing 40CFR63 Subpart H.
40CFR61 Subpart FF National Emission Standard For Benzene Waste Operations	X		Giant Cement will process benzene-containing wastes.
Other NESHAPS		X	All other NESHAPS except 40CFR61 Subpart FF and 40CFR61 Subpart V do not apply because they apply to other source types. Giant is either not a source type or does not operate a source type covered by those NESHAPS.

TABLE 5. FEDERAL REGULATIONS (40CFR63 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES)			
Subpart	**Applicable**	**Not Applicable**	**Reason**
Subpart A (General Provisions)	X		Giant Cement is subject to 40CFR63 Subpart DD and 40CFR63 Subpart LLL. Effective September 30, 2003 it is also subject to 40CFR63 Subpart EEE.
40CFR63 Subpart H National Emission Standards for Organic Hazardous Air Pollutants For Equipment Leaks	X		40CFR63 Subpart DD gives Giant the option of choosing this subpart to control equipment leaks. It also gives Giant the option of choosing 40CFR61 Subpart V.
40CFR63 Subpart DD National Emission Standards for Hazardous Air Pollutants from Off-Site Waste And Recovery Operations	X		Giant Cement accepts waste from off-site sources.
40CFR63 Subpart PP National Emission Standards For Containers	X		Giant Cement will use containers to store and transport off-site wastes.
40CFR63 Subpart EEE National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors	X		Giant Cement's existing Kilns and the New Kiln System are hazardous waste combustors. Effective September 30, 2003, it must be in compliance with the applicable provisions of this subpart for the existing Kilns and by the startup date of the New Kiln System.

ATTACHMENT C

Applicable and Non-Applicable Federal and State Regulations
Giant Cement
TV-0900-0002

(permit updated 6/8/06)

TABLE 5. FEDERAL REGULATIONS (40CFR63 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES)			
Subpart	**Applicable**	**Not Applicable**	**Reason**
40CFR63 Subpart LLL National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry	X		Giant Cement has equipment subject to this subpart.
Other National Emission Standards for Hazardous Air Pollutants		X	All other subparts except 40CFR63 Subpart A, 40CFR63 Subpart H, 40CFR63 Subpart DD, 40CFR63 Subpart EEE and 40CFR63 Subpart LLL do not apply because they apply to other source types. Giant is either not a source type or does not operate a source type covered by those subparts.

TABLE 6. FEDERAL REGULATIONS (OTHER REGULATIONS)			
Subpart	**Applicable**	**Not Applicable**	**Reason**
40CFR 64 (Compliance Assurance Monitoring)		X	CAM has been incorporated into the requirements of 40CFR63 Subpart EEE and 40CFR63 Subpart LLL.

PERMIT ABBREVIATIONS AND ACRONYMS

As	Arsenic
AMM	Alternative Monitoring Method
AWFCO	Automatic Waste Feed Cutoff
Be	Beryllium
Btu	British Thermal Unit
CEM	Continuous Emission Monitor
CEMS	Continuous Emission Monitoring System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System
CO	Carbon Dioxide
COM	Continuous Opacity Monitor
COMS	Continuous Opacity Monitoring System
CPMS	Continuous Particulate Monitoring System
cond.	Condition
Cr	Chromium
DRE	Destruction and Removal Efficiency
dscm	Dry Standard Cubic Meter
Equip.	Equipment
EPA	Environmental Protection Agency
ESV	Emergency Safety Vent
°F	Fahrenheit
ft	Feet
g	Gram
HAP	Hazardous Air Pollutant
HCl	Hydrochloric Acid
hr	Hour
ID	Identification
kg	Kilogram
lb	Pound
Mg	Megagram
m^3	Cubic Meter
MTEC	Maximum Theoretical Equivalent Concentration
N/A	Not Applicable
ng	Nanogram
NO_2	Nitrogen Dioxide
NSPS	New Source Performance Standard
O&M	Operation and Maintenance
O_2	Oxygen
P	Process Rate
PEMS	Predictive Emission Monitoring System
PM	Particulate Matter
PM_{10}	Particulate Matter Size 10 microns or less
PMCD	Particulate Matter Control Device
POHC	Principal Organic Hazardous Constituent
ppm	Part Per Million
ppmv	Part Per Million Volume
PPT	Pollutant Performance Test
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
SFSS	Solid Fuel Storage System
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown and Malfunction
TEQ	Toxicity Equivalence
THI	Total Heat Input
tph	Tons Per Hour
tpd	Tons Per Day
TSP	Total Suspended Particulate Matter
VOC	Volatile Organic Compound

PERMIT ABBREVIATIONS AND ACRONYMS

VOL	Volatile Organic Liquid
µg	Microgram
%	Percent
#	Number

June 8, 2006

Giant Cement
P.O. Box 326
Harleyville, SC 29448

ATTENTION: Clint Roberts

Dear Mr. Roberts:

Re: Revised Title V Operating Permit TV-0900-0002

Enclosed please find your updated Title V Permit TV-0900-0002 that incorporates the minor changes made during construction of the New Kiln System. This permit replaces the corresponding operating permit issued on February 11, 2003.

Please review this permit carefully. Should you notice any errors or omissions, notify your permit engineer, Kirk Schneider, of this office, at (803) 898-4023.

Sincerely,

Carl W. Richardson, P.E., Director
Engineering Services Division
Bureau of Air Quality

CWR:KGS:pe

Enclosure

cc: Mark Hiott, Region 7 Charleston EQC Office
Scott Miller, EPA Region IV (via e-mail)
TV-0900-0002

PART VI: ORGANIC AIR EMISSION STANDARDS FOR TANKS, CONTAINERS, MISCELLANEOUS UNITS, AND EQUIPMENT

40 CFR §§264.1050 & 264.1080

VI.A. EQUIPMENT

40 CFR Part 264 Subpart BB

VI.A.1. Equipment Applicability
40 CFR §264.1050

40 CFR Part 264 Subpart BB applies to all equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight. Specifically, Subpart BB applies to all Permittee equipment identified in Attachment 14-1, 40 CFR 61 Subpart V Monitoring Program Table EAR 03 008, dated April 2016, in Section 14 of the Approved Permit Application. All subject equipment must be uniquely marked and tagged for the specific purposes of tracking, monitoring, inspecting, and repairing each piece of equipment in accordance with the written Leak Detection & Repair (LDAR) Program, Attachment 14-1 of Section 14 of the Approved Permit Application, and 40 CFR Part 264 Subpart BB. All subject equipment shall comply with Part VI of this Permit and 40 CFR Part 264 Subpart BB.

The LDAR Program, Attachment 14-1 of Section 14 of the Approved Permit Application, contains a listing of subject equipment based on the system configurations of the Permittee at the time of this Permit's issuance. The Permittee shall maintain the most current equipment identification list in the Facility's operating record accompanied by a written copy of the approved LDAR Program. The current equipment list and LDAR Program shall be available at all times at the Facility.

VI.A.2. Equipment Standards
40 CFR §§264.1052 through 264.1058, 264.1060 through 264.1062, & 264.1064(b)

Each piece of equipment subject to 40 CFR Part 264 Subpart BB shall comply with the appropriate equipment standard for each piece of equipment's specific equipment type, design, operation, inspection and monitoring methods and frequencies, leak definition and leak repair procedures and times per the appropriate standard and the approved written LDAR Program.

VI.A.3. Equipment Repair Delays
40 CFR §§264.1059 & 264.1064

Delays in repair of leaking equipment shall be justified or otherwise demonstrated and recorded per 40 CFR §§264.1059 and 264.1064.

VI.A.4. Subpart BB Test Methods and Procedures
40 CFR §264.1063

The Permittee shall comply with the test methods and procedures of 40 CFR §264.1063, Section 14.2 and the written LDAR Program in the Approved Permit Application, for all

equipment subject to Subpart BB or, if more stringent, the test methods and procedures specified in 40 CFR Part 63 Subpart DD (40 CFR §63.694) and 40 CFR Part 61 Subpart V (40 CFR §61.245) can be used in lieu of duplicative Subpart BB test methods or procedures Subpart BB-subject equipment. The Permittee shall demonstrate compliance with the written LDAR Program through records of inspection, monitoring, repair, and LDAR monitoring personnel training records. Records shall include instructions and information ensuring accurate equipment calibration, monitoring and inspection records for each piece of equipment each monitoring date and each waste stream determination. All records shall indicate the personnel creating the record and shall include records of the personnel's training and experienced with the LDAR Program and LDAR monitoring and leak detection equipment. All records shall be available in the Facility's operating record. The LDAR Program and the monitoring, inspection, and repair records shall demonstrate the tracking of leak detections, leak marking and communication of leaks, repairs and repair confirmations through the Facility's internal communication system and shall be maintained in the Facility operating record available upon request.

VI.A.5. Equipment Records
40 CFR §264.1064(m)

Records shall be the primary demonstration of compliance with the equipment requirements of Part VI of this Permit and 40 CFR Part 264 Subpart BB. The Permittee shall maintain all records necessary to demonstrate compliance, accessible at the Facility, for a period of not less than three (3) years. All records necessary for demonstrating compliance for equipment shall include the required recordkeeping information and requirements of 40 CFR §264.1064, and may be kept with an equivalent recordkeeping system required per 40 CFR Part 63 Subpart DD (40 CFR §63.696) and 40 CFR Part 61 Subpart V (40 CFR §61.246), to prevent duplication of equipment records in the Facility's operating record. Should conditions change such that the Permittee is no longer required to comply with the equivalent recordkeeping requirements for equipment under the authority of 40 CFR Part 63 Subpart DD and 40 CFR Part 61 Subpart V, the Permittee shall immediately notify the Regional Administrator per Conditions I.D.7., I.D.10. and I.D.11. of this Permit.

VI.A.6. Semiannual Equipment Delays and Exceedances Report
40 CFR §264.1065

The Permittee shall comply with the semiannual reporting requirement of this Condition per 40 CFR §§61.247 and 63.697 under the Clean Air Act in lieu of 40 CFR §264.1065. The 40 CFR §§61.247 and 63.697 equipment reporting requirements are more stringent than the requirements of Subpart BB. The Permittee shall provide a copy of required 40 CFR §§61.247 and 63.697 required report submittals also to the RCRA Corrective Action & Permiting Section Chief per Condition I.H when submitted each reporting period. If the Permittee is no longer required to submit the reports as required by 40 CFR Part 63 Subpart DD and 40 CFR Part 61 Subpart V, the Permittee shall notify the RCRA Corrective Action & Permiting Section Chief in writing thirty (30) calendar days prior to the next scheduled report, and shall thereafter submit a report per 40 CFR §264.1065 and Condition I.H. documenting: (1) equipment for which delays in repair exceed the required response and repair times; (2) emission control devices exceeding or operating

outside of device design specifications for a duration of greater than twenty-four (24) hours prior to correction; and (3) the dates of hazardous waste management unit shutdowns.

VI.A.7. Equipment Additions or Modifications

Prior to installing any new equipment subject to 40 CFR Part 264 Subpart BB, or prior to significantly modifying existing equipment layout for other than periodic, equivalent equipment replacement, the Permittee shall apply for a permit modification under 40 CFR §270.42, and provide revised Part B application information required under 40 CFR §§270.14 - 16, and 270.25, as applicable, with the modification request.

VI.A.8. Equipment Maintenance and Installation of Temporary Equipment

Temporary equipment installed during maintenance activities shall be noted in the daily inspection log in the Facility's operating record. The notation shall include the equipment identification numbers replaced during the maintenance activity, the date the maintenance started, the date the maintenance is expected to be completed, and a brief statement as to what the activity is that includes installation of temporary equipment.

All temporary equipment shall be selected and installed to ensure engineering performance equivalent to the equipment it is replacing to prevent system performance upsets, releases of hazardous waste, fire or explosion.

VI.B. TANKS, CONTAINERS, AND MISCELLANEOUS UNITS

40 CFR Part 264 Subpart CC

VI.B.1. Applicability
40 CFR §264.1080

40 CFR Part 264 Subpart CC applies to facilities that treat, store or dispose of hazardous waste in tanks, containers, miscellaneous units, or surface impoundments for which all hazardous wastes entering the unit have an average volatile organic concentration equal to or more than 500 parts per million by weight (ppmw) unless excepted as provided for in 40 CFR §§264.1 and 264.1080(b). Units subject to 40 CFR Part 264 Subpart CC are listed in Condition VI.B.2. Table 1. Per the RCRA and Clean Air Act (CAA) statutes, RCRA requirements are designed to control the potential for release of volatile RCRA listed and characteristic wastes to the air when the standards of the CAA do not have authority to require control of such emissions on a unit-specific basis. RCRA and the CAA are intended to work in coordination to comprehensively address potential releases from jointly regulated hazardous waste management units. Where a HWMU is subject to both RCRA requirements and CAA standards that are both unit-specific and equally stringent, RCRA defers regulatory authority to the equivalent CAA standard for control of volatile organic air emissions from the unit. 40 CFR Part 264 Subpart CC requires that the Permittee have installed and operating organic air emissions controls on all subject HWMUs at all times hazardous wastes are managed in the unit. If the Permittee is required to comply with a CAA standard that is equivalent to or more stringent than the requirements of Subpart CC, then the HWMU is considered exempt from the

requirements of Subpart CC.

VI.B.2. RCRA 40 CFR Part 264 Subpart CC Exemption
40 CFR §264.1080(b)(7)

Per Section 12 of the Approved Permit Application, the Permittee has certified that all Permittee tanks and containers, in which hazardous volatile organic wastes of concentrations subject to Condition VI.B.1. are treated, stored or disposed, are equipped with and operating air emission controls in accordance with applicable requirements of the CAA codified under 40 CFR Parts 60, 61 or 63. The Permittee's tanks and containers are operated in accordance with CAA requirements that address the control of volatile organic air emissions from HWMUs that are as stringent as the RCRA Subpart CC requirements.

The hazardous waste management units identified in Table 1 below are exempt from the RCRA Subpart CC standards as specifically cited for as long as the unit is required to install, maintain and operate organic air emissions controls while managing RCRA hazardous wastes subject to RCRA Subpart CC.

Should conditions change such that the Permittee is no longer required to comply with the equivalent CAA standard listed in Table 1 below, the Permittee shall immediately notify the Regional Administrator per Conditions I.D.7., I.D.10. and I.D.11. of this Permit.

Condition VI.B.2. Table 1:
RCRA Subpart CC Exempted Hazardous Waste Management Units

Hazardous Waste Management Unit	Complying with:	RCRA Subpart CC Exception Cited
Blend Tanks T-4101, T-4102, T-4103, and T-4104	40 CFR Part 60 Subpart Kb 40 CFR Part 61 Subpart FF (specifically, 40 CFR §61.343(a)(1))	40 CFR §264.1080(b)(7)
Burn Tanks T-4105 and T-4106	40 CFR Part 60 Subpart Kb 40 CFR Part 61 Subpart FF	40 CFR §264.1080(b)(7)
Tank Trucks	40 CFR Part 63 Subpart PP 40 CFR Part 63 Subpart DD (specifically, 40 CFR §63.688)	40 CFR §264.1080(b)(7)
Railcars	40 CFR Part 63 Subpart PP 40 CFR Part 63 Subpart DD (specifically, 40 CFR §63.688)	40 CFR §264.1080(b)(7)
Containers (Drums, Totes, etc.)	40 CFR Part 63 Subpart PP 40 CFR Part 63 Subpart DD (specifically, 40 CFR §63.688)	40 CFR §264.1080(b)(7)

VI.B.3. Records
40 CFR §264.1089(j)

Records shall be the primary demonstration of compliance with the tank, container and miscellaneous unit requirements of Condition VI.B. of this Permit and 40 CFR Part 264 Subpart CC. The Permittee shall maintain all records necessary to demonstrate compliance with each applicable CAA Subpart as specified in Condition VI.B.2. in lieu of compliance with 40 CFR Part 264 Subpart CC for these units. Records shall be accessible at the Facility for inspection, and kept in accordance with the applicable recordkeeping requirements of 40 CFR Parts 60, 61, or 63 as referenced in Table 1 of Condition VI.B.2. for each exempted unit.

VI.B.4. Notification of New Units

Prior to installing any tank, container, surface impoundment, or miscellaneous unit subject to 40 CFR Part 264 Subpart CC, or prior to modifying an existing process, waste handling process, or tank or container such that the unit(s) will become subject to 40 CFR Part 264 Subpart CC, the Permittee shall apply for a Permit modification under 40 CFR §270.42, and provide specific Part B application information required under 40 CFR §§270.14-17, 270.23, and 270.27, as applicable, with the modification request.

State of Oregon
Department of Environmental Quality

Organic Recovery Unit #2 Design and Operations Plan

For

Chemical Waste Management of the Northwest, Inc.

Arlington Facility • ORD 089 452 353
17629 Cedar Springs Lane
Arlington, Oregon

Standalone Document No. 22

This document is issued by the
Oregon Department of Environmental Quality

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1 - ORGANIC RECOVERY UNIT #2

1.1 Introduction

This *Organic Recovery Unit #2 Design and Operations Plan* (Plan) establishes the design and operating standards for the Bioremediation and the Organic Recovery Unit (ORU) treatment processes.

1.2 Purpose

- To ensure compliance with all aspects of Organic waste treatment under 40 CFR §264 subparts AA,BB, and CC air emissions standards and;,
- To ensure treatment standards are achieved for all treated wastes per 40 CFR §268.40.

1.1.1 Organic Recovery Unit ORU-2

CWMNW operates two Organic Recovery Units (ORU), designated ORU-1 and ORU-2. Both ORU treatment systems are located adjacent to Containment Building B-5. ORU-1 received approval to operate in 2010 and has been operating since that time. ORU-1 is covered under *Standalone #19 – Bioremediation and Organic Recovery Unit Design and Operations Plan.*

ORU-2 was constructed and commissioned in 2016, The ORU-2 treatment unit treats listed and/or characteristic hazardous wastes using an indirect fired thermal process to reduce listed and/or characteristic hazardous wastes to the levels specified in 40 CFR Part 268. Secondary treatment methods may be required to reduce the treated listed and/or characteristic hazardous wastes to the levels specified in 40 CFR Part 268 prior to land disposal. Wastes accepted for treatment through the ORU-2 treatment system are staged inside Building B-5 and in approved containers in outside storage areas. Post-treatment solids awaiting LDR clearance or further treatment are temporarily stored in piles inside Building B-4 or B-5.

1.3 ORU-2 Treatment System

ORU-2 material handling conveyers receive material from two feed hoppers and convey the media to be treated to the ORU treatment unit. System feed conveyors are fully enclosed and ventilated to the thermal oxidizer. The ORU-2 system consists of a double pass rotary furnace that indirectly heats the media traveling through the inside of the rotary tube, and the treated media discharges at the feed end of the unit. System components subject to freezing are heat traced and insulated to prevent freezing. As-built design plans for the ORU-2 are contained in Appendix A.

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1.4 Wastes Approved for Treatment

ORU-2 physically treat media with organic contamination. The following table illustrates the general waste families and possible associated RCRA Codes being treated by the system.

Table 19-1: ORU Approved Waste Codes

APPROVED EPA CODES
D001, D002, DOO3, D004, D005, D006, D007, D008, D009, D010, D011, D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, DO36, D037, D038, D039, D040, F001, F002, F003, F005, F034, F037, F038, K001, K048, K049, K050, K051, K052, K143, K169, K170, K171, K172, P037, P059, P089, U002, U019, U031, U036, U051, U052, U060, U061, U112, U129, U140, U154, U159, U161, U165, U188, U210, U220, U228, U239

The ORU Treatment systems are made up of several subsystems that include the feed systems, an indirect fired Anaerobic Thermal Desorption Unit (ATDU), ash handling systems, vapor condensing system, process water handling and treatment systems, and air emissions control systems. A process flow diagram for the various systems is contained in Appendix B.

1.5 Waste Segregation

The treatment of the wastes with codes in Table 19-1 through the ORU system may require the isolation of process residuals dependent on the EPA codes associated with the waste being treated. These incompatible wastes will be treated separately following a system change over. The system changeover process shall include the following tasks, all wastes in the feed system will be processed through the ATDU, all process water will be evacuated from the system and treated through the process water treatment system, and all sludges accumulated in the sludge removal system will be removed and stored in accordance with the WAP. Evacuated residual sludges and process waters will be treated and/or managed in accordance with the WAP.

2 - ORU-2 SYSTEM OVERVIEW

2.1 Anaerobic Thermal Desorption Unit

The system is designed to separate the organic constituents from contaminated media in such a manner that they are preserved for collection and recycling. The Anaerobic Thermal Desorption Unit (ATDU) includes a rotating cylinder that is slightly inclined downward from the product feed end. This rotating cylinder is enclosed within an outer shell, within which heat is applied to the outside of the rotating cylinder. Either Landfill Gas or Propane will be used to fire the ATDU. Wastes inside the ATDU do not directly contact the heat source, and an inert atmosphere is maintained in the cylinder to prevent oxidation of the organic constituents. The indirectly heated cylinder vaporizes water and organics contained in the waste. The primary heat transfer mechanism is conduction through the cylinder wall.

2.2 ATDU Operating Conditions

The ATDU rotating cylinder operates under an inert anaerobic atmosphere, thereby preventing any oxidation or destruction of the hydrocarbon or chemical constituents. The inert anaerobic atmosphere is maintained during start-up and shutdown by purging the ATDU with steam to displace the oxygen. During normal operations, the water content of the feedstock is typically sufficient to generate enough water vapor to maintain the inert atmosphere inside the desorber and additional steam is therefore not required. The seals at the inlet and discharge ends of the rotary drum combined with the double tipping valve airlocks at either end maintain a non-oxidizing atmosphere in which the waste can be safely vaporized.

An oxygen sensor connected to the SCADA control system is installed in the discharge end of the ATDU continuously monitors the oxygen concentration within the rotary drum which during normal operations is typically below 1 percent. The SCADA control system the oxygen sensor measures the oxygen concentration inside the drum, in the event the oxygen level increases above 1 percent, steam can be added to reduce the oxygen concentration down to normal levels. In the event the oxygen level rises above 5 percent this would constitute a malfunction condition, the SCADA system will automatically shut down the burners and stop feed into the ATDU.

2.3 ATDU Shutdown Strategy

The system is shutdown employing three scenarios; these are Normal. Malfunction, and Emergency scenarios. The following is a discussion for each scenario;

2.3.1 Emergency Shutdown

Emergency shutdowns are required for

- Feed to the ATDU system is shutdown, feed conveyor system are shutdown
- Burners shutdown
- ATDU shutdown.
- Thermal Oxidizer bypass valve set to open
- Thermal Oxidizer is shutdown

2.3.2 Normal Plant Shutdown

The normal shutdown procedure involves shutting down equipment from the feed end of the unit down through the discharge equipment, allowing adequate time for each conveyor or piece of equipment to fully discharge before proceeding to the next item. The rotary drum will be allowed to cool before drum rotation is stopped. During this cooldown period steam is added to ensure the anaerobic atmosphere inside the ATDU is maintained. After the unit has cooled the vapor recovery and ancillary support systems are shut down. Finally, the thermal oxidizer system is shutdown

2.3.3 Shutdown due to Malfunction

The ATDU system is programmed with both software and hardwired process interlocks to ensure components shut down automatically upon the failure or malfunction of any critical piece of process equipment. Failure of the system to maintain proper combustion in the furnace, process conditions in the ATDU or thermal oxidizer, or a failure of the material handling equipment downstream of the ATDU will cause the system to automatically switch off the combustion system, stop the feed of material into the unit. Should the malfunction involve the thermal oxidize, the system, will divert process vapors away from the thermal oxidizer until the upset condition can be remedied.

2.3.4 Emergency Plant Shutdown

Hardwired interlocks will initiate an emergency shutdown upon loss of primary electrical power, high oxygen concentration inside the ATDU or a runaway stack temperature in the ATDU furnace or Thermal Oxidizer Unit. Redundant gas safety valves installed on each burner spring fail closed if there is any loss in the numerous permissive conditions or interlocks that allow their opening. Feed to the plant is stopped automatically. In certain cases, the thermal oxidizer will remain running but should the emergency condition involve the thermal oxidizer, the system will divert process vapors away from the thermal oxidizer until the upset condition can be remedied. An uninterruptible power supply (UPS) supports the control system to allow the operator to monitor the system shutdown in the event of complete power loss.

2.4 Feed Systems

A below grade mixing hopper south of contaminant Building B5 receives untreated medias, moisture conditions them if necessary and feeds the waste through a series of conveyors to the ATDU for thermal separation. If desired this mixing hopper feed system can also pile the moisture conditioned media inside Building B-5 allowing for storage of the media inside the building. A second feed hopper inside the building is loaded by mechanical methods, the hopper feeds a debris screen which removes materials meeting the definition of debris contained in 40 CFR 268.45 from the waste. Oversize media separated by the screening system is classified as debris and is stored on the floor in containment Building B-5 for delivery to other treatment methods in accordance with Standalone #11 - *Debris Treatment Plan*. The undersize media is then fed through a series of conveyors to the ATDU for thermal separation. An arrangement of airlocks ensure that oxygen is not able to enter the unit during the process operation. The ORU Feed Systems are designed to maintain compliance with 40 CFR 61, Subpart FF (Benzene Waste Operations NESHAP, or BWON) control and treatment standards to manage BWON subject materials when required.

2.5 Treated Ash Systems

The ORU vaporizes organic contaminants contained in media and produces a treated ash that is cooled through jacketed cooling conveyors. A series of transfer conveyors route the processed solids to several separate discharge points in Building B-4, each discharge point will be used to create piles inside the containment building approximately 250 tons in size. Ash may also be stored in containment Building B-5 or in approved containers prior to disposal or further treatment. The ash from the treatment process can be landfilled once the waste meets LDR limits in 40 CFR 268.7. Ash that does not meet the constituent specific LDRs is further treated and cleared before disposal. Confirmation testing is completed in accordance with Standalone #1-*Waste Analysis Plan*.

2.6 Vapor Recovery System

The organic vapors and water are gasified inside the rotating cylinder, and conveyed to a condensing system. The condensing system uses process water to quench the organic vapors. Once quenched the resulting quench water is separated into an organic fraction and a water fraction. The organic fraction separated from the treated wastes can be generally classified in two categories;

2.6.1 Petroleum Fractions

The condensed and separated organic fraction for wastes with recoverable petroleum fraction is not regulated according to 40 CFR 261.6(a)(3)(iv)(C), and is transferred to one of three product storage tanks in the tank farm area. Organic fraction product for these wastes is recycled as a commodity depending on makeup.

2.6.2 Non-Petroleum Fractions

The condensed organic fraction for wastes without recoverable petroleum fractions is subject to the disposal requirements contained in 40 CFR 268 and are managed in accordance with *Standalone #1 – Waste Analysis Plan*. The condensed organic fraction is transferred as process water to the water treatment system in the tank farm area.

2.7 Settled Solids

Settled solids which accumulate in the vapor recovery sump are conveyed out of the sump into a closed hopper. These accumulated solids may be reintroduced back into the ORU feed system for treatment using pumps or mechanical means. In some cases, a centrifuge may be used to dewater these solids for shipment offsite for additional treatment. Liquids separated in the centrifuging process are introduced back into the process water for reuse and/or final treatment.

2.8 Process Water System

Reclaimed commodities are separated from the process water fraction in the oil water separator. Process water is recycled back into the system, and any residual water condensed out of the incoming waste is stored in the process water tank. Residual process water is transferred to surge tanks in the tank farm area. Process water is treated through an onsite water treatment system in the tank farm area with sand and carbon filtration. Chemical treatment prior to filtration may be required for some waste streams. Treated process water meeting LDR

requirements may be reused for moisture conditioning of wastes in the solidification and stabilization process, or sent to the facilities solar evaporation ponds.

2.9 Air Emission Controls

Any residual non-condensable organic vapors are passed through a thermal oxidizer for complete destruction. The thermal oxidizer operation and performance is regulated by the facilities ACDP permit.

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- ORU-2 SYSTEM TANKS

The following twenty-one (21) tanks are used in the ORU treatment system. Tank numbers listed below coincide with tank numbers provided on the flow diagram in Appendix B. All hazardous waste storage tanks associated with the ORU treatment system are managed in accordance with Standalone #8 – *Bulk Storage Plan*.

Table 22-3: ORU-2 Tank Listing

TANK #	DESCRIPTION	TYPE	CAPACITY (Gal)
RCRA Tanks			
F-1301	Interceptor	Above ground, horizontal, flat bottom, CS	3,000
F-1401	Oil Water Separator	Above ground, horizontal, cone bottom, CS	13,200
F-1402	Process Water Tank	Above ground, vertical, cone bottom, CS	20,000
F-1403	Process Water Mix Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1404	Process Water Mix Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1405	Treated Process Water Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1406	Treated Process Water Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1407	Treated Process Water Tank 3	Above ground, vertical, cone bottom, CS	20,000
F-1408	Treated Process Water Tank 4	Above ground, vertical, cone bottom, CS	20,000
F-1409	Treated Process Water Tank 5	Above ground, vertical, cone bottom, CS	20,000
F-1410	Treated Process Water Tank 6	Above ground, vertical, cone bottom, CS	20,000
F-1411	Treated Process Water Tank 7	Above ground, vertical, cone bottom, CS	20,000
F-1412	Treated Process Water Tank 8	Above ground, vertical, cone bottom, CS	20,000
F-1413	Treated Process Water Tank 9	Above ground, vertical, cone bottom, CS	20,000
F-1414	Treated Process Water Tank 10	Above ground, vertical, cone bottom, CS	20,000
F-1415	Treated Process Water Tank 11	Above ground, vertical, cone bottom, CS	20,000
F-1416	Treated Process Water Tank 12	Above ground, vertical, cone bottom, CS	20,000
ME-1101	Mix Hopper A	Above Ground Mix/Feed Hopper, CS	7,473
ME-1102	Feed Hopper B	Above Ground Feed Hopper	1,742
V-1401A	Sand Filter A	Above Ground Sand Filter A	100
V-1401B	Sand Filter B	Above Ground Sand Filter B	100
V-1402	Carbon Filter	Stainless Steel	3,950
Non-RCRA Tanks			
F-1417	Product Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1418	Product Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1419	Product Tank 3	Above ground, vertical, cone bottom, CS	20,000

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I - SYSTEM SECONDARY CONTAINMENT

The ORU-2 System containment is made up of 5 separate containment systems as listed below:

Table 22-4: ORU-2 System Containment

Site Plan Identifier	Area Description	Construction	Required Containment	Actual Containment
C	ORU System Equipment	Reinforced Concrete	3,739.3 ft^3	4,101.3 ft^3
B3	Product Tank Storage	Reinforced Concrete	2,948.6 ft^3	3,152.5 ft^3
B2	Process Water Treatment Area	Reinforced Concrete	2,932.1 ft^3	3,502.5 ft^3
B1	Treated Water Storage	Reinforced Concrete	3,433.3 ft^3	6,265.2 ft^3
D	Mixing Hopper Vault	Reinforced Concrete	1,018.4 ft^3	9,781.3 ft^3
A	Truck Offload Area	Reinforced Concrete	120 ft^3	159.8 ft^3

All ORU-2 containment areas are designed to meet the requirements contained in 40 CFR §264.193. 40 CFR §264.193(e)(2) requires that the secondary containment areas be large enough to contain the capacity of the largest tank plus precipitation from a 25-year, 24-hour storm, (refer to Appendix C for containment calculations). All joints in containment slabs are constructed with chemical-resistant waterstops meeting the requirements of 40 CFR §264.193(e)(2)(iii)). The slab is coated with a chemically compatible impermeable coating meeting the requirements of 40 CFR §264.193(e)(2)(iv)). Stormwater collected from the sumps in these containment areas will be pumped to the process water system and ultimately treated through the process water treatment system. The P.E. certification of the containment structures and tanks required by 40 CFR 264.192(b) will be maintained at the facility in the operating record.

5 - ORU-2 OPERATIONS

5.1 Organic Recovery Unit Contaminated Waste Handling

Following arrival and acceptance of the waste, the wastes are either stored in approved storage areas or fed directly into the treatment system through two feed hoppers in the system.

5.2 Subpart CC Waste Handling

Wastes subject to Subpart CC Level 1 controls will be stored or accepted in roll-off boxes and dump type vehicles may be placed on the slab floor in Containment Building B-5. Wastes subject to Subpart CC Level 2 controls will remain in the Level 2 shipping containers in accordance with Standalone # 9 - *Container Storage Design and Operations Plan* until they are transferred to the ORU-2 outside mixing feed hopper and amended with drying agents as necessary. Wastes with higher moisture contents may also be mixed with dryer materials in the mixing feed hopper or inside Building B-5 to attain appropriated moisture content.

5.3 Subpart FF Waste Handling

CWMNW tracks the facility's Total Annual Benzene (TAB) and it has historically been less than 1 Mg; therefore, CWMNW is not subject to controls in Subpart FF. However, in the event that generators require their specific wastes to be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is transferred into the ORU-2 mixing feed hopper. These wastes will be maintained in containers that meet BWON control requirements, and shall be inspected and monitored in order to comply with all related standards. The vapors throughout the ORU feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

5.4 Waste Preparation for Organic Recovery

In general, waste preparation improves the ability of the ORU-2 to treat the contaminated waste. This preparation includes specific operations for screen sizing and size reduction that are also dependent on the uniformity, moisture, and liquid content of the incoming contaminated waste.

Screening (vibrating or non-vibrating) is a primary operation, and wastes are screened or strained to remove debris. Blending low and high concentration waste or high and low boiling point wastes optimizes the operation and reduces problems in liquids recovery.

5.5 Organic Recovery Unit Treatment Capacity ORU-2

The indirect-fired ATDU has an ultimate design capacity of 30 million British thermal units (30 MMBtu), and a theoretical heat transfer efficiency of 60-percent. The temperature capacity of the system is 1,200°F. The actual operating temperatures vary depending upon the boiling points of the organic constituents being extracted such that optimal fuel consumption is maintained.

The theoretical treatment capacity of the system (tons/hour) depends primarily upon the moisture content of the waste and the thermal capacity of the ATDU. Appendix D provides the estimated treatment capacity of the system running at 900° F, based upon the moisture content of incoming waste, and using a thermal transfer efficiency of 60-percent.

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6 - ORU-2 REGULATORY STANDARDS

6.1 Organic Recovery Unit - 40 CFR Part 264 Subparts J/X Compliance

6.1.1 40 CFR Part 264, Subpart J Compliance

The ORU contains process water tanks that store and/or treat hazardous waste and are subject to 40 CFR Part 264, Subpart J. These tanks are managed in compliance with Standalone #8 - *Bulk Storage Plan*, which contains requirements for inspection and operation of these tanks. The hazardous waste storage tank systems in both of the ORU systems have been adequately designed, have sufficient structural integrity, and are acceptable for storing hazardous waste. Required engineer's certifications are contained in Standalone #8 - *Bulk Storage Plan*. Further, the tanks are provided with sufficient secondary containment meeting the requirements of 40 CFR 264.193. Containment calculations for the system are shown in Appendix C. All tanks associated with the ORU are included in Standalone #8 - *Bulk Storage Plan*, which includes all permitted RCRA tanks at the facility.

In the event of any leak or spill from a tank system or secondary containment system, the facility shall comply with response requirements per 40 CFR 264.196. Closure and post-closure care of the hazardous waste tank systems are discussed in Standalone #5 – *Closure/Post-Closure Plan*.

6.1.2 40 CFR Part 264, Subpart X Compliance

The ORU-2 treatment system contains a thermal desorption unit (TDU) and shaker screen equipment that is subject to 40 CFR Part 264, Subpart X. These miscellaneous units are most similar to tank systems; and thus, the applicable and appropriate provisions of 40 CFR Part 264, Subpart J shall be complied with to ensure protection of human health and the environment. Standalone #23 – Subpart X units includes these pieces of equipment.

6.2 Routine Tank Inspections

The elements and frequency of routine inspections of ORU-2 systems hazardous waste tanks, piping and containment are included in Standalone #3 - *Inspection Plan*. The tanks and piping shall be inspected for visible leaks and general condition. The overfill alarm systems shall be tested to insure they are in working order. The containment area and sumps shall be inspected for evidence of any liquid collection and evidence of any leakage from the associated pipes, pumps, tanks and equipment contained within the area. An inspection form for both the ORU systems tanks, piping and containment is contained in Standalone #3 - *Inspection Plan*.

6.3 RCRA Subparts AA, BB and CC and Benzene NESHAPS - Applicability and Compliance for Organic Recovery Systems

6.3.1 40 CFR Part 264, Subpart AA Applicability

40 CFR Part 264, Subpart AA defines the air emission standards for process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations. ORU-2 does not contain any distillation, fractionation, thin-film evaporation, solvent

extraction, or air or steam streaming operation; and thus, 40 CFR Part 264, Subpart AA does not apply to either ORU Treatment system and subsystems.

6.3.2 40 CFR Part 264, Subpart BB Applicability and Compliance

ORU-2 systems are subject to the requirements of 40 CFR Part 270; and thus, all equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight is subject to 40 CFR Part 264, Subpart BB. Compliance requirements for 40 CFR Part 264, Subpart BB is discussed in the Organic Recovery Unit Controls and Monitoring section below

6.3.3 40 CFR Part 264, Subpart CC Applicability

The requirements of 40 CFR Part 264, Subpart CC apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to 40 CFR Part 264, Subparts I, J, or K. As discussed in Section 3.6.1, the ORU does contain hazardous waste storage tanks subject to 40 CFR Part 264, Subpart J; however, per 40 CFR 264.1080(b)(7), the requirements of 40 CFR Part 264, Subpart CC do not apply to a hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. All hazardous waste storage tanks in the ORU are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU are not subject to 40 CFR Part 264, Subpart CC. All 40 CFR Part 264, Subpart CC requirements, if any, are contained in the facilities ACDP Permit.

Subpart CC regulations are applicable to containers which are not handled in accordance with 40 CFR Part 61, Subpart FF, having a design capacity greater than 0.1 m^3 (approximately 26 gallons), and containing hazardous waste that has an average volatile organic (VO) concentration greater than 500 ppm by weight (ppmw) at the point of waste generation. Waste received at the facility for ORU treatment will typically arrive or be placed in containers that are larger than the exempted capacity and may contain hazardous waste with VO concentrations greater than 500 ppmw. CWMNW complies with Subpart CC container standards as provided in the Permit and Standalone # 9 - *Container Storage Design and Operations Plan*. In addition, the waste in any container is unloaded in an expedient manner to minimize potential organic air emissions. If, for any reason, unloading of the contaminated waste does not commence immediately, the container is to be kept covered with a lid that meets Subpart CC Level 1 controls. The lid or cover forms a continuous barrier over the entire surface area with no visible cracks, holes, gaps or other open spaces.

6.3.4 40 CFR Part 61, Subpart FF Applicability and Compliance

The ORU at certain times is subject to 40 CFR Part 61, Subpart FF (BWON), since it is part of a facility that intermittently treats, stores, and disposes of BWON wastes from chemical plants and petroleum refineries where the regulation does apply. CWMNW tracks the facility's Total Annual Benzene (TAB), and has historically been less than 1 Mg. Therefore, CWMNW facility is not subject to controls in Subpart FF. However, should the generator require their specific wastes be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is loaded into the mixing feed hopper. These wastes shall be maintained in containers that meet BWON control requirements,

and shall be inspected and monitored as to comply with all related standards. The vapors throughout the ORU-2 feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

All fixed-roof tanks shall have no detectable emissions in accordance with Method 21 standards and must be closed and sealed unless it is opened for sampling, inspections, maintenance, repair or removal of the waste. All organic vapors that are vented shall be maintained in a closed-vent system that routes to the thermal oxidizer control device.

In instances where the tank is venting to the atmosphere by a pressure relief device, these devices must remain in closed, sealed positions during normal operations. They may be opened if it is necessary to prevent damage or permanent disfiguration to tank, during filling or emptying, or during malfunctions. This follows the alternative standard for tanks under 40 CFR 61.351, allowing tanks handling primarily organic material to have only a pressure relief device.

The oil water separator in the ORU system is vented to the closed vent system and to the thermal oxidizer control device.

7 - ORU-2 CONTROLS AND MONITORING

The entire ORU-2 unit is centrally-monitored and controlled using a SCADA control package. The computer-based process controls provide graphic screens for effective plant control, monitoring, and data storage. The ORU-2 SCADA control system allow real-time access to all key plant parameters, and records the required operating parameters for compliance with the Part B permit and the ACDP permit. The demonstrated compliance SCADA system records the following parameters:

- Monitoring point CP1 - TDU Flue gas temperature - Deg F
- Monitoring point CP2 - TDU Syngas temperature - Deg F
- Monitoring point CP3 – TDU Infeed rate - TPH
- Monitoring point CP4 - Thermal oxidizer chamber temperature - Deg F
- Monitoring Point CP5 - Thermal oxidizer feed valve position – Open/Closed

The SCADA process controls enable the operator to improve system capacity, optimize fuel consumption, and protect the system against accidental malfunctions. The computerized system includes automatic fail safes for controlled shutdown of the system during upsets.

The process instrumentation and electrical switch gear is housed in a motor control center. The SCADA control system and operators control station is located in the control room south of the thermal processing system. Plant operators are trained in the operational and maintenance aspects of the system and these requirements are contained in Standalone #2 - *Security Procedures, Hazard Prevention, and Training Plan.*

7.1 Control Device Monitoring

The emissions control devices throughout the ORU system require monitoring of several different parameters, and the requirements for these are established in the facilities ACDP permit. The facility shall manage leaks identified by regular inspections in compliance with the requirements in 40 CFR Part 264.1064.

7.2 Tank Monitoring

As indicated in Section 3.6.3, all hazardous waste storage tanks in the ORU-2 system are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU-2 system are not subject to 40 CFR Part 264, Subpart CC. The facility shall comply with all applicable requirements under 40 CFR Part 61, Subpart FF. All hazardous waste tanks are equipped with a fixed roof cover and shall be visually inspected by the owner and operator quarterly, and monitored via Method 21 annually. If leaks are detected, responses and recordkeeping shall be made in compliance with 40 CFR Part 264, Subpart BB and 40 CFR 264.1064.

7.3 Other Equipment Monitoring

The ORU-2 is in heavy liquid service, and all pumps, valves, and pressure relief devices shall be observed for potential leaks using the following methods: Audible, Visual, and Olfactory (AVO), per 40 CFR Part 264, Subpart BB. There is no stated monitoring frequency for equipment in heavy liquid service according to 40 CFR Part 264, Subpart BB; however, monitoring shall be conducted quarterly consistent with industry best management practices, and to satisfy the BWON quarterly visual inspection requirements. When a leak is discovered, 40 CFR Part 60, Method 21 shall be used to measure the severity.

All sampling stations within ORU-2 system shall be built and kept up to design and installation requirements in order to stay compliant with 40 CFR, Subpart BB. All operational open-ended lines or pipes shall have a cap, plug, or double valve system when not in use.

APPENDIX A
AS-BUILT DESIGN PLANS FOR ORU-2

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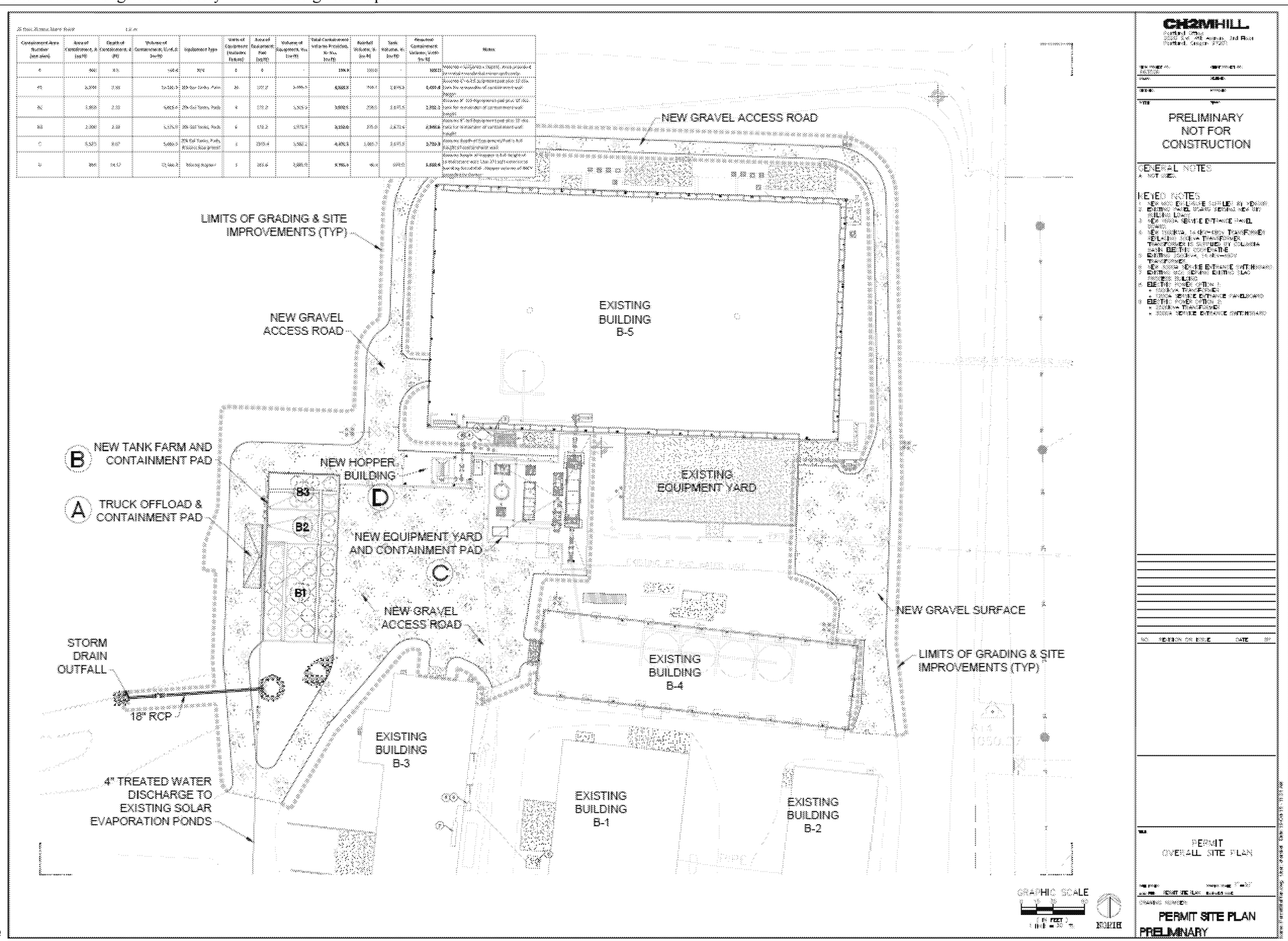
NEW GRAVEL ACCESS ROAD
LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)
NEW GRAVEL ACCESS ROAD
EXISTING BUILDING B-5
B
NEW TANK FARM AND CONTAINMENT PAD
NEW HOPPER BUILDING
D
EXISTING EQUIPMENT YARD
A
TRUCK OFFLOAD & CONTAINMENT PAD
B3
B2
B1
NEW EQUIPMENT YARD AND CONTAINMENT PAD
C
NEW GRAVEL ACCESS ROAD
NEW GRAVEL SURFACE
STORM DRAIN OUTFALL
18" RCP
EXISTING BUILDING B-4
LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)
EXISTING BUILDING B-3
4" TREATED WATER DISCHARGE TO EXISTING SOLAR EVAPORATION PONDS
EXISTING BUILDING B-1
EXISTING BUILDING B-2
GRAPHIC SCALE
NORTH
CH2MHILL
PRELIMINARY NOT FOR CONSTRUCTION
GENERAL NOTES
KEYED NOTES
PERMIT OVERALL SITE PLAN
PERMIT SITE PLAN
PRELIMINARY

APPENDIX B
PROCESS FLOW DIAGRAM

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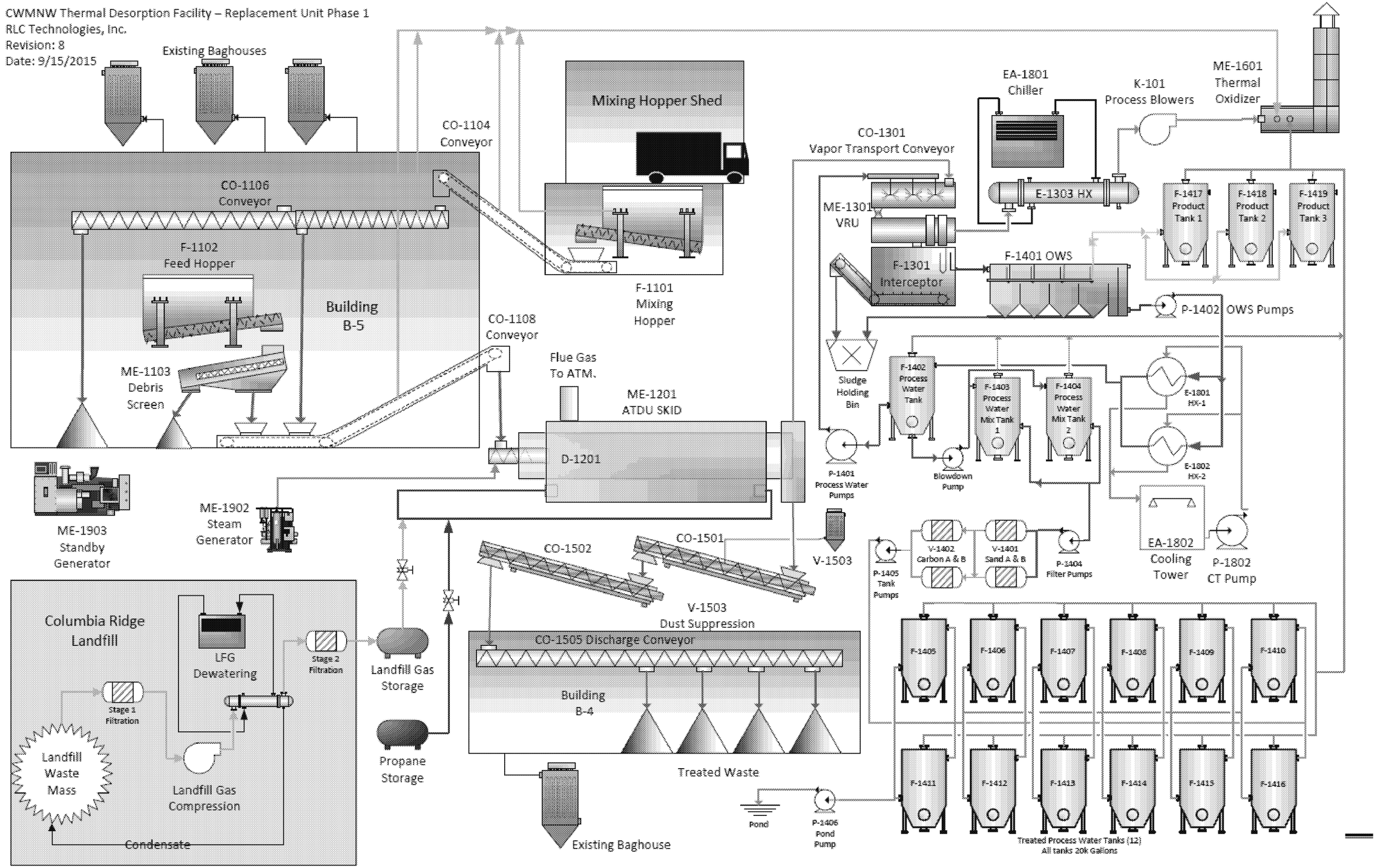
CWMNW Thermal Desorption Facility – Replacement Unit Phase 1
RLC Technologies, Inc.
Revision: 8
Date: 9/15/2015
Existing Baghouses
Mixing Hopper Shed
CO-1104 Conveyor
CO-1106 Conveyor
F-1102 Feed Hopper
Building B-5
F-1101 Mixing Hopper
CO-1108 Conveyor
ME-1103 Debris Screen
Flue Gas To ATM.
ME-1201 ATDU SKID
D-1201
ME-1903 Standby Generator
ME-1902 Steam Generator
CO-1502
CO-1501
V-1503
V-1503 Dust Suppression
CO-1505 Discharge Conveyor
Building B-4
Treated Waste
Existing Baghouse
Columbia Ridge Landfill
LFG Dewatering
Stage 2 Filtration
Landfill Gas Storage
Stage 1 Filtration
Landfill Waste Mass
Landfill Gas Compression
Condensate
Propane Storage
Pond
P-1406 Pond Pump
CO-1301 Vapor Transport Conveyor
ME-1301 VRU
F-1301 Interceptor
Sludge Holding Bin
P-1401 Process Water Pumps
F-1402 Process Water Tank
Blowdown Pump
F-1403 Process Water Mix Tank 1
F-1404 Process Water Mix Tank 2
EA-1801 Chiller
E-1303 HX
F-1401 OWS
P-1402 OWS Pumps
K-101 Process Blowers
ME-1601 Thermal Oxidizer
F-1417 Product Tank 1
F-1418 Product Tank 2
F-1419 Product Tank 3
E-1801 HX-1
E-1802 HX-2
EA-1802 Cooling Tower
P-1802 CT Pump
P-1405 Tank Pumps
V-1402 Carbon A & B
V-1401 Sand A & B
P-1404 Filter Pumps
F-1405
F-1406
F-1407
F-1408
F-1409
F-1410
F-1411
F-1412
F-1413
F-1414
F-1415
F-1416
Treated Process Water Tanks (12)
All tanks 20k Gallons

APPENDIX C
SECONDARY CONTAINMENT CALCULATIONS

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25 Year, 25 Hour Storm Event *2.5 in*

Containment Area Number (see plan)	Area of Containment, A (sq ft)	Depth of Containment, d (ft)	Volume of Containment, V_c=A.d (cu ft)	Equipment Type	Units of Equipment (Includes Future)	Area of Equipment Pad (sq ft)	Volume of Equipment, V_{eq} (cu ft)	Total Containment Volume Provided, V_c-V_{eq} (cu ft)	Rainfall Volume, V_r (cu ft)	Tank Volume, V_t (cu ft)	Required Containment Volume, V_r+V_t (cu ft)	Notes
A	960	0.5	159.8	N/A	0	0	-	159.8	120.0	-	120.0	Volume = 1/3[Area x Depth]. Area provided to contain incidental minor spills only.
B1	6,078	2.33	14,180.8	20k Gal Tanks, Pads	36	172.2	7,895.5	6,265.2	759.7	2,673.6	3,433.3	Assume 6'-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B2	2,068	2.33	4,818.4	20k Gal Tanks, Pads	4	172.2	1,315.9	3,502.5	258.5	2,673.6	2,932.1	Assume 6'-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B3	2,200	2.33	5,125.9	20k Gal Tanks, Pads	4	172.2	1,973.9	3,152.0	275.0	2,673.6	2,948.6	Assume 6'-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
C	8,525	0.67	5,683.5	20k Gal Tanks, Pads, Process Equipment	1	2373.4	1,582.2	4,101.3	1,065.7	2,673.6	3,739.3	Assume depth of Equipment/Pad is full height of containment wall
D	894	14.17	12,666.3	Mixing Hopper	1	203.6	2,885.0	9,781.3	46.4	972.0	1,018.4	Assume height of hopper is full height of containment wall. Use 371 sqft exterior to building for rainfall. Hopper volume of 36CY provided by Owner.

PRELIMINARY
NOT FOR CONSTRUCTION

APPENDIX D
TDU SYSTEM CAPACITY

ED_002469_00000042-00025

RLC Technologies TDU System Capacity 30.0 MMBTU/HR

MMBTU/HR Required

	Tons per Hour																			
% Water	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0%	0.692	1.383	2.075	2.767	3.458	4.150	4.842	5.533	6.225	6.917	7.608	8.300	8.992	9.683	10.375	11.067	11.758	12.450	13.142	13.833
5%	0.898	1.796	2.694	3.591	4.489	5.387	6.285	7.183	8.081	8.979	9.877	10.774	11.672	12.570	13.468	14.366	15.264	16.162	17.060	17.957
10%	1.104	2.208	3.312	4.416	5.520	6.624	7.729	8.833	9.937	11.041	12.145	13.249	14.353	15.457	16.561	17.665				
15%	1.310	2.621	3.931	5.241	6.551	7.862	9.172	10.482	11.792	13.103	14.413	15.723	17.034							
20%	1.516	3.033	4.549	6.066	7.582	9.099	10.615	12.132	13.648	15.165	16.681									
25%	1.723	3.445	5.168	6.891	8.613	10.336	12.059	13.781	15.504	17.227										
30%	1.929	3.858	5.787	7.716	9.644	11.573	13.502	15.431	17.360											
35%	2.135	4.270	6.405	8.540	10.675	12.811	14.946	17.081												
40%	2.341	4.683	7.024	9.365	11.706	14.048	16.389													
45%	2.547	5.095	7.642	10.190	12.737	15.285	17.832													
50%	2.754	5.507	8.261	11.015	13.769	16.522														
55%	2.960	5.920	8.880	11.840	14.800	17.759														
60%	3.166	6.332	9.498	12.664	15.831															
65%	3.372	6.745	10.117	13.489	16.862															
70%	3.579	7.157	10.736	14.314	17.893															
75%	3.785	7.569	11.354	15.139																
80%	3.991	7.982	11.973	15.964																
85%	4.197	8.394	12.591	16.788																
90%	4.403	8.807	13.210	17.613																
95%	4.610	9.219	13.829																	
100%	4.816	9.631	14.447																	

****** MMBTU/HR required estimates above use 60% Thermal Transfer Efficiency and 900Deg F operating temperatures**

ED_002469_00000042-00026

Message

From: Davies, Lynne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=169EB6CBDEBB4CAF85F76390B8AB2674-LDAVIE12]
Sent: 4/10/2017 5:18:32 PM
To: McArthur, Lisa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=524660efbdb140e7868646d8073f0c72-McArthur, Lisa]; Valdez, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=eb323347294d44009a369c3576798bdf-Valdez, Heather]; Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]
Subject: ChemWaste: RCRA Subpart CC/CAA Overlap
Attachments: Subpart CC Preamble Language.pdf

Hi all – I found the following two pages of the Subpart CC exemption preamble language quite informative. I'll bring a few copies to our meeting.

Thanks!

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Citation: 61 Fed. Reg. 59938 1996

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However, the EPA agrees that under some circumstances, the owner's or operator's approach to complying with the air emission control requirements under the subpart CC standards may involve a major design and construction project which requires a longer time to complete. In recognition of these cases, the EPA decided that it is reasonable to allow up to December 8, 1997, for affected facilities to install and begin operation of air emission controls required by the subpart CC standards (See Hazardous Waste TSDF Background Information Document for Promulgated Organic Air Emission Standards, EPA–453/R–94–076b, page 9–7).

The final rule requirements that may necessitate a major modification, as described above, for tanks are paragraphs (b) through (d) of 40 CFR 264.1084 and 265.1085. These paragraphs specify air emission control equipment that must be operated on tanks receiving affected hazardous waste. Similarly, the requirements that may necessitate such a major modification for surface impoundments are paragraphs (b) through (e) of 40 CFR 264.1085 and 265.1086. These paragraphs specify air emission control equipment that must be operated on surface impoundments receiving affected hazardous waste. To comply with these requirements for tanks and surface impoundments, facilities may choose to construct new hazardous waste management units to replace existing units, or may choose to modify existing hazardous waste management units. Examples of facility equipment modifications that could require an extended period of compliance would be replacing a large open surface impoundment with a series of covered tanks, or fitting an existing open tank with a fixed roof vented to a control device. The EPA recognizes that such major modifications or new construction can require several months or more, and therefore allows until December 8, 1997, for facilities to comply with the air emission control requirements of the final subpart CC standards.

In addition, certain States may require that a facility obtain a permit modification prior to performing a major modification such as those described above. The EPA recognizes that such a permit modification can be a lengthy process, and therefore felt it was appropriate to afford an extended compliance period to allow such modifications to be obtained (59 FR 62919). The EPA does not expect that such a lengthy period of implementation would be required in circumstances other than those described above, although § 264.1082(c) allows that such a period is available if necessary.

The final rule provisions that justified a compliance date of December 8, 1997, are not among those that are affected by the revisions being made under today's action. Specifically, the EPA is not considering either a broader applicability or more stringent control requirements for covers and air emission controls on tanks and surface impoundments. All affected facilities thus have been on notice of the final rule air emission control requirements for these units since the final CC rule publication on December 6, 1994. Therefore, the EPA does not consider it appropriate to postpone the compliance date of December 8, 1997, by which all required air emission control equipment must be operating.

It should be noted that the Regional Administrator may elect to extend the implementation date for control equipment at a facility, on a case by case basis, to a date later than December 8, 1997, when special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment and the owner or operator has made all reasonable and prudent attempts to comply with the requirements of the subpart CC rules (see § 265.1082).

C. Applicability

Numerous comments were received concerning overlap between the RCRA subpart CC rules and Clean Air Act NESHAP, particularly the HON. Most commenters argued that subpart CC requirements should not apply to units, either 90-day generators or TSDF, meeting Clean Air Act control requirements, including units meeting standards through emissions averaging.

The EPA fully recognizes that in developing air standards to meet congressional directives established by provisions in the Clean Air Act and Resource Conservation and Recovery Act, the potential exists for regulatory overlap. However, it is the EPA's intention to minimize, if not eliminate, regulatory overlap to the extent that the Agency is allowed under the different legislative acts. Section 1006(b) of RCRA indeed requires that the air standards be consistent with and not duplicative of Clean Air Act standards. Similarly, the Clean Air Act voices a strong preference for consistency of CAA section 112 standards and RCRA standards where practicable (see section 112(n)(7)).

The EPA is aware that at some sites managing hazardous wastes, the owner or operator of the hazardous waste treatment, storage, and disposal facility could be subject to the RCRA air rules under subparts AA, BB, and CC and also subject to a Clean Air Act NESHAP standard such as the Off-Site Waste rule or the HON. At a particular TSDF, some waste management units may be required to use air emission controls under one or the other, but not both, a Clean Air Act NESHAP and the RCRA air rules. However, some other waste management units could be subject to using air emission controls to comply with both sets of rules. It is unnecessary for owners and operators of those waste management units subject to air standards under both sets of rules to perform duplicative testing and monitoring, keep duplicative sets of records, or perform other duplicative actions.

In Section VI.A, *Development of Air Standards Under RCRA*, of the preamble to the final rule (59 FR 62906, December 6, 1994), the EPA discussed the potential for duplication between the RCRA air rules and various rules being developed under the Clean Air Act maximum achievable control technology (MACT) program but noted that the air standards developed under RCRA section 3004(n) did not duplicate or contradict existing NESHAP or new source performance standards (NSPS). As the MACT program has matured and additional standards have been developed, the EPA is now aware that the possibility for overlap is greater than was originally thought.

The EPA has decided that the best way to eliminate any regulatory overlap is to amend the RCRA rules to exempt units that are using air emission controls in accordance with the requirements of applicable Clean Air Act NESHAP or NSPS regulations. Therefore, the subpart CC applicability is amended to exempt any hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63, with the sole exception of tanks being controlled through the use of an enclosure rather than a cover. (The EPA's rationale for placing additional conditions on that control approach is explained in detail in sections E and G of this preamble.) Providing this exemption eliminates the possibility of duplicative or conflicting requirements for those TSDF tanks, surface impoundments, or containers using organic emission controls in compliance with a NESHAP but also subject to requirements under the RCRA standards. It is important to note that this exemption only applies to those

units using organic air emission controls. This seems to EPA to be the best way to assure that air emissions from hazardous waste management units are controlled to the extent necessary to protect human health and the environment. A unit that does not use the required air emission controls but is in compliance with a NESHAP through an "emission averaging" or "bubbling" provision does not qualify for the exemption since EPA lacks assurance that emissions from the unit are controlled to the extent necessary to protect human health and the environment.[2]

Similarly, if the Clean Air Act standard for the particular unit is no control (for example, because the MACT floor for the source category is no control and the Agency decided not to apply controls more stringent than the floor), the exemption from the RCRA standards would not apply since the unit would not actually be controlled under provisions of the MACT standard. Again, as stated above, the EPA believes the best way to assure protectiveness in this national rule is to require controls on each particular unit.

Section 3004(n) of RCRA, of course, requires that EPA control emissions from (among other things) tanks, surface impoundments, and containers as may be necessary to protect human health and the environment. Some of the Clean Air Act standards, in contrast, are technology-based controls implementing the provisions of section 112(d) of the Clean Air Act. The EPA, however, has found that under some circumstances a technology-based standard may satisfy the RCRA protectiveness requirement by adequately controlling air emissions and thus adequately controlling risk or controlling risk sufficiently that the Clean Air Act section 112(f) residual risk process need not be interdicted. See 60 FR at 32593 (June 23, 1995), the preamble for final MACT standards for the secondary lead source category, and 61 FR at 17369–370 (April 19, 1996), the preamble for proposed MACT standards for hazardous waste combustion units.

The EPA is finding here that where there are MACT air emission control requirements for a specific unit otherwise covered by subpart CC, the MACT requires the same technical air emission controls as would be required under subpart CC. Thus, it follows that compliance with the MACT requirements would thus afford equal protectiveness as would be achieved under subpart CC, and therefore can be considered to satisfy the RCRA protectiveness requirements. This is a conscious effort on the Agency's part to provide consistency of requirements where at all possible in its rulemakings.[3]

The technical requirements for the RCRA air rules in subpart CC as amended are essentially the same as those published by the EPA under the MACT program (e.g., those in subparts OO, PP, and QQ of part 63). A unit controlled under one or the other set of requirements would achieve the same emission reduction and performance level; and the various requirements thus provide the same level of protection.

D. Definitions

Definitions are being added for closure device, continuous seal, enclosure, hard-piping, in light material service, malfunction, metallic shoe seal, no detectable organic emissions, safety device, and single-seal system and other definitions are being revised consistent with their use in the amended regulation. These amended or added definitions do not directly affect the substance of the subpart CC standards, but rather, serve to clarify the 1994 final provisions, or today's amended provisions, of the final regulations.

E. Standards: General

1. Action Level

Several major changes are being made to the general standards for the final subpart CC rule. First, the average VO concentration action level for hazardous waste required to be managed in the units using air emission controls under the rule is being changed to 500 ppmw (as determined at the point of waste origination). Units managing hazardous wastes determined by the owner or operator to have average VO concentrations that remain less than 500 ppmw are not required to use air emission controls under the rule.

The EPA considered a range of possible values to establish the VO concentration limit for the Subpart CC RCRA air rules. The EPA proposed a VO concentration value of 500 ppmw to be used as the action level for the rule (56 FR 33491, July 22, 1991) and promulgated an action level of 100 ppmw in the 1994 final subpart CC rule (59 FR 62897). However, in promulgating this value, the EPA acknowledged that some hazardous waste management units subject to the subpart CC RCRA air rules could be subject to other Clean Air Act NESHAP and NSPS with differing action levels (59 FR 62903, 62906, and 62907).

The EPA received comments in response to the August 14, 1995 Federal Register notice, stating that the 100 ppmw VO concentration action level promulgated by the EPA for the subpart CC RCRA air rules is inappropriate (e.g., the action level cannot be justified on the basis of risk and the action level is too close to the detection limit of method 25D; this results in numerous waste determination errors such as false positives) and is inconsistent with other applicable Clean Air Act NSPS and NESHAP (i.e, the Off-Site Waste rule,

[2] EPA believes it is both reasonable and legally permissible to interpret section 3004(n) to apply to specific waste management units. Section 3004(n) addresses specific unit types ("open tanks, surface impoundments, and landfills"), and the overarching requirement to control air emissions at hazardous waste management "facilities" can reasonably be construed as applying to individual units. See *Mobil Oil Corp. v. EPA*, 871 F. 2d 149, 152–54 (D.C. Cir. 1989). On the other hand, "facilities" might also be construed to apply to an entire plant, *id.* at 153. Consequently, EPA is not indicating by the discussion in the text that an averaging approach is legally foreclosed. Certain types of site-specific demonstrations, for example, might indicate the appropriateness of an averaging approach to demonstrating that air emissions from hazardous waste management are sufficiently controlled. In such a situation, EPA could interpret the term "facility" as applying to an entire plant. What EPA is finding in this rule is that for this national rule (i.e., in the absence of potential case-specific demonstrations), the best way of assuring that emissions from hazardous waste tanks, containers, and impoundments are sufficiently controlled is to require control of each particular unit.

[3] For example, EPA, in promulgating the final requirements for the Off-Site Waste and Recovery Operations NESHAP (61 FR 34147, July 1, 1996), added a series of new subparts to 40 CFR part 63. These subparts included Subpart OO—National Emission Standards for Tanks - Level 1, Subpart PP—National Emission Standards for Containers, Subpart QQ—National Emission Standards for Surface Impoundments, Subpart RR—National Emission Standards for Individual Drain Systems, and Subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators. These standards are essentially identical to the requirements for tanks, containers, and impoundments found in the RCRA subpart CC rule under discussion in this notice.

The EPA set out at length in the Off-Site Waste rule preamble (59 FR 62908) the Agency's goal as to integration of these various air standards, "the EPA decided to promulgate the air emission control requirements for selected types of units in individual subparts for ease of reference, administrative convenience, and as a step towards assuring consistency of the air emission control requirements applied to similar types of units under different rules. The EPA believes adopting the format of codifying the air emission control requirements for specific unit types in individual subparts will provide significant advantages to both regulated industries and to the Agency."

"A major advantage for using the unit-specific subpart format for NESHAP and other air rules is for those situations when more than one rule applies to a particular source (e.g., a tank) and each of these rules requires use of air emission controls on that source (e.g., a fixed roof). By establishing unit-specific subparts, all of the rules will reference a common set of design, operating, testing, inspection, monitoring, repair, recordkeeping, and reporting requirements for air emission controls. This eliminates the potential for duplicative or conflicting air emission control requirements being placed on the unit by the different rules, and assures consistency of the air emission control requirements applied to the same types of units."

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Citation: 53 Fed. Reg. 37920 1988

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activities at the permittee's facility; (iv) enable the permittee to respond to changes in the types or quantities of wastes being managed under the facility permit; or (v) carry out other changes to protect human health and the environment. Temporary authorizations can be granted for any Class 2 modification that meets these criteria, or for a Class 3 modification that is necessary to: (i) Implement corrective action or closure activities; (ii) allow treatment or storage in tanks or containers of restricted waste; or (iii) provide improved management or treatment of a waste already listed in the permit, where necessary to avoid disruption of ongoing waste management, allow the permittee to respond to changes in waste quantities, or carry out other changes to protect human health and the environment. A temporary authorization will be valid for a period of up to 180 days. The term of the temporary authorization will begin at the time of its approval by the Agency, or at some specified effective date shortly after the time of approval. The authorized activities must be completed at the end of the authorization.

Several commenters responded on the subject of temporary authorizations. Several supported the approach contained in the proposal, citing the beneficial flexibility to change certain facility operations with no adverse effect to human health or the environment.

Two other commenters supported the use of temporary authorizations, but for more restricted uses (e.g., for on-site wastes only or for unexpected situations only). One commenter was generally opposed because of a lack of public comment and hearings. EPA disagrees because the use of temporary authorizations is allowed only for specified purposes, which are intended to improve the management of hazardous wastes or respond to a critical situation. The Agency will have the authority to deny any requests which are not protective of human health and the environment or do not meet the criteria for a temporary authorization. Also, as discussed below, the permittee must notify persons on the facility mailing list about the temporary authorization and must comply with Part 264 standards for its duration.

The proposal would not have allowed temporary authorizations for periods of less than 90 days. In today's final rule, however, EPA has eliminated this minimum length to provide that the term of a temporary authorization may be for any period up to 180 days. Although two commenters supported the proposed minimum length, EPA is making today's change for two reasons.

First, the minimum specified period of 90 days seemed arbitrary and would likely result in restricting the Agency's flexibility to allow facilities to respond to temporary situations. For example, if the Agency believed that there was good cause to authorize a facility to conduct a particular activity without a permit modification but that the task should be completed within 30 days under the proposal, the Agency would be limited to approving the activity for 90 days or denying the request. Given that temporary authorizations were developed to allow a rapid response without the limitations of a formal permit modification, to set an arbitrary minimum duration would be needlessly restrictive and likely counterproductive.

Second, the duration of a temporary authorization under proposed § 270.42(e) (i.e., 90 to 180 days) was inconsistent with the temporary authorization which may be granted by the Agency at day 90 or 120 in the Class 2 process which can be granted for 1 to 180 days (see § 270.42(b)(6)(i)(D)). The different treatment of these temporary authorizations could lead to confusion.

The criteria in the final rule for approval of temporary authorizations under § 270.42(e)(3) are the same as proposed on September 23, 1987 except for two changes. First, in response to several requests by commenters, EPA is adding a specific provision for the storage and treatment of wastes subject to the land disposal restrictions of Part 268. This will give the regulated industry the flexibility to treat and store restricted wastes in tanks and containers, while the permit modification process is conducted. The Agency believes that there was sufficient flexibility to approve these changes as a temporary authorization under the proposed criteria; however, commenters wanted an assurance that the activities allowed under the recently promulgated minor modification provision in § 270.42(p)—which will be eliminated with today's new modification process—will be eligible for a temporary authorization under the new system. Therefore, these activities involving restricted wastes are specifically endorsed for temporary authorizations in new § 270.42(e)(3)(ii)(B).

In a second change, EPA decided not to retain the proposed temporary authorization provision for management of newly regulated waste. Instead, management of such waste is addressed solely under § 270.42(g). Although some commenters suggested keeping both alternatives, other commenters believed that the special procedure for new wastes in § 270.42(g) is generally more appropriate. EPA believes that it is preferable to have a single procedure for addressing newly regulated wastes, and agrees that § 270.42(g) is more appropriate since it is designed specifically for that situation. (See preamble discussion in Section IV.B.7.)

Section 270.42(e) (2) through (4) details the procedures for granting temporary authorizations. Under these procedures, the permittee must submit to the Agency a request for a temporary authorization describing the activities to be conducted; explain why the temporary authorization was necessary; and provide sufficient information to ensure compliance with Part 264 standards. In addition, the permittee would be required to notify all persons on the facility mailing list and local and State agencies about the temporary authorization request within seven days of the request.

Section 270.42(e)(3) requires the Agency to approve or deny the temporary authorization as quickly as practical. To approve the authorization, the Agency must find that the request meets the criteria for a temporary authorization. It should be noted that today's rule, like the proposal, requires compliance with Part 264 for Agency-initiated temporary authorizations. This is because the procedures for obtaining such an authorization provides for Agency review of the permittee's request and an affirmative Agency action to approve the conditions of the authorization. Therefore, an Agency permit writer will be involved in establishing the appropriate operating conditions based on the Part 264 standards. This is in contrast to the automatic temporary authorizations (discussed in Section IV.B.2.ii above) where Part 265 standards are more appropriate since there are no Agency-prescribed site specific conditions developed.

A denial of a temporary authorization request would not prejudice action on any concurrent modification request. The denial only means that the activities contemplated by the permittee were not eligible for a temporary authorization. The request could still be acceptable as a permit modification.

In today's final rule, EPA has modified the language in § 270.42(e)(4) from the proposal. As proposed, § 270.42(e)(4)(i) required the owner or operator to submit a "complete modification request" within 60 days of obtaining a temporary authorization. This provision assumed

there would be circumstances where the permittee might not have time to provide all the material required under Part 270 (e.g., changes to closure plans or training plans) prior to issuance of the temporary authorization.

Several commenters disagreed with this proposal, pointing out that in many cases a temporary authorization could address a short-term or one-time situation, and would not require a permanent modification to the permit and submission of all the Part 270 information. EPA agrees with these commenters, and finds the 60-day deadline unnecessary, particularly since § 270.42(e)(3)(i) requires the permittee to demonstrate in his or her request that the Part 264 standards will be achieved. Thus, the Director should have all information necessary prior to a temporary authorization decision. In cases where some additional minor information is needed, the Director could make the authorization conditional on the submission of this information on an appropriate schedule.

The proposal allowed the renewal of a temporary authorization (§ 270.42 (e)(1) and (e)(4)(iii)), if the permittee initiated the Class 2 or 3 process for a permit modification. Today's rule modifies and clarifies these provisions. As required in § 270.42(e)(4) today, a temporary authorization cannot be reissued except through the following procedures. First, the permittee must initiate the appropriate Class 2 or 3 modification process for the activity covered in the temporary authorization. In addition, for a Class 2 modification, any extension of the activity approved in the temporary authorization must take place under Class 2 procedures. Finally, for a Class 3 modification, the Director may extend the temporary authorization if warranted to allow the authorized activity to continue while Class 3 procedures are completed.

The result of today's change for a temporary authorization that is concurrently undergoing the Class 2 review is to set a limit, generally, of 300 days for operation under the temporary authorization. The proposal would have allowed, in extreme cases, up to 540 days of temporary authorization before a final Agency decision was required. (For example, a 280-day authorization, reissued for a second 180-day period, and then the Director's decision per § 270.42(e)(4)(ii) to issue an additional authorization of 180 days.) These changes were made in response to commenters, who requested a shorter and clearer schedule for Agency decisions on Class 2 changes subject to temporary authorizations. EPA agrees with these comments, and maintains that Class 2 changes should be reviewed rapidly and incorporated into the permit as a modification. It is not appropriate for these decisions to be postponed for up to a year and a half. For these reasons, today's rule does not allow extension of a temporary authorization for a Class 2 activity, except through the Class 2 procedures that are leading to an Agency decision on the modification request.

For Class 3 modifications, the renewal of the temporary authorization is at the discretion of the Director if he or she believes that it is appropriate for the activities to continue while the Class 3 modification process is completed. In most cases it will be difficult to complete the Class 3 process in the 180 days allowed for the temporary authorization, since there will be at least 105 days of public comment (60 days for comment on the applicant's modification request and 45 days for comment on the draft permit modification prepared by the Agency), as well as one or more public meetings and a public hearing, if requested. Therefore, today's rule allows the extension of a Class 3 temporary authorization for an additional 180 days, for a maximum of 360 days. However, this would be allowed only if the facility is proceeding toward a Class 3 modification.

In summary, the Agency-issued temporary authorization mechanism provides a reasonable balance between the public's right to be informed of and comment on activities at permitted hazardous waste facilities and the facility owner/operator's need to implement certain changes rapidly. More generally, the temporary authorization procedure will provide important flexibility to permitted hazardous waste facilities without sacrifice to public health or the environment. Because temporary authorizations are designed specifically for activities necessary to improve management of hazardous waste or to conduct timely closures and corrective actions, this authority should actually reduce risk and promote safe handling of wastes. For this reason, EPA believes that the temporary authorization procedure will be of benefit to the regulated industry, regulating agencies, and the public.

6. Notification Requirements and Permit Modification Appeals

Under today's rule, the Director will notify persons on the facility mailing list and appropriate state and local government agencies within 10 days of any decision to grant or deny a permit modification request (except for Class 1 modifications and temporary authorizations). (*See* § 270.42(f).) Such notification will also be given within 10 days after a Class 2 automatic authorization takes effect. The permit appeal procedures of 40 CFR 124.19 apply to the Director's decision to grant or deny a Class 2 or 3 permit modification request and to Class 2 automatic authorizations. For Class 1 modifications, temporary authorizations, and classification determinations, the appeal procedures of Part 124 do not apply, although in many cases there are opportunities to seek a change in the modification or authorization, as discussed in more detail below.

The proposal provided that the Agency would notify persons on the facility mailing list after making a determination on an unclassified change, after approving a Class 1 modification (when prior approval is needed), and after granting a temporary authorization. However, EPA received a number of comments from state agencies and industry arguing that there are too many required notices in the proposal, and that numerous notifications add complexity to the process and divert Agency resources to administrative tasks instead of to protection of the environment. EPA agrees with this comment for notifications of temporary authorizations, classification determinations, and Class 1 approvals.

In the case of Agency classification determinations, there will be subsequent public notification of the proposed changes as the facility proceeds with its modification request. The public will be able to raise concerns at that time if they believe that the modification request has been incorrectly classified. For these reasons, EPA believes that the notice regarding a classification determination would be redundant, and therefore is not adopting it in today's rule.

For Class 1 modifications, the permittee is required to provide notice of the change to persons on the facility mailing list within 90 days, including those cases where prior Director approval is required. (See § 270.42(a)(1)(ii).) The proposal would have also required that the Agency send a notice of its decision to the facility mailing list for a Class 1 modification that required prior Agency approval. EPA believes that there is no need for the Agency to mail such a notice since the permittee will be sending a similar notice. Two notifications regarding a single Class 1 modification would be a duplication of effort and could also be confusing to people on the mailing list.

Message

From: Davies, Lynne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=169EB6CBDEBB4CAF85F76390B8AB2674-LDAVIE12]
Sent: 6/6/2017 5:05:21 PM
To: Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]
Subject: Draft: One-Pager for Don Dossett
Attachments: 17 06 06 Chem Waste Don Dossett Memo.docx; 4-27-90 Preamble Proposed Rule 55FR17869 - Definitions of infrared incinerators.pdf; RO 13657.pdf

Hi! Edit as you see fit...

And here is the preamble we cite to, as well as the RCRA Online Notice.

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Citation: 55 Fed. Reg. 17869 1990

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be addressed under the SIP process or potentially by a RCRA permit writer using the omnibus permitting authority.

In developing today's proposed rule, a number of people representing a wide range of interests (e.g., industry representatives, environmentalists) have indicated, however, that the rule may be simpler to implement and more protective if the controls were technology-based. They advocate using risk assessment only as a check to determine if the standards are protective on a site-specific basis. They cite the current limitations of risk-based standards in this particular situation, including: (1) indirect exposure (e.g., uptake through the food chain) has not been considered for carcinogens; (2) metals controls are proposed only for those metals for which sufficient health effects data exist to establish acceptable ambient levels; and (3) the metals controls are difficult to implement by limiting feed rates of individual metals given the physical matrices of wastes and the variability of metals concentrations. We agree with these concerns and are initiating a testing program to develop technology-based controls for particulate matter to provide a measure of control for particulates, including metal particulates and adsorbed organic compounds, commensurate with best demonstrated technology (BDT) for hazardous waste incinerators. See RCRA section 3004(a)(1)—section 3004 standards are to be revised periodically to take into account improvements of measurement and technology. If EPA establishes a BDT particulate standard, the risk-based controls for metals emissions would still apply and would then be used as a check to determine if the BDT standard provides adequate protection on a case-by-case basis. Given the limitations of current risk assessment methodologies, we do not believe that it could be demonstrated that a BDT standard substantially over-regulates in many situations.

We are not proposing at this time to lower the existing particulate standard because we have not conducted adequate field testing of hazardous waste incinerators to establish a BDT particulate standard.[12] Further, once the BDT standard is identified, we would then need to consider the impact on the regulated community of applying the standard to establish a reasonable compliance schedule.

II. Definitions of Incinerators and Industrial Furnaces

We discuss below the basis for proposing to revise the definitions of incinerator and industrial furnace, the regulatory status for sludge dryers, and a request for comment on regulating all hazardous waste thermal treatment devices under parts 264 and 265, subpart O.

A. Definition of Incinerator and Industrial Furnace

Existing definitions in § 260.10 for incinerators and industrial furnaces consider how thermal energy is provided to the device. Both definitions stipulate that the device must utilize controlled flame combustion, thus excluding devices using other means to supply the heat necessary to combust or otherwise themally treat waste. Thus, for example, electric arc smelters are not industrial furnaces and devices using infrared heat to destroy waste are not incinerators. Significant regulatory consequences result from these determinations. Electric arc smelters that reclaim nonindigenous metal hydroxide sludges are not industrial furnaces, and, thus, are exempt from regulation under § 261.6(c)(1), while smelters using direct flame combustion to reclaim the same sludge would be regulated under the May 6, 1987, proposed rules for boilers and industrial furnaces. Infrared devices used to destroy waste would be regulated under the subpart X permit standards of part 264 and the subpart P interim status standards of part 265, while controlled flame incinerators would be regulated under subpart O of parts 264 and 265 (and any amendments resulting from today's proposal). The subpart X permit standards under part 264 are not prescriptive; permit writers use engineering judgment and risk analysis to determine appropriate permit conditions.

We believe that incinerators and industrial furnaces pose much the same risk irrespective of whether they use controlled flame combustion or some other means to provide heat energy. Therefore, we are proposing to replace or temper the reference to controlled flame combustion in respective definitions.

1. *Revised definition of industrial furnace.* We are proposing to revise the definition of industrial furnace to refer to thermal treatment rather than to controlled flame combustion. We believe that there are very few additional industrial furnaces (that process nonindigenous waste) that would be regulated under this expanded definition, and it makes no sense to regulate these few furnaces differently than other industrial furnaces processing the same materials. EPA specifically requests comments on the need for the revised industrial furnace definition and resulant impacts on the regulated community.

2. *Plasma arc and infrared devices are incinertors.* We are proposing to revise the definition of incinerator to include explicitly two nonflame combustion devices: plasma arc and infrared incinerators. Although these devices are sometimes considered to be nonflame devices rather than incinerators, we believe that they should be regulated as Subpart O incinerators for two reasons. First, they invariably employ afterburners to combust hydrocarbons driven off by the plasma arc or infrared process. Thus, it can be argued that these units, in fact, meet the current definition of an incinerator. Second, we believe that the Subpart O incinerator standards can be appropriately applied to these devices; the technical requirements of subpart O are appropriate to address the hazards posed by these devices. We also note that applying the Subpart O standards will reduce the burden on both permit writers and applicants. The Subpart X standards are nonprescriptive standards under which permit writers apply permit conditions as appropriate to protect human health and the environment. Thus, under subpart X, permit writers would need to determine on a case-by-case basis whether particular provisions of subpart O are appropriate and whether additional permit conditions would be needed. Using Subpart O strandards removes the ambiguity for both permit writers and applicants over what requirements are necessary.

Today's proposed amendments to the incinerator standards likewise appear suitable for plasma arc and infrared incinerators. We request comment on whether there are other "nonflame" combustion devices for which the Subpart O incinerator standards are applicable (i.e., devices that use an afterburner to combust hydrocarbons generated from hazardous waste by a nonflame process).

We note that we are proposing only to change (or clarify) the regulatory status of these two classes of devices, not to subject them to regulation for the first time. Thus, interim status is not being reopened for these devices. They have

[12] We note that several States control hazardous waste incinerator particulate emissions to levels well below EPA's standard of 0.08 gr/dscf. In addition, several hazardous waste incinerators have been demonstrated to be capable of routinely controlling particulate emissions to levels in the 0.01–0.02 gr/dscf range, or less. Further, as discussed above in the text, the proposed particulate standard for MWCs is 0.015 gr/dscf. Thus, we anticipate that a BDT particulate standard for hazardous waste incinerators would be within that range of 0.01 to 0.02 gr/dscf.

been regulated since 1980 under subpart P (interim status standards for thermal treatment units), subpart X (permit standards for other treatment units), or subpart O (interim status and permit standards for incinerators). We note that the interim status standards of part 265, subpart P, are virtually identical to the interim status standards of part 265, subpart O.

3. *Fluidized bed devices are incinerators.* EPA would also like to clarify that fluidized bed devices are incinerators and are regulated under subpart O. They are not subject to the thermal treatment standards of part 265, subpart P, or requirements established under part 264, subpart X. Fluidized bed incinerators are enclosed devices that are designed to provide contact between a heated inert bed material fluidized with air and the solid waste. Gas is passed upwards through a column of fine particulates at a sufficient velocity to cause the solids/gas mixture to behave like a liquid. The bed is preheated by overfired or underfired auxiliary fuel. It is generally accepted that fluidized beds meet the definition of incinerator, although there may have been some confusion in the past. Although we are clarifying that they do meet the definition of incincerator, we specifically request comment on whether there is sufficient ambiguity to warrant adding fluidized bed devices to the definition of incinerator.

4. *Revised regulatory status of carbon regeneration units.* We are also proposing to revise the regulatory status of carbon regeneration units. Controlled flame carbon regeneration units currently meet the definition of incinerator and have been subject to regulation as such since 1980,[13] while carbon regeneration nonflame units have been treated as exempt reclamation units. We are proposing to regulate both direct flame and nonflame carbon regeneration units as thermal treatment units under the interim status standards of part 265, subpart P, and the permit standards of part 264, subpart X. Our reason for doing this is that we are concerned that emissions from these devices may present a substantial hazard to human health or the environment. We are not proposing to apply the part 264, subpart O, incinerator standards to these units because we are concerned that demonstration of conformance with the DRE standards (and the proposed CO/THC standards) may not be achievable considering the relatively low levels of toxic organic compounds absorbed onto the activated carbon.

The prevailing view appears to be that carbon regeneration units currently are exempt recycling units. We have considered whether or not these units truly are engaged in reclamation, or whether the regeneration of the carbon is just the concluding aspect of the waste treatment process that commenced with the use of activated carbon to absorb waste contaminants, which are now destroyed in the "regeneration" process.[14] Irrespective of whether these units are better classified as waste treatment or recycling units (or whether the units are flame or nonflame devices), we are concerned, as indicated above, that emissions from the regeneration process can pose a serious hazard to public health if not properly controlled. Consequently, nonflame units in existence on the date of promulgation (like flame units) would be subject to part 265, subpart P, and new units would be subject to part 264, subpart X.

We note that we intend for this proposal to also apply to those carbon regeneration units that meet the definition of wastewater treatment units in § 260.10 while they are in active service. These units would not be exempt from regulation when they are being regenerated because they are no longer treating wastewater. Rather, the activated carbon columns themselves are being treated thermally.

B. Regulation of All Thermal Treatment Units Under Subpart O

The Agency has done some preliminary thinking on an alternative approach to regulating combustion devices—the regulation of all thermal treatment devices under virtually identical standards under subpart O. This would avoid a number of problems with the current regulatory approach, including: (1) Ambiguous definitions for boilers and industrial furnaces; (2) incomplete coverage of the incinerator and industrial furnace definitions (e.g., although today's proposal would expand regulatory coverage of industrial furances to include heating by means other than controlled flame combustion, furances other than those that are "integral components of a manufacturing process" (see § 260.10), such as off-site facilities engaged solely in waste management, could be engaged in *bona fide* reclamation and should be classified as an industrial furnace rather than an incinerator); (3) the burden on the regulated community and EPA and State officials to process petitions to classify individual devices as boilers or industrial furnaces rather than incinerators; and (4) the numerous provisions in the proposed boiler and furnace rules that would merely parrot the current and proposed incinerator standards.

Under this alternative approach, all thermal treatment devices would be regulated under the same risk-based standards to control metals and HCl emissions—the standards proposed today for incinerators.[15] Control of organic emissions could also be the same as those CO controls proposed today for incinerators coupled with the existing DRE standards for incinerators. Devices handling wastes with low levels of toxic organic constituents (e.g., smelters, sludge dryers, certain incinerators), however, would not be subject to organic emissions controls. The applicability of standards could, in many cases, be a function of waste properties and composition. It may not be necessary to identify applicability by type of device.

EPA is continuing to consider this alternative. In particular, we are investigating whether the temporary exclusion for the special wastes in RCRA section 3001(b)(3) and the special standards and exemptions proposed for boilers and industrial furnaces can be implemented without definitions for these devices. We specifically request comments on this alternative regulatory approach whereby all thermal treatment units could be regulated under one set of standards under subpart O.

PART THREE: DISCUSSION OF PROPOSED CONTROLS

I. Overview of EPA's Risk Assessment

In developing this regulation, the Agency has used risk assessment to: (1) determine that absent regulatory

[13] There appears to be confusion as to the current regulatory status of direct flame activated carbon regeneration units. Because EPA indicated in the May 19, 1980, preamble that all activated carbon regeneration units were engaged in a form of recycling presently exempt from regulation (45 FR 33094), EPA is proposing in this notice to amend the regulations to control these devices, both direct and indirect fired. Consequently, the "in existence" date for all activated carbon regeneration units would be the date of promulgation of final regulations.

[14] We note that activated carbon units used as air emissions control devices frequently regenerate the carbon in place by steam stripping, condensing the organic contaminants for reuse. The trapped organics in such columns are not hazardous wastes because the gas originally being treated is not a solid waste (it is an uncontained gas), and therefore any condensed organics do not derive from treatment of a listed hazardous waste.

[15] We note that EPA is requesting comment on applying these controls (as well as the proposed CO controls) to boilers and industrial furnaces as well in lieu of those proposed on May 6, 1987. See the Federal Register notice published today entitled, "Burning of Hazardous Waste in Boilers and Industrial Furnaces: Supplement to Proposed Rule."

9489.1994(01)

CLARIFICATION ON THE DISTINCTION BETWEEN THERMAL DESORBERS AND INCINERATORS

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

February 23, 1994

Mr. David D. Emery
President
Bioremediation Service, Inc.
P.O. Box 2010
Lake Oswego, Oregon 97035-0012

Dear Mr. Emery:

This is in response to your December 21, 1993, letter requesting clarification on the distinction between thermal desorbers and incinerators. In particular, you questioned whether temperature was a criterion for distinguishing between desorbers and incinerators and whether chlordane contaminated soil can be effectively and safely treated by thermal desorption.

Under the Environmental Protection Agency's (EPA's) regulations, thermal treatment units that are enclosed devices using controlled flame combustion and that are neither boilers nor industrial furnaces are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart O. Definitions of boilers, industrial furnaces, and incinerators are established in 40 CFR 260.10. Thermal treatment units that do not use controlled flame combustion and that are not industrial furnaces are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

The use of "controlled flame combustion" determines whether EPA regulates a device used for thermal desorption as an incinerator or a "miscellaneous unit". Consequently, a thermal desorber would be subject to regulation as an incinerator if it was equipped with a fired afterburner to destroy desorbed organic compounds, or if the desorption chamber was directly fired, irrespective of how the desorbed organics were controlled. On the other hand, if the desorption chamber was indirectly heated and the desorbed organics were not controlled using controlled flame combustion (e.g., no afterburner), the thermal desorber would be subject to regulation as a "miscellaneous unit". Thus, in response

to your questions, temperature is not a criterion that is used to determine the regulatory status of a thermal desorber.

EPA's regulations for miscellaneous units are not prescriptive given the variety of devices that fall into this category. Rather, the regulations require the permitting official to establish permit conditions that are necessary to protect human health and the environment. For "miscellaneous" thermal treatment units, permit writers will generally require compliance with all of the Subpart O incinerator standards that are appropriate for the technology and then determine if additional controls are needed to ensure that emissions are safe.

Please note that I have described EPA's regulatory classification approach for thermal desorbers. Under the Resource Conservation and Recovery Act, EPA authorizes the States to implement the hazardous waste management regulatory program. State regulations may be more stringent or broader in scope than EPA's. Therefore, you should check with the State in which the facility in question is to be located to identify any applicable standards.

With respect to your question as to whether chlordane contaminated soil can be effectively and safely treated by low temperature desorption, you should contact EPA's technical expert on thermal desorption, Paul de Percin, Office of Research and Development, for assistance. Mr. de Percin can also be consulted about TCDD conjugation but, without full thermodynamic and kinetic data regarding the process involved, it may be difficult to give you any definitive assistance. He can be reached at 513-569-7797.

I hope that this information will be helpful. If you have further questions about the regulatory classification of thermal desorbers, please contact Bob Holloway of my staff at 703-308-8461.

Sincerely,
Michael Shapiro
Director
Office of Solid Waste

cc: Paul de Percin; Bob Holloway

Message

From: Davies, Lynne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=169EB6CBDEBB4CAF85F76390B8AB2674-LDAVIE12]
Sent: 4/26/2017 7:01:26 PM
To: Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]; Valdez, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=eb323347294d44009a369c3576798bdf-Valdez, Heather]
Subject: Draft: Subpart CC Exemption Memo
Attachments: 17 04 25 Chem Waste Subpart CC.docx

Hi Janette and Heather – Attached is a draft memo (a work in progress) that describes my thinking with regard to the Subpart CC exemption. I have some issues highlighted for your input. Let me know what you think! And, we also have to turn to the AA/BB exemption question next, which Rich also asked about. That's much easier to deal with, I think.

Best,
Lynne

Lynne Davies
Attorney-Advisor
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900, ORC -113
Seattle, WA 98101
(206) 553-5556

Message

From: Knittel, Janette [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A955F914E8D34CB19B6F63AC60707D32-KNITTEL, JANETTE]
Sent: 3/26/2018 6:33:10 PM
To: DUSO Dan [Dan.DUSO@state.or.us]; RAMOZ Gina [Gina.RAMOZ@state.or.us]
CC: Valdez, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=eb323347294d44009a369c3576798bdf-Valdez, Heather]; Davies, Lynne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=169eb6cbdebb4caf85f76390b8ab2674-LDavie12]; McArthur, Lisa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=524660efbdb140e7868646d8073f0c72-McArthur, Lisa]
Subject: EPA comments re: CWMNW ORU Mod M118
Attachments: EPA comments CWM ORU2 M118.docx

Hi Gina and Dan,

Attached are EPA's comments and questions on the CWMNW permit mod M118 for the Organic Recovery Unit #2. We would be happy to talk through these with you and review the next versions of the documents. Let us know how we can assist. We can be available for a call on March 29th, April 4th or 5th, or later.

Regards,
Janette

From: DUSO Dan [mailto:Dan.DUSO@state.or.us]
Sent: Wednesday, March 21, 2018 1:37 PM
To: Knittel, Janette <Knittel.Janette@epa.gov>; DUSO Dan <Dan.DUSO@state.or.us>; RAMOZ Gina <Gina.RAMOZ@state.or.us>
Cc: Valdez, Heather <Valdez.Heather@epa.gov>; Davies, Lynne <Davies.Lynne@epa.gov>
Subject: RE: Request for clarification re: CWMNW ORU Mod M118

Janette,

Based on what I was able to dig up, the 261.4(a)(12) reference was in one of the early iterations of this PMR and should have been deleted. Rich said it was in several locations and apparently he missed that particular reference. The recycling exemption in 261.6(a)(3)(iv)(C) is the appropriate citation. Hope this helps

Dan

From: Knittel, Janette <Knittel.Janette@epa.gov>
Sent: Monday, March 19, 2018 4:35 PM
To: DUSO Dan <Dan.DUSO@state.or.us>; RAMOZ Gina <Gina.RAMOZ@state.or.us>
Cc: Valdez, Heather <Valdez.Heather@epa.gov>; Davies, Lynne <Davies.Lynne@epa.gov>
Subject: Request for clarification re: CWMNW ORU Mod M118

Hi, Gina and Dan,

Before we send EPA's comments to you on the permit modification for the Organic Recovery Unit #2 (PMR #M118), we'd like some clarification from ODEQ on a fundamental question that may affect our other comments. In Standalone 22 – ORU-2 Design and Operations Plan, Section 2.7 states that wastes with recoverable petroleum fractions are not regulated according to 40 CFR 261.6(a)(3)(iv)(C) (i.e. the recyclable materials exemption) or 40 CFR 261.4(a)(12) (i.e. the oil-bearing secondary materials exclusion). By citing both this section is unclear. At which point does either or both apply and why?

Thanks,
Janette

Janette Knittel
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RCRA Corrective Action, Permits, and PCBs Unit
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CWMNW Permit Modification Request M118: Organic Recovery Unit #2 (ORU-2)
EPA Comments and Questions
March 26, 2018

General Comments

1. How specifically does ORU-2 meet the recycling exemption in 40 CFR 261.6(a)(3)(iv)(C)? This is a crucial question to answer, as it helps determine whether Subparts AA, BB, and CC apply, in addition to other regulatory requirements.

    a. Regarding the recycling exemption in 40 CFR 261.6(a)(3)(iv)(C), EPA's understanding is that the material entering the ORU-2 for processing consists only of waste from "petroleum refining, production, and transportation practices." SA #22 makes reference to "media" and "contaminated media" entering the ORU-2 for treatment. What does this media consist of and where does it originate from? Clarify that it contains only those wastes in Table 19-1.

    b. Provide details on the mass balance to show what percentage of the incoming waste is recovered for burning as a used oil fuel as described in 261.6(a)(3)(iv)(C) vs. how much waste is disposed of elsewhere or combusted in the thermal oxidizer. What is the waste that is disposed of and where is it disposed? This information is important to determine whether CWMNW is legitimately recycling the waste in Table 19-1.

    c. Where is the beginning and end of the recycling process that falls under the exemption? Are all the tanks that are used in the ORU-2 operation part of the recycling process? Where does the WWTP-2 start and stop, and what constitutes the "tank farm"?

    d. As Dan Duso confirmed in an email on 3/21/2018, the exclusion under 261.4(a)(12) does not apply. Remove all references to this section and associated language about returning organic constituents to the refinery process (e.g. Sections 2.1, 2.7). 40 CFR 261.6(a)(3)(iv)(C) states that the exemption applies so long as "reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under §279.11 of this chapter."

2. Is the ORU-2 in operation?

General Comments on Standalone #22 - Organic Recovery Unit #2 Design and Operations Plan

1. General editing is needed. For example, corrections for the following should be made:
    a. Page numbering,
    b. References to sections that don't exist (e.g. Section 6.2.3 refers to sect 3.6.1; and Section 7.2 refers to 3.6.3),
    c. The title of Table 19-1 (and references to it) should be Table 22-1.

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Specific Comments on Standalone #22 - Organic Recovery Unit #2 Design and Operations Plan

Provided the recycling exemption under 40 CFR 261.6(a)(3)(iv)(C) applies to the ORU-2, the EPA has the following comments:

Section	Comment
Table 19-1	There appears to be an extra comma between waste codes F038 and K048. Is there a waste code missing?
1.5	Be more specific about what wastes listed in Table 19-1 are expected to be incompatible through treatment in ORU-2.
2.3.1, second to last sentence	If vapors are diverted from the TO in an emergency, where do they go? If vented to the atmosphere, then is that regulated in any way through the air permit?
2.3.3	What are the parameters that are monitored to indicate any failure or malfunction and what are the associated operating ranges for those parameters so that proper operation is maintained?
2.3.3, last sentence	If vapors are diverted from the TO during a malfunction or failure, where do they go? Are there any start-up, shut-down, or malfunction provisions in the air permit?
2.5, second to last sentence	How is the ash further treated if it does not initially meet LDRs?
2.8	Quantify the mass of material that is disposed of via the waste water treatment system.
2.8.1, second to last sentence	Elaborate in what type of cases would the settled solids be shipped off-site for additional treatment. When settled solids are shipped off-site is the material designated as waste or product? Quantify the potential volume or the historical average volume for this material stream.
1.2 and 1.4	The correct reference is 261.6**(a)**(3)(iv)(C).
3, first sentence	Clarify the number of tanks – 22 or 21?
6.2.1	Verify that ORU-2 is not a "fractionation operation" as defined in 264.1031, especially since Section 2.7 mentions that petroleum fractions are produced.
6.2.2 and 6.2.3	EPA believes the information in Sections 6.2.2 and 6.2.3 regarding Subpart BB and CC are reversed – see the following comments.
6.2.2	The sentence in Section 6.2.2, "ORU-2 systems are not subject to the requirements of 40 CFR Part 270 while performing recycling operations" applies to Subpart CC (applicable to tanks, surface impoundments, containers). (Section 6.2.2. currently refers to Subpart BB.) It should state that the ORU-2 systems are not subject to the requirements of 40 CFR Subpart CC or Part 270 while performing recycling operations, according to 261.6(d).
6.2.3	This section should reference Subpart BB, not CC. When the TAB is not exceeded under 40 CFR 61 Subpart FF, controls are not required to be operated. Are controls operating pursuant to an air permit? If so clarify that under a SIP approved Air Permit there is a requirement to operate controls at all times that the ORU system is in operation, and that operation is done according to the provisions in 40 CFR 264.1033. Section 5.3 states that they are not subject to controls under 40 CFR 61 Subpart FF. If they are not actively operating a control device, then the 264.1080(b)(7) exemption is not valid.

6.2.4	This section states, "…CWMNW facility is not subject to controls in Subpart FF unless wastes treated from refineries are subject to Subpart FF requirements." If not subject to controls under FF then there must be equivalent control requirements in a Federally enforceable CAA permit, or vapors need to be managed according to RCRA. See comment above for section 6.2.3
7.2	Clarify the basis for the air emission controls. If the TAB threshold of 40 CFR Part 61, Subpart FF is not exceeded then controls are not operated pursuant to Subpart FF. A SIP approved Air Permit with requirements to operate controls at all times that the ORU system is in operation, provided operation is done according to the provisions in 40 CFR 264.1033, can be cited to as a basis for the air emission controls if the TAB threshold is not exceeded for Subpart FF.

Standalone #23 - WWTP-2 Liquid Storage/Treatment Plan

1. Correct all references to 40 CFR 264 (from 40 CFR 265).
2. The tank list in SA #23 differs from that in SA #22.

Message

From: Davies, Lynne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=169EB6CBDEBB4CAF85F76390B8AB2674-LDAVIE12]
Sent: 4/11/2017 9:01:42 PM
To: Mia, Marcia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6590c44762d64ce28ab3d7a7fbb14673-MMia]; Welles, Laura [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d12d5767a8634f48935d8aa59f93d4f6-Welles, Lau]; Martin, Thomas [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0f5be51c12f644489c641d1231da5f5f-TMarti03]
CC: McArthur, Lisa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=524660efbdb140e7868646d8073f0c72-McArthur, Lisa]; Valdez, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=eb323347294d44009a369c3576798bdf-Valdez, Heather]; Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]; Vergeront, Julie [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=99966bfa656f4d7c85b4b370f8b33c0e-Vergeront, Julie]; Pavitt, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=31d144be2f8043a2b6de245e1706134a-Pavitt, John]
Subject: Follow-Up: ChemWaste ORU#2 Documents
Attachments: 6-12-98 MEMO Clarifing Thermal Desorber vs Incinerator.pdf; 10-29-93 Memo RCRA Applicability to Thermal Desobers and Hybrid Incinera....pdf; 2-23-94 MEMO Clarifing Thermal Desorber vs Incinerator.pdf; 7-15-03 Fact Sheet on air poluution control technologies, Thermal Oxidi....pdf; 11-15-94 MEMO Exide Corporation's Proposed Fuming Gasification Unit.pdf; 4-27-90 Preamble Subpart O Incinerator Proposed Rule 55FedReg17869 - Definitions of infrared incinerators - Incinerator Proposed Rule 55FedReg17869.pdf; 2-21-91 Preamble BIF Rule 56FedReg - Definitions of infrared incinerato....pdf; 7-29-94 Memo Boundary of Unit, footnote2 - Single Emission Point, Multi-....pdf; Subpart CC Preamble Language.pdf

FYI, Marcia, Laura, and Tom – yesterday, I mentioned I would send a link to documents collected by Heather Valdez that might be helpful in answering our questions. There may be other documents that are not included here that may be helpful, but this is hopefully a start (all attached above):

- Air Pollution Control Technology Fact Sheet, 7/15/03: thermal incinerator
- RCRA Online notice, 6/12/1998: clarification between thermal desorbers and incinerators (attached above)
- RCRA Online notice, 11/15/1994: Exide Corp., applicability of RCRA regs to proposed fuming/gasification unit
- RCRA Online notice, 7/29/1994: Clarification of Single Emission Point
- RCRA Online notice, 2/23/94: clarification between thermal desorbers and incinerators
- RCRA Online notice, 10/29/1993: clarification on applicability of RCRA regs to thermal desorbers, sludge dryers, and hybrid incineration devices
- Preamble, BIF Rule, 2/21/91: definition of incinerator
- Preamble, 4/27/1990: Definition of "incinerator" in 40 CFR 260.10
- 40 CFR Subpart CC Preamble language.

Many thanks for your help!
Lynne

Lynne Davies
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Citation: 56 Fed. Reg. 7204 1991

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is not promulgating an exemption from regulation of the hydrocarbon phase of the landfill gas condensate at this time. Facilities that wish to burn a landfill gas condensate may consider whether they are eligible for the small quantity burner exemption promulgated in this rule.

V. Definitions of Infrared and Plasma Arc Incinerators

Today's rule establishes definitions for infrared and plasma arc incinerators and revises the definition of incinerator to explicitly include these devices. As discussed in the April 27, 1990 proposed amendments to the incinerator standards (55 FR at 17869–70), EPA is clarifying that these devices are incinerators rather than (other) thermal treatment units subject to regulation under subpart X of part 264 (or subpart P of part 265 for interim status units) because: (1) although these devices use nonflame sources of thermal energy to treat waste in the primary chamber, they invariably employ controlled flame afterburners to combust hydrocarbons driven off by the primary process (and, thus, they meet the definition of an "incinerator" under § 260.10); and (2) the incinerator standards are workable and protective for these units.

We note that today's action merely clarifies the regulatory status of these devices. It does not subject them to regulation for the first time; they have been regulated since 1980. Thus, interim status is not reopened for these devices.

Part Five: Administrative, Economic, and Environmental Impacts, and List of Subjects

I. State Authority

A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR part 271 for the standards and requirements for authorization.) Following authorization, EPA retains enforcement authority under sections 3008, 7003 and 3013 of RCRA, although authorized States have primary enforcement responsibility.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final authorization administered its hazardous waste program entirely in lieu of EPA administering the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities in the State which the State was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obliged to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

In contrast, under section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time that they take effect in nonauthorized States. EPA is directed to carry out those requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. While States must still adopt HSWA-related provisions as State law to achieve or retain final authorization, the HSWA applies in authorized States in the interim.

The majority of today's rule is promulgated pursuant to section 3004(q) of RCRA, a provision added by HSWA. (The provisions that are not promulgated pursuant to HSWA are the provisions for sludge dryers, carbon regeneration units, infrared incinerators, and plasma arc incinerators.) Therefore, the Agency is adding the requirements (except the non-HSWA provisions) to Table 1 in § 271.1(j) which identifies the Federal program requirements that are promulgated pursuant to HSWA and that take effect in all States, regardless of their authorization status. States may apply for either interim or final authorization for the HSWA provisions identified in Table 1, as discussed in the following section of this preamble.

B. Effect on State Authorizations

As noted above, EPA will implement the majority of the provisions of today's rule in authorized States until they modify their programs to adopt these rules and the modification is approved by EPA. Because these provisions of the rules are promulgated pursuant to HSWA, a State submitting a program modification may apply to receive either interim or final authorization under section 3006(g)(2) or 3006(b), respectively, for these provisions on the basis of requirements that are substantially equivalent or equivalent to EPA's. The procedures and schedule for State program modifications for either interim or final authorization are described in 40 CFR 271.21. It should be noted that all HSWA interim authorizations will expire January 1, 1993. (See § 271.24(c).)

The provisions of today's rule that are not promulgated pursuant to HSWA—provisions for sludge dryers, carbon regeneration units, infrared incinerators, and plasma are incinerators—are not effective in authorized States. Thus, these requirements will be applicable only in those States that do not have final authorization. In authorized States, the requirements will not be applicable until the State revises its program to adopt equivalent requirements under State law.

40 CFR 271.21(e)(2) requires that States that have final authorization must modify their programs to reflect Federal program changes, and must subsequently submit the modifications to EPA for approval. The deadline by which the State must modify its program to adopt the HSWA portion of today's rule is July 1, 1993 if a statutory change is not needed, or July 1, 1994 if a statutory change is needed. The deadline by which the State must modify its program to adopt the non-HSWA portion of today's rule is July 1, 1992 if a statutory change in not needed, or July 1, 1993 if a statutory change is needed. These deadlines can be extended in certain cases (40 CFR 271.21(e)(3)). Once EPA approves the modification, the State requirements become Subtitle C RCRA requirements.

States with authorized RCRA programs may already have requirements similar to those in today's rule. These State regulations have not been assessed against the Federal regulations being promulgated today to determine whether they meet the tests for authorization. Thus, a State is not authorized to implement these requirements in lieu of EPA until the State program modification is approved. Of course, States with existing standards may continue to administer and enforce their standards as a matter of State law.

In implementing the Federal program for the HSWA portion of today's rule, EPA will work with States under cooperative agreements to minimize duplication of efforts. In many cases, EPA will be able to defer to the States in their efforts to implement their programs, rather than take separate actions under Federal authority.

States that submit their official applications for final authorization less than 12 months after the effective date of these standards are not required to include standards equivalent to these standards in their application. However, the State must modify its program by the deadlines set forth in § 271.21(e). States that submit official applications for final authorization 12 months after the effective date of these standards must include standards equivalent to these standards in their application. 40 CFR 271.3 sets forth the requirements a State

9489.1994(01)

CLARIFICATION ON THE DISTINCTION BETWEEN THERMAL DESORBERS AND INCINERATORS

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

February 23, 1994

Mr. David D. Emery
President
Bioremediation Service, Inc.
P.O. Box 2010
Lake Oswego, Oregon 97035-0012

Dear Mr. Emery:

This is in response to your December 21, 1993, letter requesting clarification on the distinction between thermal desorbers and incinerators. In particular, you questioned whether temperature was a criterion for distinguishing between desorbers and incinerators and whether chlordane contaminated soil can be effectively and safely treated by thermal desorption.

Under the Environmental Protection Agency's (EPA's) regulations, thermal treatment units that are enclosed devices using controlled flame combustion and that are neither boilers nor industrial furnaces are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart O. Definitions of boilers, industrial furnaces, and incinerators are established in 40 CFR 260.10. Thermal treatment units that do not use controlled flame combustion and that are not industrial furnaces are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

The use of "controlled flame combustion" determines whether EPA regulates a device used for thermal desorption as an incinerator or a "miscellaneous unit". Consequently, a thermal desorber would be subject to regulation as an incinerator if it was equipped with a fired afterburner to destroy desorbed organic compounds, or if the desorption chamber was directly fired, irrespective of how the desorbed organics were controlled. On the other hand, if the desorption chamber was indirectly heated and the desorbed organics were not controlled using controlled flame combustion (e.g., no afterburner), the thermal desorber would be subject to regulation as a "miscellaneous unit". Thus, in response

to your questions, temperature is not a criterion that is used to determine the regulatory status of a thermal desorber.

EPA's regulations for miscellaneous units are not prescriptive given the variety of devices that fall into this category. Rather, the regulations require the permitting official to establish permit conditions that are necessary to protect human health and the environment. For "miscellaneous" thermal treatment units, permit writers will generally require compliance with all of the Subpart O incinerator standards that are appropriate for the technology and then determine if additional controls are needed to ensure that emissions are safe.

Please note that I have described EPA's regulatory classification approach for thermal desorbers. Under the Resource Conservation and Recovery Act, EPA authorizes the States to implement the hazardous waste management regulatory program. State regulations may be more stringent or broader in scope than EPA's. Therefore, you should check with the State in which the facility in question is to be located to identify any applicable standards.

With respect to your question as to whether chlordane contaminated soil can be effectively and safely treated by low temperature desorption, you should contact EPA's technical expert on thermal desorption, Paul de Percin, Office of Research and Development, for assistance. Mr. de Percin can also be consulted about TCDD conjugation but, without full thermodynamic and kinetic data regarding the process involved, it may be difficult to give you any definitive assistance. He can be reached at 513-569-7797.

I hope that this information will be helpful. If you have further questions about the regulatory classification of thermal desorbers, please contact Bob Holloway of my staff at 703-308-8461.

Sincerely,
Michael Shapiro
Director
Office of Solid Waste

cc: Paul de Percin; Bob Holloway

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Citation: 55 Fed. Reg. 17869 1990

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be addressed under the SIP process or potentially by a RCRA permit writer using the omnibus permitting authority.

In developing today's proposed rule, a number of people representing a wide range of interests (e.g., industry representatives, environmentalists) have indicated, however, that the rule may be simpler to implement and more protective if the controls were technology-based. They advocate using risk assessment only as a check to determine if the standards are protective on a site-specific basis. They cite the current limitations of risk-based standards in this particular situation, including: (1) indirect exposure (e.g., uptake through the food chain) has not been considered for carcinogens; (2) metals controls are proposed only for those metals for which sufficient health effects data exist to establish acceptable ambient levels; and (3) the metals controls are difficult to implement by limiting feed rates of individual metals given the physical matrices of wastes and the variability of metals concentrations. We agree with these concerns and are initiating a testing program to develop technology-based controls for particulate matter to provide a measure of control for particulates, including metal particulates and adsorbed organic compounds, commensurate with best demonstrated technology (BDT) for hazardous waste incinerators. See RCRA section 3004(a)(1)—section 3004 standards are to be revised periodically to take into account improvements of measurement and technology. If EPA establishes a BDT particulate standard, the risk-based controls for metals emissions would still apply and would then be used as a check to determine if the BDT standard provides adequate protection on a case-by-case basis. Given the limitations of current risk assessment methodologies, we do not believe that it could be demonstrated that a BDT standard substantially over-regulates in many situations.

We are not proposing at this time to lower the existing particulate standard because we have not conducted adequate field testing of hazardous waste incinerators to establish a BDT particulate standard.[12] Further, once the BDT standard is identified, we would then need to consider the impact on the regulated community of applying the standard to establish a reasonable compliance schedule.

II. Definitions of Incinerators and Industrial Furnaces

We discuss below the basis for proposing to revise the definitions of incinerator and industrial furnace, the regulatory status for sludge dryers, and a request for comment on regulating all hazardous waste thermal treatment devices under parts 264 and 265, subpart O.

A. Definition of Incinerator and Industrial Furnace

Existing definitions in § 260.10 for incinerators and industrial furnaces consider how thermal energy is provided to the device. Both definitions stipulate that the device must utilize controlled flame combustion, thus excluding devices using other means to supply the heat necessary to combust or otherwise themally treat waste. Thus, for example, electric arc smelters are not industrial furnaces and devices using infrared heat to destroy waste are not incinerators. Significant regulatory consequences result from these determinations. Electric arc smelters that reclaim nonindigenous metal hydroxide sludges are not industrial furnaces, and, thus, are exempt from regulation under § 261.6(c)(1), while smelters using direct flame combustion to reclaim the same sludge would be regulated under the May 6, 1987, proposed rules for boilers and industrial furnaces. Infrared devices used to destroy waste would be regulated under the subpart X permit standards of part 264 and the subpart P interim status standards of part 265, while controlled flame incinerators would be regulated under subpart O of parts 264 and 265 (and any amendments resulting from today's proposal). The subpart X permit standards under part 264 are not prescriptive; permit writers use engineering judgment and risk analysis to determine appropriate permit conditions.

We believe that incinerators and industrial furnaces pose much the same risk irrespective of whether they use controlled flame combustion or some other means to provide heat energy. Therefore, we are proposing to replace or temper the reference to controlled flame combustion in respective definitions.

1. *Revised definition of industrial furnace.* We are proposing to revise the definition of industrial furnace to refer to thermal treatment rather than to controlled flame combustion. We believe that there are very few additional industrial furnaces (that process nonindigenous waste) that would be regulated under this expanded definition, and it makes no sense to regulate these few furnaces differently than other industrial furnaces processing the same materials. EPA specifically requests comments on the need for the revised industrial furnace definition and resulant impacts on the regulated community.

2. *Plasma arc and infrared devices are incinertors.* We are proposing to revise the definition of incinerator to include explicitly two nonflame combustion devices: plasma arc and infrared incinerators. Although these devices are sometimes considered to be nonflame devices rather than incinerators, we believe that they should be regulated as Subpart O incinerators for two reasons. First, they invariably employ afterburners to combust hydrocarbons driven off by the plasma arc or infrared process. Thus, it can be argued that these units, in fact, meet the current definition of an incinerator. Second, we believe that the Subpart O incinerator standards can be appropriately applied to these devices; the technical requirements of subpart O are appropriate to address the hazards posed by these devices. We also note that applying the Subpart O standards will reduce the burden on both permit writers and applicants. The Subpart X standards are nonprescriptive standards under which permit writers apply permit conditions as appropriate to protect human health and the environment. Thus, under subpart X, permit writers would need to determine on a case-by-case basis whether particular provisions of subpart O are appropriate and whether additional permit conditions would be needed. Using Subpart O strandards removes the ambiguity for both permit writers and applicants over what requirements are necessary.

Today's proposed amendments to the incinerator standards likewise appear suitable for plasma arc and infrared incinerators. We request comment on whether there are other "nonflame" combustion devices for which the Subpart O incinerator standards are applicable (i.e., devices that use an afterburner to combust hydrocarbons generated from hazardous waste by a nonflame process).

We note that we are proposing only to change (or clarify) the regulatory status of these two classes of devices, not to subject them to regulation for the first time. Thus, interim status is not being reopened for these devices. They have

[12] We note that several States control hazardous waste incinerator particulate emissions to levels well below EPA's standard of 0.08 gr/dscf. In addition, several hazardous waste incinerators have been demonstrated to be capable of routinely controlling particulate emissions to levels in the 0.01–0.02 gr/dscf range, or less. Further, as discussed above in the text, the proposed particulate standard for MWCs is 0.015 gr/dscf. Thus, we anticipate that a BDT particulate standard for hazardous waste incinerators would be within that range of 0.01 to 0.02 gr/dscf.

been regulated since 1980 under subpart P (interim status standards for thermal treatment units), subpart X (permit standards for other treatment units), or subpart O (interim status and permit standards for incinerators). We note that the interim status standards of part 265, subpart P, are virtually identical to the interim status standards of part 265, subpart O.

3. *Fluidized bed devices are incinerators.* EPA would also like to clarify that fluidized bed devices are incinerators and are regulated under subpart O. They are not subject to the thermal treatment standards of part 265, subpart P, or requirements established under part 264, subpart X. Fluidized bed incinerators are enclosed devices that are designed to provide contact between a heated inert bed material fluidized with air and the solid waste. Gas is passed upwards through a column of fine particulates at a sufficient velocity to cause the solids/gas mixture to behave like a liquid. The bed is preheated by overfired or underfired auxiliary fuel. It is generally accepted that fluidized beds meet the definition of incinerator, although there may have been some confusion in the past. Although we are clarifying that they do meet the definition of incincerator, we specifically request comment on whether there is sufficient ambiguity to warrant adding fluidized bed devices to the definition of incinerator.

4. *Revised regulatory status of carbon regeneration units.* We are also proposing to revise the regulatory status of carbon regeneration units. Controlled flame carbon regeneration units currently meet the definition of incinerator and have been subject to regulation as such since 1980,[13] while carbon regeneration nonflame units have been treated as exempt reclamation units. We are proposing to regulate both direct flame and nonflame carbon regeneration units as thermal treatment units under the interim status standards of part 265, subpart P, and the permit standards of part 264, subpart X. Our reason for doing this is that we are concerned that emissions from these devices may present a substantial hazard to human health or the environment. We are not proposing to apply the part 264, subpart O, incinerator standards to these units because we are concerned that demonstration of conformance with the DRE standards (and the proposed CO/THC standards) may not be achievable considering the relatively low levels of toxic organic compounds absorbed onto the activated carbon.

The prevailing view appears to be that carbon regeneration units currently are exempt recycling units. We have considered whether or not these units truly are engaged in reclamation, or whether the regeneration of the carbon is just the concluding aspect of the waste treatment process that commenced with the use of activated carbon to absorb waste contaminants, which are now destroyed in the "regeneration" process.[14] Irrespective of whether these units are better classified as waste treatment or recycling units (or whether the units are flame or nonflame devices), we are concerned, as indicated above, that emissions from the regeneration process can pose a serious hazard to public health if not properly controlled. Consequently, nonflame units in existence on the date of promulgation (like flame units) would be subject to part 265, subpart P, and new units would be subject to part 264, subpart X.

We note that we intend for this proposal to also apply to those carbon regeneration units that meet the definition of wastewater treatment units in § 260.10 while they are in active service. These units would not be exempt from regulation when they are being regenerated because they are no longer treating wastewater. Rather, the activated carbon columns themselves are being treated thermally.

B. Regulation of All Thermal Treatment Units Under Subpart O

The Agency has done some preliminary thinking on an alternative approach to regulating combustion devices—the regulation of all thermal treatment devices under virtually identical standards under subpart O. This would avoid a number of problems with the current regulatory approach, including: (1) Ambiguous definitions for boilers and industrial furnaces; (2) incomplete coverage of the incinerator and industrial furnace definitions (e.g., although today's proposal would expand regulatory coverage of industrial furances to include heating by means other than controlled flame combustion, furances other than those that are "integral components of a manufacturing process" (see § 260.10), such as off-site facilities engaged solely in waste management, could be engaged in *bona fide* reclamation and should be classified as an industrial furnace rather than an incinerator); (3) the burden on the regulated community and EPA and State officials to process petitions to classify individual devices as boilers or industrial furnaces rather than incinerators; and (4) the numerous provisions in the proposed boiler and furnace rules that would merely parrot the current and proposed incinerator standards.

Under this alternative approach, all thermal treatment devices would be regulated under the same risk-based standards to control metals and HCl emissions—the standards proposed today for incinerators.[15] Control of organic emissions could also be the same as those CO controls proposed today for incinerators coupled with the existing DRE standards for incinerators. Devices handling wastes with low levels of toxic organic constituents (e.g., smelters, sludge dryers, certain incinerators), however, would not be subject to organic emissions controls. The applicability of standards could, in many cases, be a function of waste properties and composition. It may not be necessary to identify applicability by type of device.

EPA is continuing to consider this alternative. In particular, we are investigating whether the temporary exclusion for the special wastes in RCRA section 3001(b)(3) and the special standards and exemptions proposed for boilers and industrial furnaces can be implemented without definitions for these devices. We specifically request comments on this alternative regulatory approach whereby all thermal treatment units could be regulated under one set of standards under subpart O.

PART THREE: DISCUSSION OF PROPOSED CONTROLS

I. Overview of EPA's Risk Assessment

In developing this regulation, the Agency has used risk assessment to: (1) determine that absent regulatory

[13] There appears to be confusion as to the current regulatory status of direct flame activated carbon regeneration units. Because EPA indicated in the May 19, 1980, preamble that all activated carbon regeneration units were engaged in a form of recycling presently exempt from regulation (45 FR 33094), EPA is proposing in this notice to amend the regulations to control these devices, both direct and indirect fired. Consequently, the "in existence" date for all activated carbon regeneration units would be the date of promulgation of final regulations.

[14] We note that activated carbon units used as air emissions control devices frequently regenerate the carbon in place by steam stripping, condensing the organic contaminants for reuse. The trapped organics in such columns are not hazardous wastes because the gas originally being treated is not a solid waste (it is an uncontained gas), and therefore any condensed organics do not derive from treatment of a listed hazardous waste.

[15] We note that EPA is requesting comment on applying these controls (as well as the proposed CO controls) to boilers and industrial furnaces as well in lieu of those proposed on May 6, 1987. See the Federal Register notice published today entitled, "Burning of Hazardous Waste in Boilers and Industrial Furnaces: Supplement to Proposed Rule."

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. Parker E. Brugge
Patton Boggs, L.L.P.
2550 M Street, N. W.
Washington, D.C. 20037-1350

Dear Mr. Brugge:

This letter is in response to your April 7, 1998, letter seeking clarification on the distinction between thermal desorbers and incinerators. Under the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 260.10), thermal treatment units that are enclosed devices using controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart 0. Thermal treatment units that do not use controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

EPA regulations do not define "thermal desorber", but the term generally applies to a unit that treats waste thermally to extract the contaminants from the matrix. A thermal desorber utilizing controlled flame combustion (e.g., equipped with a directly fired desorption chamber and/or a fired afterburner to destroy organics) would meet the regulatory definition of an incinerator. On the other hand, a thermal desorber that did not use controlled flame combustion (e.g., equipped with an indirectly heated desorption chamber and the desorbed organics were not "controlled"/destroyed with an afterburner) would be classified as a "miscellaneous unit".

With regard to the September 1993 Presumptive Remedy guidance entitled: `Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites with Volatile Organic Compounds in Soils" (Directive Number 9355.0-48FS) that you mentioned, EPA identified thermal &sorption and incineration as the second and third preferred technologies, respectively. The intent of the guidance is that units that can be generally described as thermal desorbers, whether or not they are also incinerators, are second in the preference list. However, if a thermal desorber that meets the RCRA definition of incinerator is used to treat hazardous waste at a CERCLA site, the unit must meet RCRA's incinerator standards, EPA developed the preferential order set out in this guidance based on historical patterns of remedy selection and EPA's

scientific and engineering evaluation of performance data on technology implementation. There was no intent implied or stated in the Presumptive Remedy guidance that the preferential order was based on the temperature of operation; the guidance does not limit the thermal desorbers technologies to those that are low-temperature thermal desorbers.

We appreciate that as technologies evolve, the distinctions between units often become blurred, and, in the case of thermal desorbers, may fail within two separate classifications depending on the design of the unit. Classification of a "thermal treatment" unit, however, is defined by 40 CFR 260.10.

Both the RCRA regulatory framework and the CERCLA remedy selection process provide adequate flexibility to ensure that the unit is operated in a protective manner and that there is adequate and informed public participation. If you have any further questions, please contact either Andrew O'Palko, Office of Solid Waste, at (703) 308-8646 or Robin Anderson, Office of Emergency and Remedial Response, at (703) 603-8747.

Sincerely,

Elizabeth Cotsworth
Acting Director
Office of Solid Waste

Sincerely,

Stephen D. Luftig
Director
Office of Emergency and
Remedial Response

cc: Andrew O'Palko, OSW
Bob Holloway, OSW
Robin Anderson, OERR
Karen Kraus, OGC
Superfund Regional Response Managers
RCRA Senior Policy Advisors

PATTON BOGGS, L.L.P.

2550 M STREET. N.W.
WASHINGTON. D.C. 20037-1350
(202) 457-6000 (202) 457-5225

April 2, 1998

Ms. Elizabeth A. Cotsworth
Acting Director
Office of Solid Waste
U.S. Environmental Protection Agency
401 M Street, S.W. (5301W)
Washington, D.C. 20460

Dear Ms. Cotsworth:

I am writing to seek clarification on the distinction between thermal desorbers and incinerators.

It is my understanding that thermal treatment units which are enclosed devices using controlled flame combustion, and that are neither boilers nor industrial furnaces, are classified as incinerators subject to regulation under 40 CFR Part 264, Subpart O. It is also my understanding that thermal treatment units which do not use controlled flame combustion, and that are not industrial furnaces, are classified as "miscellaneous units" subject to regulation under 40 CFR Part 264, Subpart X.

Thus, a thermal desorber is subject to regulation as an incinerator if it is equipped with a fired afterburner, or if the desorption chamber is directly fired. However, I would assume that, although such a device is subject to regulation under Subpart O, it nevertheless remains a "thermal desorber." The fact that it must meet the standards set forth in Subpart O for incinerators does not transform it somehow into an incinerator for CERCLA purposes.

For example, EPA issued guidance in September 1993 explaining that at a Superfund site which has soil contaminated with volatile organic compounds, the range of remedial technologies set forth in a Record of Decision may be soil-vapor extraction ("SVE"), low-temperature thermal desorption ("LTTD"), and incineration. The preferred order is SVE, LTTD, and, as a last resort, incineration. A thermal desorber with a fired afterburner, or one whose desorption chamber is directly fired, must fall within the "thermal desorption" family of technologies, even though it would be subject to regulation under Subpart O as an incinerator.

To hold otherwise would disqualify the large majority of LTTD units, which are directly fired and use afterburners for air pollution control. This result would be contrary to EPA's CERCLA guidance and to the Administrator's emphasis on reducing incineration which involves the high-temperature burning of contaminated soil.

There appears to be some confusion on this issue, for which we would appreciate your help in clarifying. Please call me if you have any questions or if you would like to discuss this issue further.

Sincerely,

Parker E. Brugge

cc: Bob Holloway

EPA-452/F-03-022

Air Pollution Control Technology Fact Sheet

Name of Technology: Thermal Incinerator

This type of incinerator is also referred to as a direct flame incinerator, thermal oxidizer, or afterburner. However, the term afterburner is generally appropriate only to describe a thermal oxidizer used to control gases coming from a process where combustion is incomplete.

Type of Technology: Destruction by thermal oxidation

Applicable Pollutants: Primarily volatile organic compounds (VOC). Some particulate matter (PM), commonly composed as soot (particles formed as a result of incomplete combustion of hydrocarbons (HC), coke, or carbon residue) will also be destroyed in various degrees.

Achievable Emission Limits/Reductions:

VOC destruction efficiency depends upon design criteria (i.e., chamber temperature, residence time, inlet VOC concentration, compound type, and degree of mixing) (EPA, 1992). Typical thermal incinerator design efficiencies range from 98 to 99.99% and above, depending on system requirements and characteristics of the contaminated stream (EPA, 1992; EPA, 1996a). The typical design conditions needed to meet 98% or greater control or a 20 parts per million by volume (ppmv) compound exit concentration are: 870°C (1600°F) combustion temperature, 0.75 second residence time, and proper mixing. For halogenated VOC streams, 1100°C (2000°F) combustion temperature, 1.0 second residence time, and use of an acid gas scrubber on the outlet is recommended (EPA, 1992).

For vent streams with VOC concentration below approximately 2000 ppmv, reaction rates decrease, maximum VOC destruction efficiency decreases, and an incinerator outlet VOC concentration of 20 ppmv, or lower may be achieved (EPA, 1992).

Controlled emissions and/or efficiency test data for PM in incinerators are not generally available in the literature. Emission factors for PM in phthalic anhydride processes with incinerators are available, however. The PM control efficiencies for these processes were found to vary from 79 to 96% (EPA, 1998). In EPA's 1990 National Inventory, incinerators used as control devices for PM were reported as achieving 25 to 99% control efficiency of particulate matter 10 microns or less in aerodynamic diameter (PM_{10}) at point source facilities (EPA, 1998). Table 1 presents a breakdown of the PM_{10} control efficiency ranges by industry for recuperative incinerators (EPA, 1996b). The VOC control efficiency reported for these devices ranged from 0 to 99.9%. These ranges of control efficiencies are large because they include facilities that do not have VOC emissions and control only PM, as well as facilities which have low PM emissions and are primarily concerned with controlling VOC (EPA, 1998).

ED_002469_00000069-00001

Table 1. Thermal Incinerator PM_{10} Destruction Efficiencies by Industry (EPA, 1996b)

Industry/Types of Sources	PM_{10} Control Efficiency (%)
Petroleum and Coal Products asphalt roofing processes (blowing, felt saturation); mineral calcining; petroleum refinery processes (asphalt blowing, catalytic cracking, coke calcining, sludge converter); sulfur manufacturing	25 - 99.9
Chemical and Allied Products carbon black manufacturing (mfg); charcoal mfg; liquid waste disposal; miscellaneous chemical mfg processes; pesticide mfg; phthalic anhydride mfg (xylene oxidation); plastics/synthetic organic fiber mfg; solid waste incineration (industrial)	50 - 99.9
Primary Metals Industries by-product coke processes (coal unloading, oven charging and pushing, quenching); gray iron cupola and other miscellaneous processes; secondary aluminum processes (burning/drying, smelting furnace); secondary copper processes (scrap drying, scrap cupola, and miscellaneous processes); steel foundry miscellaneous processes; surface coating oven	70 - 99.9
Electronic and Other Electric Equipment chemical mfg miscellaneous processes; electrical equipment bake furnace; fixed roof tank; mineral production miscellaneous processes; secondary aluminum roll/draw extruding; solid waste incineration (industrial)	70 - 99.9
Electric, Gas, and Sanitary Services internal combustion engines; solid waste incineration (industrial, commercial/ institutional)	90 - 98
Stone, Clay, and Glass Products barium processing kiln; coal cleaning thermal dryer; fabricated plastics machinery; wool fiberglass mfg	50 - 95
Food and Kindred Products charcoal processing, miscellaneous; corn processing, miscellaneous, fugitive processing, miscellaneous; soybean processing, miscellaneous	70 - 98
Mining asphalt concrete rotary dryer; organic chemical air oxidation units, sulfur production	70 - 99.6
National Security and International Affairs solid waste incineration (commercial/institutional and municipal)	70
Textile Mill Products plastics/synthetic organic fiber (miscellaneous processes)	88 - 95
Industrial Machinery and Equipment secondary aluminum processes (burning/drying, smelt furnace)	88 -98
Lumber and Wood Products solid waste incineration (industrial)	70
Transportation Equipment solid waste incineration (industrial)	70 - 95

ED_002469_00000069-00002

Applicable Source Type: Point

Typical Industrial Applications:

Thermal incinerators can be used to reduce emissions from almost all VOC sources, including reactor vents, distillation vents, solvent operations, and operations performed in ovens, dryers, and kilns. They can handle minor fluctuations in flow, however, excess fluctuations require the use of a flare (EPA, 1992). Their fuel consumption is high, so thermal units are best suited for smaller process applications with moderate-to-high VOC loadings.

Incinerators are used to control VOC from a wide variety of industrial processes, including, but not limited to the following (EPA, 1992):

- Storing and loading/unloading of petroleum products and other volatile organic liquids;
- Vessel cleaning (rail tank cars and tank trucks, barges);
- Process vents in the synthetic organic chemical manufacturing industry (SOCMI);
- Paint manufacturing;
- Rubber products and polymer manufacturing;
- Plywood manufacturing;
- Surface coating operations:
  Appliances, magnetic wire, automobiles, cans, metal coils, paper, film and foil, pressure sensitive tapes and labels, magnetic tape, fabric coating and printing, metal furniture, wood furniture, flatwood paneling, aircraft, miscellaneous metal products;
- Flexible vinyl and urethane coating;
- Graphic arts industry; and
- Hazardous waste treatment storage, and disposal facilities (TSDFs).

Emission Stream Characteristics:

a. **Air Flow:** Typical gas flow rates for thermal incinerators are 0.24 to 24 standard cubic meters per second (sm^3/sec) (500 to 50,000 standard cubic feet per minute (scfm)) (EPA, 1996a).

b. **Temperature:** Most incinerators operate at higher temperatures than the ignition temperature, which is a minimum temperature. Thermal destruction of most organic compounds occurs between 590°C and 650°C (1100°F and 1200°F). Most hazardous waste incinerators are operated at 980°C to 1200°C (1800°F to 2200°F) to ensure nearly complete destruction of the organics in the waste (AWMA, 1992).

a. **Pollutant Loading:** Thermal incinerators can be used over a fairly wide range of organic vapor concentrations. For safety considerations, the concentration of the organics in the waste gas must be substantially below the lower flammable level (lower explosive limit, or LEL) of the specific compound being controlled. As a rule, a safety factor of four (i.e., 25% of the LEL) is used (EPA, 1991, AWMA, 1992). The waste gas may be diluted with ambient air, if necessary, to lower the concentration. Considering economic factors, thermal incinerators perform best at inlet concentrations of around 1500 to 3000 ppmv, because the heat of combustion of hydrocarbon gases is sufficient to sustain the high temperatures required without addition of expensive auxiliary fuel (EPA, 1995).

d. **Other Considerations:** Incinerators are not generally recommended for controlling gases containing halogen- or sulfur-containing compounds, because of the formation of hydrogen chloride, hydrogen fluoride gas, sulfur dioxide, and other highly corrosive acid gases. It may be necessary to install a post-oxidation acid gas treatment system in such cases, depending on the outlet concentration. This would likely make incineration an uneconomical option. (EPA, 1996a). Thermal

incinerators are also not generally cost-effective for low-concentration, high-flow organic vapor streams (EPA, 1995).

Emission Stream Pretreatment Requirements:

Typically, no pretreatment is required, however, in some cases, a concentrator (e.g., carbon or zeolite adsorption) may be used to reduce the total gas volume to be treated by the more expensive incinerator.

Cost Information:

The following are cost ranges (expressed in 2002 dollars) for packaged thermal incinerators of conventional design under typical operating conditions, developed using EPA cost-estimating spreadsheets (EPA, 1996a) and referenced to the volumetric flow rate of the waste stream treated. The costs do not include costs for a post-oxidation acid gas treatment system. Costs can be substantially higher than in the ranges shown when used for low to moderate VOC concentration streams (less than around 1000 to 1500 ppmv). As a rule, smaller units controlling a low concentration waste stream will be much more expensive (per unit volumetric flow rate) than a large unit cleaning a high pollutant load flow. Operating and Maintenance (O & M) Costs, Annualized Cost, and Cost Effectiveness are dominated by the cost of supplemental fuel required.

a. **Capital Cost:** \$53,000 to \$190,000 per sm^3/sec (\$25 to \$90 per scfm)

b. **O & M Cost:** \$11,000 to \$160,000 per sm^3/sec (\$5 to \$75 per scfm), annually

c. **Annualized Cost:** \$17,000 to \$208,000 per sm^3/sec (\$8 to \$98 per scfm), annually

d. **Cost Effectiveness:** \$440 to \$3,600 per metric ton (\$400 to \$3,300 per short ton), annualized cost per ton per year of pollutant controlled

Theory of Operation:

Incineration, or thermal oxidation is the process of oxidizing combustible materials by raising the temperature of the material above its auto-ignition point in the presence of oxygen, and maintaining it at high temperature for sufficient time to complete combustion to carbon dioxide and water. Time, temperature, turbulence (for mixing), and the availability of oxygen all affect the rate and efficiency of the combustion process. These factors provide the basic design parameters for VOC oxidation systems (ICAC, 1999).

A straight thermal incinerator is comprised of a combustion chamber and does not include any heat recovery of exhaust air by a heat exchanger (this type of incinerator is referred to as a recuperative incinerator).

The heart of the thermal incinerator is a nozzle-stabilized flame maintained by a combination of auxiliary fuel, waste gas compounds, and supplemental air added when necessary. Upon passing through the flame, the waste gas is heated from its preheated inlet temperature to its ignition temperature. The ignition temperature varies for different compounds and is usually determined empirically. It is the temperature at which the combustion reaction rate exceeds the rate of heat losses, thereby raising the temperature of the gases to some higher value. Thus, any organic/air mixture will ignite if its temperature is raised to a sufficiently high level (EPA, 1996a).

The required level of VOC control of the waste gas that must be achieved within the time that it spends in the thermal combustion chamber dictates the reactor temperature. The shorter the residence time, the higher the reactor temperature must be. The nominal residence time of the reacting waste gas in the combustion chamber is defined as the combustion chamber volume divided by the volumetric flow rate of the gas. Most thermal units are designed to provide no more than 1 second of residence time to the waste gas with typical temperatures of 650 to 1100°C (1200 to 2000°F). Once the unit is designed and built, the residence time is

not easily changed, so that the required reaction temperature becomes a function of the particular gaseous species and the desired level of control (EPA, 1996a).

Studies based on actual field test data, show that commercial incinerators should generally be run at 870°C (1600°F) with a nominal residence time of 0.75 seconds to ensure 98% destruction of non-halogenated organics (EPA, 1992).

Advantages:

Incinerators are one of the most positive and proven methods for destroying VOC, with efficiencies up to 99.9999% possible. Thermal incinerators are often the best choice when high efficiencies are needed and the waste gas is above 20% of the LEL.

Disadvantages:

Thermal incinerator operating costs are relatively high due to supplemental fuel costs.

Thermal incinerators are not well suited to streams with highly variable flow because of the reduced residence time and poor mixing during increased flow conditions which decreases the completeness of combustion. This causes the combustion chamber temperature to fall, thus decreasing the destruction efficiency (EPA, 1991).

Incinerators, in general, are not recommended for controlling gases containing halogen- or sulfur-containing compounds because of the formation of highly corrosive acid gases. It may be necessary to install a post-oxidation acid gas treatment system in such cases, depending on the outlet concentration (EPA, 1996a). Thermal incinerators are also not generally cost-effective for low-concentration, high-flow organic vapor streams (EPA, 1995).

Other Considerations:

Thermal incinerators are not usually as economical, on an annualized basis, as recuperative or regenerative incinerators because they do not recover waste heat energy from the exhaust gases. This heat can be used to preheat incoming air, thus reducing the amount of supplemental fuel required. If there is additional heat energy available, it can be used for other process heating needs.

References:

AWMA, 1992. Air & Waste Management Association, Air Pollution Engineering Manual. Van Nostrand Reinhold, New York.

EPA, 1991. U.S. EPA, Office of Research and Development, "Control Technologies for Hazardous Air Pollutants," EPA/625/6-91/014, Washington, D.C., June.

EPA, 1992. U.S. EPA, Office of Air Quality Planning and Standards, "Control Techniques for Volatile Organic Emissions from Stationary Sources," EPA-453/R-92-018, Research Triangle Park, NC., December.

EPA, 1995. U.S. EPA, Office of Air Quality Planning and Standards, "Survey of Control Technologies for Low Concentration Organic Vapor Gas Streams," EPA-456/R-95-003, Research Triangle Park, NC., May.

EPA, 1996a. U.S. EPA, Office of Air Quality Planning and Standards, "OAQPS Control Cost Manual," Fifth Edition, EPA 453/B-96-001, Research Triangle Park, NC. February.

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ICAC, 1999. Institute of Clean Air Companies internet web page www.icac.com, Control Technology Information - Thermal Oxidation, page accessed March 1999.

9498.1994(08)

CLARIFICATION REGARDING SINGLE EMISSION POINT, MULTI-DEVICE COMBUSTION FACILITIES

United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

July 29, 1994

MEMORANDUM

SUBJECT: Clarification Regarding Single Emission Point, Multi-Device Combustion Facilities

FROM: Michael H. Shapiro, Director
Office of Solid Waste

TO: Allyn M. Davis, Director Hazardous Waste Management Division, Region VI

Walter L. Sutton, Jr., Acting Regional Counsel
Office of Regional Counsel, Region VI

This memorandum is in response to your July 8, 1994, memorandum requesting clarification of a prior headquarters opinion regarding the Giant Cement Company in Harleyville, South Carolina. I understand that the recent court ruling on Marine Shale Processors has raised some questions about EPA's interpretation of the regulatory status of multi-device combustion facilities. In particular, we think that our August 11, 1992 memorandum regarding Giant Cement and Region IV's subsequent letter of November 24, 1993 was misapplied. I thus agree with Region VI that it is important to clarify this issue so that consistent determinations can be made nationwide.

This memorandum will clarify how the RCRA regulations apply to combustion devices (incinerators, industrial furnaces, and boilers) at facilities in which more than one of these devices are connected and in which the emissions from the connected devices emanate from a single emissions point. I believe the confusion arose because there are two basic issues that are encountered when applying the regulations to units in series: 1) what emission controls and

operating conditions are technically appropriate and will be fully protective of human health and the environment; and 2) what legal categories do the units fall into, for the purpose of determining regulatory coverage, eligibility for interim status, need for permit modifications, etc. The Giant memo addressed only the first issue, but appears to have been misinterpreted to apply to the second issue also. Following interpretation of the two issues.

Emission Controls

Giant Cement operated a hazardous waste-fired cement kiln and a number of "resource recovery kilns" burning contaminated soil. Both the off-gas and the treated-solids from the resource recovery kilns were fed into the cement kiln. The resource recovery kilns were interim status incinerators.

The Giant memo referenced above addressed only the question of what types of operational and emissions controls are appropriate to impose on connected devices with a single emissions point, by stating: "For systems of two or more hazardous waste treatment units in series, our general guideline is that a case-by-case determination of how the overall system is classified and what standards and permit conditions are applied should be based on the dominant design, operating, feed, and emissions characteristics of the system, and the most specific standards applicable to that type of system." We still believe this type of flexible approach is important because of the difficulty, from an engineering standpoint, of applying two sets of potentially conflicting emission standards (e.g., the Part 264 Subpart O incinerator standards and the Part 266 Subpart H boiler and industrial furnace (BIF) standards) to a single emissions point on a series of devices which are connected.

In performing a technical evaluation of what standards should be applied to a group of units in series, it will usually be necessary to look at the reasoning behind the regulatory requirements, as expressed in preambles and guidance documents, and not simply at the regulatory requirements. Based on this type of evaluation, if two sets of emissions standards fit equally well from a technical standpoint, preference should be given to the more stringent standards. If not, the standards which are most-appropriate technically, considering their regulatory rationale, should be applied. In addition, the permit writer should consider whether additional conditions beyond the regulations are

necessary to tailor the permit to the specific system and site in order to protect human health and the environment (through use of the RCRA 3005(c)(3) omnibus authority).

It should also be noted that there may be cases, such as where two or more combustion devices operate in parallel and share only a common stack, in which the determination of what standards to apply is straightforward (i.e., unit by unit). The principal remaining issue in this situation is how to do the testing to determine whether each unit is meeting the standards.

Permitting/Interim status Determination

The above determination of the most technically appropriate and protective emissions controls to apply in the permit for interconnected devices must be distinguished from the classification of the devices for purposes of determining interim status eligibility and other issues. Because Giant had already attained interim status separately for its "resource recovery kilns" as incinerators and for its cement kiln as an industrial furnace, the August 1992 memorandum did not address nor need to address the classification of these devices for such purposes.

For the same reason, Region IV's November 24, 1993 letter to Giant Cement indicating that the resource recovery kilns would now be subject to hazardous waste incinerator emission standards because the combusted contaminated soil from those units was being disposed and not put into the cement kiln, dealt only with the issue of what emission standards would apply to these kilns. These earlier documents addressed the only question asked, which is what emission standards should apply.

In recognition of the practical difficulties of applying more than one set of standards to a single emission point, these documents discussed the criteria to be used in determining what emission standards should apply to that point. Under the principles discussed in these documents, EPA may determine, for example, that the emissions from a process train involving an incinerator and a cement kiln are most appropriately regulated under the emissions standards applicable to cement kilns. This does not mean that the incinerator "becomes" a cement kiln; it simply means that the common emission point should be regulated under the cement kiln standards.

These documents did not intend to suggest that the individual units in a process train lose their unit identities. The separate identities of the individual units in a process train is relevant in the context of facilities seeking to obtain interim status, among other situations. Under EPA regulations, a facility that is "in existence" on the effective date of a statutory or regulatory change that subjects it to the requirement to obtain a RCRA permit may obtain interim status by submitting Part A of its permit application and complying with statutory notification requirements. 40 CFR 270.70(a). A unit that is already subject to the permit requirement cannot obtain interim status upon the promulgation of regulations bringing a different type of unit into the RCRA system. See 56 FR at 7142 (February 21, 1991) (aggregate kiln burning hazardous waste for destruction and thereby subject to the rules for incinerators is not newly eligible for interim status when BIF rules are promulgated).

In reviewing a Part A application form filed by a facility seeking interim status following the regulation of a new type of unit, EPA evaluates whether the unit (or units) identified on the form were of the newly regulated type. In performing this evaluation, EPA-would compare the unit with the unit-definitions set forth in its regulations, irrespective of whether the unit was self-contained or part of a process train. In particular, if the unit and other units shared a common emission point, the regulatory emission standards determined to be most technically appropriate for that point would be irrelevant to the identity of the unit in question.

The pertinent definitions for combustion devices are the definitions of "boiler", "industrial furnace", and "incinerator" in 260.10. The definition of boiler is based on unit design. Industrial furnaces are an enumerated list of devices that are parts of manufacturing processes and incinerators are devices which are not boilers or industrial furnaces. The list of industrial furnaces is not written in terms of device systems; it describes particular devices: "cement kilns", "aggregate kilns", "halogen acid furnaces", etc. Consequently, a device would normally need to fit one of these descriptions to be an industrial furnace.

The Agency's interpretation is that the list of industrial furnaces applies on a device-by-device basis whenever the devices are combusting separate (i.e., not from another device in the series) hazardous wastes. The only exception would be where the

Agency has indicated unequivocally (normally in the context of a notice-and-comment rulemaking) that the definition of that industrial furnace type applies to multiple devices. The only device for which the Agency has done so are cement kiln precalciners, which EPA agrees are invariably operated as part of one cement-manufacturing operation, even if the precalciner is separately fired with hazardous waste (see footnote 1). See, e.g., 54 FR at 43761 (Oct. 26, 1989). The Agency did not consider the effect of emissions from other connected hazardous waste units when it promulgated the BIF rule.

The interpretation that the industrial furnace definition is to be read to apply to each combustion device burning separate hazardous waste is consistent with the literal language of the industrial furnace definition. It is also consistent with statutory provisions requiring that hazardous waste combustion can only be performed pursuant to stringent regulatory control, RCRA sections 3004(o)(1)(B) and 3004(q), and that hazardous waste be properly managed in the first instance. RCRA section 1003(a)(5). These goals would be circumvented if hazardous waste-fired units were simply considered to be part of the industrial furnace. Before the BIF rules became effective, for example, this would mean that the additional unit -- an incinerator -- could burn hazardous waste without any regulatory control.

This interpretation covers the case of two hazardous waste fired devices. If the additional device is not hazardous waste fired, then it could be considered to be part of the industrial furnace. The Agency has in fact indicated in explanatory preambles and other interpretive documents that industrial furnaces can include certain integrated components that pretreat materials or assist in air pollution control. See, e.g., 56 FR at 42598 (August 27, 1991). So long as these devices are not burning separate hazardous wastes, they do not raise the core RCRA concerns discussed above, and can accordingly be regulated as part of the industrial furnace (see footnote 2).

Example

To illustrate the application of the above principles to combustion units in series, consider the following example. The owner/operator of an interim status cement kiln chooses to add an afterburner to help achieve control of PIC emissions (see 57 FR at

38561 (Aug. 27, 1991) where EPA suggested this course as a means of reducing organic emissions) and further chooses to fire the afterburner with hazardous waste. The hazardous-waste fired afterburner is not a cement kiln, but rather is a separate device: an incinerator (see footnote 3). It is not on the list of industrial furnaces, and it is engaged in the type of activity -- hazardous waste combustion -- for which regulatory controls are mandated. Thus, the afterburner is ineligible for interim status as part of the cement kiln. The facility would have to apply for a change during interim status under 270.72(a)(3) for addition of a process and receive Director approval based on meeting the criteria in that section.

However, in the same example, if the cement kiln were to add an afterburner which is not hazardous waste-fired, the Agency would not view this action as adding an incinerator. By not separately combusting hazardous waste, the hypothetical afterburner is not separately engaged in hazardous waste treatment. Rather, it is simply treating emissions from a hazardous waste treatment device, and so is considered part of that device. In such a case no regulatory approval under the change during interim status provisions is needed to add the device, and the afterburner becomes part of the interim status cement kiln.

I hope this has clarified the issue of how to address interconnected combustion devices. If you have further questions, feel free to call me, or have your staff contact Sonya Sasseville at (703) 308-8648.

cc: Matt Straus, Fred Chanania, Dev Barnes, Matt Hale, Frank McAlister, Larry Starfield, Steve Silverman, Terry Sykes, Laurie King, Waste Combustion Permit Writers' Workgroup, Subpart X Permit Writers' Workgroup

1 While the Agency may have identified other devices which do not separately fire hazardous waste as part of an industrial furnace, precalciners are the only hazardous waste-fired devices for which such an interpretation has been made.

2 This is not intended to imply that the presence of an afterburner not separately fired with hazardous waste on a non-controlled flame device never affects the regulatory classification of that device. In the case of plasma arc and infrared units, the Agency has classified

those devices as incinerators when they have afterburners (considering the plasma arc or infrared device plus the afterburner to be one unit) and as Subpart X devices when they do not. (See 56 FR 7204, 57 FR 38562, and incinerator definition at 40 CFR 260.10.) It is expected that there will be other situations in the future where the Agency will be developing separate definitions for units in series. This will be done through rulemaking, as appropriate.

3 EPA officials have in fact given this advice to cement kilns contemplating adding afterburners to assist in meeting emission controls for products of incomplete combustion.

OCTOBER 29, 1993

Mr. Richard Fortuna
Executive Director
Hazardous Waste Treatment Council
915 15th Street, N.W., Fifth Floor
Washington, DC 20005

Dear Mr. Fortuna:

This is in response to your September 29, 1993, letter to the Administrator concerning the applicability of the Agency's regulations to thermal desorbers, sludge dryers and other hybrid incineration devices.

As you are aware, we discussed these and other related issues in an October 12, 1993, meeting among representatives from the Hazardous Waste Treatment Council, and staff from our office, the Office of Emergency and Remedial Response, the Office of Research and Development, and others. As we acknowledge in our meeting, there may be some need to further address whether certain thermal desorbers are, in fact, subject to regulation under the Part 264, Subpart O, incinerator standards rather than the Subpart X standards for miscellaneous treatment units. We are not inclined, however, to agree with your assertion that the Subpart X standards are inadequate for thermal desorbers determined to be subject to those standards. As we discussed in our October 12 meeting, although we are not aware of any thermal desorbers permitted as yet under Subpart X, permit writers would certainly look to Subpart O to determine which of those controls are appropriate and should be applied to the Subpart X device, and then determine which additional controls, if any, are necessary to protect human health and the environment.

The Agency will move as quickly as possible to address your concerns given the priority of implementing the Draft Waste Minimization and Combustion Strategy. We appreciate your participation in our October 12 meeting and look forward to working with you regarding exchanging additional technical information.

If you have further questions, please feel free to call me at (703) 308-8414 or John Smith, in the Hazardous Site Control Division, OERR, at (703) 603-8800.

Sincerely,

Frederic D. Chanania
Project Director
National Waste Minimization
and Combustion Strategy

FaxBack # 11790

cc: A. Blakeman Early, Washington Director, Sierra Club
Marchant Wentworth, Legislative Director, Izaak Walton League of America
John Smith, HSCD, OERR

FaxBack # 11790

9431.1994(02)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

APPLICABILITY OF RCRA REGULATIONS TO A PROPOSED FUMING/ GASIFICATION UNIT

November 15, 1994

MEMORANDUM

SUBJECT: Exide Corporation's Proposed Fuming/Gasification Unit

FROM: Michael, Shapiro, Director
Office of Solid Waste (5301)

TO: Marcia Parisi Vickers
Associate Division Director
Office of RCRA Programs, Region III (3HW03)

This is in response to your September 29, 1993, memo requesting a Headquarters' determination as to whether the RCRA regulations apply to a fuming/gasification unit that Exide Corporation proposes to build adjacent to its existing lead smelting facility near Reading, Pennsylvania. In particular, you ask if the device would be subject to RCRA regulations, and, if so, would it be classified as an incinerator, industrial furnace, or miscellaneous treatment unit (i.e., Subpart X unit). Further, you asked, if the device is considered to be a Subpart X unit, how would the permitting priorities established under the Combustion Strategy relate to the Exide facility? The remainder of this memo provides some basic information that needs to be considered in making a decision and then provides our response to your questions.

Description of the Process. As we understand, the fuming/gasification device would use a plasma arc to process lead-contaminated soil and soil mixed with spent battery casings. Lead and organic compounds would be vaporized in the device and exhausted to the afterburner section of an existing reverberatory furnace. The reverberatory furnace and its afterburner is used for secondary lead smelting and would qualify for the metals

recovery exemption under the Boiler and Industrial Furnace (BIF) rule. The afterburner would serve to destroy the organics in the exhaust from the plasma arc device and the lead would be captured (i.e., by condensation onto particulates and gas cleaning for particulate matter) and returned as feed to the reverberatory furnace for processing into salable product. The inorganic soil fractions that do not vaporize would be tapped off as slag.

Classification of Devices vs Process Trains. Given that the off-gas from the plasma arc device would be vented to an existing secondary lead smelter, previous guidance would require that we evaluate the classification of the new device -- that is, the fuming/gasification unit -- for determinations such as interim status eligibility, when applicable. For determining what regulatory standards and permit conditions should be applied, we would look at the process train in which the device would be incorporated (i.e., the plasma arc, secondary lead smelter, and afterburner). This guidance describes how the regulations apply to combustion devices at a facility where: (1) more than one device type (e.g., incinerator, industrial furnace, Subpart X unit) is connected in a process train: (2) the emissions from the connected devices emanate from a single stack; and (3) each device is separately burning or processing hazardous waste. See my July 29, 1994, memorandum to Allyn Davis (copy attached).

As discussed in that memo, a case-by-case determination needs to be made to identify the standards, and permit conditions that should apply to the process train in its entirety. For purposes of making interim status determinations, the classification of the individual device must be determined separately. Since there is no issue with respect to the eligibility of the new device to qualify for interim status, that evaluation need not be made and is not discussed further in this memo.

Evaluation of the Process Train. The process train would be comprised of the existing reverberatory furnace with its afterburner and the new plasma arc device that is also connected to the afterburner. The question is whether the new plasma arc device would affect the regulatory standards and permit conditions applicable to the process train. In this particular case, we believe the first step is to look at how we would classify the plasma arc/afterburner portion of the process train if it were a separate unit. If it would not be classified as an

industrial furnace, we then need to determine what regulations are applicable to a process train comprised of an industrial furnace and some other device (i.e., the plasma arc/afterburner).

Given that the plasma arc device would be vented to an afterburner that uses controlled flame combustion, that portion of the process train would meet the definition of an incinerator, industrial furnace, or theoretically, a boiler, as those devices are defined in 260.10. Thus, this part of the process train would not be classified or regulated under Subpart X, Part 264, if it were a separate unit. Further, this portion of the process train would not be classified as a boiler because energy is not recovered and exported. Consequently, this portion of the process train would be classified as either an incinerator or industrial furnace depending on how it would be operated.

We have previously determined that a retorter is a type of pyrometallurgical device that meets the definition of smelting, melting, or refining furnace. See my December 17, 1993, memorandum to Joseph Franzmathes (copy attached). In the metallurgical industry, a retorter is a furnace consisting of a fire chamber in which metals are recovered by vaporization and subsequent condensation. The plasma arc/afterburner portion of the process train would meet the definition of a retorter if: (1) wastes or materials fed into the device contained economically recoverable levels of lead (see 56 FR 7143 (Feb. 21, 1991)); (2) Exide is in the business of producing lead for public sale, whether to an ultimate user or for further reprocessing or manufacture (see generally, 260.10 (definition of industrial furnace); see also EPA Region VI, Statement of Basis for Denial of Permit Application by Marine Shale Processors, Inc., Sept. 15, 1994, p. 6 (devices on enumerated list of industrial furnaces must still be operating as an integral component of a manufacturing process to be an industrial furnace)), and (3) significant levels of lead are recovered. If any of these criteria are not met, this portion of the process train would meet the definition of incinerator.

If it is determined that the plasma arc/afterburner portion of the process train would be an industrial furnace and if it were a separate unit, then the entire process train (i.e., including the secondary lead smelter) would be regulated as an industrial furnace. The emission standards and exemptions for industrial furnaces would apply. If the plasma arc/afterburner

portion of the process train is determined to meet the definition of an incinerator, however, then the evaluation of what regulations would apply is more complex.

Would the Process Train Be Subject to RCRA Regulation? If the plasma arc/afterburner portion of the process train meets the above criteria, then the entire process train would be classified as a smelting, melting, or refining industrial furnace. In this case, even though 260.10 defines a plasma arc incinerator as "any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace," the plasma arc/afterburner portion of the process train would meet the definition of an industrial furnace. The process train would be conditionally exempt from the Boiler and Industrial Furnace (BIF) rule if it met the exemption criteria in 266.100(c) pertaining to levels of recoverable metals, heating value, and concentration of toxic organic compounds in the hazardous waste feed. Such exempt metals recovery facilities are not subject to RCRA permit requirements for combustion air emissions.

If the plasma arc/afterburner portion of the process train does not meet the above criteria, the entire process train would be subject to the incinerator standards of Subpart O, Part 264. This is because the devices (e.g., reverberatory furnace and plasma arc device) share a common afterburner and stack and the plasma arc device is burning or processing hazardous waste. Given that the reverberatory furnace portion of the process train is conditionally exempt from the BIF rule, the incinerator standards would be the only applicable standards.

Permitting Priority for the Device. The permitting priorities of the draft Waste Minimization and Combustion Strategy, issued in May 1993, relate to Regional and State efforts to work on permit applications submitted by RCRA facilities that combust hazardous industrial process wastes. To the extent that a combustion facility handles only remediation wastes (under either RCRA or Superfund), the priorities under the draft Strategy are not applicable. In addition, in a memorandum of May 9, 1994, Assistant Administrator Elliott Laws clarified that the Agency's shift of RCRA permit priorities did not mean that incineration should not be considered in assessing Superfund remedies. For further information on Superfund issues, please

contact John Smith, Chief, Design and Construction Management Branch, Hazardous Site Control Division, at (703) 603-8830.

I hope that this information will be helpful. If your staff have questions or would like to further discuss the issues, they may contact Mr. H. Scott Rauenzahn at 703-308-8477.

Attachments (2)
cc: M. Straus
S. Silverman
S. Sasseville
P. Borst
B. Holloway
S. Rauenzahn

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However, the EPA agrees that under some circumstances, the owner's or operator's approach to complying with the air emission control requirements under the subpart CC standards may involve a major design and construction project which requires a longer time to complete. In recognition of these cases, the EPA decided that it is reasonable to allow up to December 8, 1997, for affected facilities to install and begin operation of air emission controls required by the subpart CC standards (See Hazardous Waste TSDF Background Information Document for Promulgated Organic Air Emission Standards, EPA–453/R–94–076b, page 9–7).

The final rule requirements that may necessitate a major modification, as described above, for tanks are paragraphs (b) through (d) of 40 CFR 264.1084 and 265.1085. These paragraphs specify air emission control equipment that must be operated on tanks receiving affected hazardous waste. Similarly, the requirements that may necessitate such a major modification for surface impoundments are paragraphs (b) through (e) of 40 CFR 264.1085 and 265.1086. These paragraphs specify air emission control equipment that must be operated on surface impoundments receiving affected hazardous waste. To comply with these requirements for tanks and surface impoundments, facilities may choose to construct new hazardous waste management units to replace existing units, or may choose to modify existing hazardous waste management units. Examples of facility equipment modifications that could require an extended period of compliance would be replacing a large open surface impoundment with a series of covered tanks, or fitting an existing open tank with a fixed roof vented to a control device. The EPA recognizes that such major modifications or new construction can require several months or more, and therefore allows until December 8, 1997, for facilities to comply with the air emission control requirements of the final subpart CC standards.

In addition, certain States may require that a facility obtain a permit modification prior to performing a major modification such as those described above. The EPA recognizes that such a permit modification can be a lengthy process, and therefore felt it was appropriate to afford an extended compliance period to allow such modifications to be obtained (59 FR 62919). The EPA does not expect that such a lengthy period of implementation would be required in circumstances other than those described above, although § 264.1082(c) allows that such a period is available if necessary.

The final rule provisions that justified a compliance date of December 8, 1997, are not among those that are affected by the revisions being made under today's action. Specifically, the EPA is not considering either a broader applicability or more stringent control requirements for covers and air emission controls on tanks and surface impoundments. All affected facilities thus have been on notice of the final rule air emission control requirements for these units since the final CC rule publication on December 6, 1994. Therefore, the EPA does not consider it appropriate to postpone the compliance date of December 8, 1997, by which all required air emission control equipment must be operating.

It should be noted that the Regional Administrator may elect to extend the implementation date for control equipment at a facility, on a case by case basis, to a date later than December 8, 1997, when special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment and the owner or operator has made all reasonable and prudent attempts to comply with the requirements of the subpart CC rules (see § 265.1082).

C. Applicability

Numerous comments were received concerning overlap between the RCRA subpart CC rules and Clean Air Act NESHAP, particularly the HON. Most commenters argued that subpart CC requirements should not apply to units, either 90-day generators or TSDF, meeting Clean Air Act control requirements, including units meeting standards through emissions averaging.

The EPA fully recognizes that in developing air standards to meet congressional directives established by provisions in the Clean Air Act and Resource Conservation and Recovery Act, the potential exists for regulatory overlap. However, it is the EPA's intention to minimize, if not eliminate, regulatory overlap to the extent that the Agency is allowed under the different legislative acts. Section 1006(b) of RCRA indeed requires that the air standards be consistent with and not duplicative of Clean Air Act standards. Similarly, the Clean Air Act voices a strong preference for consistency of CAA section 112 standards and RCRA standards where practicable (see section 112(n)(7)).

The EPA is aware that at some sites managing hazardous wastes, the owner or operator of the hazardous waste treatment, storage, and disposal facility could be subject to the RCRA air rules under subparts AA, BB, and CC and also subject to a Clean Air Act NESHAP standard such as the Off-Site Waste rule or the HON. At a particular TSDF, some waste management units may be required to use air emission controls under one or the other, but not both, a Clean Air Act NESHAP and the RCRA air rules. However, some other waste management units could be subject to using air emission controls to comply with both sets of rules. It is unnecessary for owners and operators of those waste management units subject to air standards under both sets of rules to perform duplicative testing and monitoring, keep duplicative sets of records, or perform other duplicative actions.

In Section VI.A, *Development of Air Standards Under RCRA*, of the preamble to the final rule (59 FR 62906, December 6, 1994), the EPA discussed the potential for duplication between the RCRA air rules and various rules being developed under the Clean Air Act maximum achievable control technology (MACT) program but noted that the air standards developed under RCRA section 3004(n) did not duplicate or contradict existing NESHAP or new source performance standards (NSPS). As the MACT program has matured and additional standards have been developed, the EPA is now aware that the possibility for overlap is greater than was originally thought.

The EPA has decided that the best way to eliminate any regulatory overlap is to amend the RCRA rules to exempt units that are using air emission controls in accordance with the requirements of applicable Clean Air Act NESHAP or NSPS regulations. Therefore, the subpart CC applicability is amended to exempt any hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63, with the sole exception of tanks being controlled through the use of an enclosure rather than a cover. (The EPA's rationale for placing additional conditions on that control approach is explained in detail in sections E and G of this preamble.) Providing this exemption eliminates the possibility of duplicative or conflicting requirements for those TSDF tanks, surface impoundments, or containers using organic emission controls in compliance with a NESHAP but also subject to requirements under the RCRA standards. It is important to note that this exemption only applies to those

units using organic air emission controls. This seems to EPA to be the best way to assure that air emissions from hazardous waste management units are controlled to the extent necessary to protect human health and the environment. A unit that does not use the required air emission controls but is in compliance with a NESHAP through an "emission averaging" or "bubbling" provision does not qualify for the exemption since EPA lacks assurance that emissions from the unit are controlled to the extent necessary to protect human health and the environment.[2]

Similarly, if the Clean Air Act standard for the particular unit is no control (for example, because the MACT floor for the source category is no control and the Agency decided not to apply controls more stringent than the floor), the exemption from the RCRA standards would not apply since the unit would not actually be controlled under provisions of the MACT standard. Again, as stated above, the EPA believes the best way to assure protectiveness in this national rule is to require controls on each particular unit.

Section 3004(n) of RCRA, of course, requires that EPA control emissions from (among other things) tanks, surface impoundments, and containers as may be necessary to protect human health and the environment. Some of the Clean Air Act standards, in contrast, are technology-based controls implementing the provisions of section 112(d) of the Clean Air Act. The EPA, however, has found that under some circumstances a technology-based standard may satisfy the RCRA protectiveness requirement by adequately controlling air emissions and thus adequately controlling risk or controlling risk sufficiently that the Clean Air Act section 112(f) residual risk process need not be interdicted. See 60 FR at 32593 (June 23, 1995), the preamble for final MACT standards for the secondary lead source category, and 61 FR at 17369–370 (April 19, 1996), the preamble for proposed MACT standards for hazardous waste combustion units.

The EPA is finding here that where there are MACT air emission control requirements for a specific unit otherwise covered by subpart CC, the MACT requires the same technical air emission controls as would be required under subpart CC. Thus, it follows that compliance with the MACT requirements would thus afford equal protectiveness as would be achieved under subpart CC, and therefore can be considered to satisfy the RCRA protectiveness requirements. This is a conscious effort on the Agency's part to provide consistency of requirements where at all possible in its rulemakings.[3]

The technical requirements for the RCRA air rules in subpart CC as amended are essentially the same as those published by the EPA under the MACT program (e.g., those in subparts OO, PP, and QQ of part 63). A unit controlled under one or the other set of requirements would achieve the same emission reduction and performance level; and the various requirements thus provide the same level of protection.

D. Definitions

Definitions are being added for closure device, continuous seal, enclosure, hard-piping, in light material service, malfunction, metallic shoe seal, no detectable organic emissions, safety device, and single-seal system and other definitions are being revised consistent with their use in the amended regulation. These amended or added definitions do not directly affect the substance of the subpart CC standards, but rather, serve to clarify the 1994 final provisions, or today's amended provisions, of the final regulations.

E. Standards: General

1. Action Level

Several major changes are being made to the general standards for the final subpart CC rule. First, the average VO concentration action level for hazardous waste required to be managed in the units using air emission controls under the rule is being changed to 500 ppmw (as determined at the point of waste origination). Units managing hazardous wastes determined by the owner or operator to have average VO concentrations that remain less than 500 ppmw are not required to use air emission controls under the rule.

The EPA considered a range of possible values to establish the VO concentration limit for the Subpart CC RCRA air rules. The EPA proposed a VO concentration value of 500 ppmw to be used as the action level for the rule (56 FR 33491, July 22, 1991) and promulgated an action level of 100 ppmw in the 1994 final subpart CC rule (59 FR 62897). However, in promulgating this value, the EPA acknowledged that some hazardous waste management units subject to the subpart CC RCRA air rules could be subject to other Clean Air Act NESHAP and NSPS with differing action levels (59 FR 62903, 62906, and 62907).

The EPA received comments in response to the August 14, 1995 Federal Register notice, stating that the 100 ppmw VO concentration action level promulgated by the EPA for the subpart CC RCRA air rules is inappropriate (e.g., the action level cannot be justified on the basis of risk and the action level is too close to the detection limit of method 25D; this results in numerous waste determination errors such as false positives) and is inconsistent with other applicable Clean Air Act NSPS and NESHAP (i.e, the Off-Site Waste rule,

[2] EPA believes it is both reasonable and legally permissible to interpret section 3004(n) to apply to specific waste management units. Section 3004(n) addresses specific unit types ("open tanks, surface impoundments, and landfills"), and the overarching requirement to control air emissions at hazardous waste management "facilities" can reasonably be construed as applying to individual units. See *Mobil Oil Corp. v. EPA*, 871 F. 2d 149, 152–54 (D.C. Cir. 1989). On the other hand, "facilities" might also be construed to apply to an entire plant, *id.* at 153. Consequently, EPA is not indicating by the discussion in the text that an averaging approach is legally foreclosed. Certain types of site-specific demonstrations, for example, might indicate the appropriateness of an averaging approach to demonstrating that air emissions from hazardous waste management are sufficiently controlled. In such a situation, EPA could interpret the term "facility" as applying to an entire plant. What EPA is finding in this rule is that for this national rule (i.e., in the absence of potential case-specific demonstrations), the best way of assuring that emissions from hazardous waste tanks, containers, and impoundments are sufficiently controlled is to require control of each particular unit.

[3] For example, EPA, in promulgating the final requirements for the Off-Site Waste and Recovery Operations NESHAP (61 FR 34147, July 1, 1996), added a series of new subparts to 40 CFR part 63. These subparts included Subpart OO—National Emission Standards for Tanks - Level 1, Subpart PP—National Emission Standards for Containers, Subpart QQ—National Emission Standards for Surface Impoundments, Subpart RR—National Emission Standards for Individual Drain Systems, and Subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators. These standards are essentially identical to the requirements for tanks, containers, and impoundments found in the RCRA subpart CC rule under discussion in this notice.

The EPA set out at length in the Off-Site Waste rule preamble (59 FR 62908) the Agency's goal as to integration of these various air standards, "the EPA decided to promulgate the air emission control requirements for selected types of units in individual subparts for ease of reference, administrative convenience, and as a step towards assuring consistency of the air emission control requirements applied to similar types of units under different rules. The EPA believes adopting the format of codifying the air emission control requirements for specific unit types in individual subparts will provide significant advantages to both regulated industries and to the Agency."

"A major advantage for using the unit-specific subpart format for NESHAP and other air rules is for those situations when more than one rule applies to a particular source (e.g., a tank) and each of these rules requires use of air emission controls on that source (e.g., a fixed roof). By establishing unit-specific subparts, all of the rules will reference a common set of design, operating, testing, inspection, monitoring, repair, recordkeeping, and reporting requirements for air emission controls. This eliminates the potential for duplicative or conflicting air emission control requirements being placed on the unit by the different rules, and assures consistency of the air emission control requirements applied to the same types of units."

State of Oregon
Department of
Environmental
Quality

SIMPLE
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Chemical Waste Management of the Northwest, Inc.
17629 Cedar Springs Lane
Arlington, OR 97812

INFORMATION RELIED UPON:

Application No.: 28517
Date Received: 02/09/2016

PLANT SITE LOCATION:

17629 Cedar Springs Lane
Arlington, OR 97812

LAND USE COMPATIBILITY FINDING:

Approving Authority: Gilliam County
Approval Date: 10/15/2007

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

(Signature on File)
Mark W. Bailey, Eastern Region Air Quality Manager

April 25, 2016
Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-8010):

Table 1 Code	Source Description	SIC
Part B, 85	Hazardous Waste Material Disposal Site	4953

Simple Technical Permit Modification
Addendum No. 1

In accordance with OAR 340-216-0020, this permit has been modified.

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1.0 GENERAL EMISSION STANDARDS AND LIMITS

1.1. Visible Emissions

Emissions from any air contaminant source other than fugitive emission sources must not equal or exceed 20% opacity. Opacity must be measured as a six-minute block average using EPA Method 9 or an alternative monitoring method approved by DEQ that is equivalent to EPA Method 9. EPA Method 22 may be used to monitor opacity, but EPA Method 9 must be used to determine compliance with the limit.

1.2. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits, as applicable:

a. Particulate matter emissions from any fuel burning equipment such as the Organic Recovery Unit (ORU) or the ORU boiler (ME-1902) must not exceed 0.10 grains per dry standard cubic foot, corrected to 12% CO_2 or 50% excess air.

b. Particulate matter emissions from any air contaminant source other than fuel burning equipment and fugitive emission sources must not exceed 0.10 grains per standard cubic foot.

c. Non-fugitive particulate matter emissions from any process must not exceed the amount shown in Table 1 of OAR 340-226-0310 for the process weight allocated to such a process.

1.3. Fugitive Emissions

The permittee must take reasonable precautions to prevent fugitive dust emissions, as measured by EPA Method 22, by:

a. Using, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Applying water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;

c. Enclosing (full or partial) materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;

d. Installing and using hoods, fans and fabric filters to enclose and vent the handling of dusty materials;

e. Installing adequate containment during sandblasting or other similar operations;

f. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

g. Promptly removing earth or other material that does or may become airborne from paved streets; and

h. Developing a DEQ approved fugitive emission control plan upon request by DEQ if the above precautions are not adequate and implementing the plan whenever fugitive emissions leave the property for more than 18 seconds in a six-minute period.

1.4. Particulate Matter Fallout

The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person.

1.5. Nuisance and Odors

The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel.

1.6. Fuels and Fuel Sulfur Content

a. If the permittee burns any of the fuels listed below, the sulfur content cannot exceed:
   i. 0.0015% sulfur by weight for ultra low sulfur diesel;
   ii. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;
   iii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;

b. The permittee is allowed to use on-specification used oil as fuel which contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

1.7. Emergency Stationary RICE

The permittee must comply with the following requirements for emergency stationary reciprocating internal combustion engines (RICE): [40 CFR 63.6603(a), 63.6625(f), 63.6640(a), and 63.6640(f)(2)]

For each emergency stationary RICE, the permittee must:

a. Change oil and filter every 500 hours of operation or annually, whichever comes first; [40 CFR 63. 6603(a), Table 2d(4)(a)]
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; [40 CFR 63. 6603(a), Table 2d(4)(b)]
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary; [40 CFR 63. 6603(a), Table 2d(4)(c)]
d. During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply; and [40 CFR 63. 6603(a), Table 2d]
e. The permittee must install a non-resettable hour meter on each emergency stationary RICE, if one is not already installed. [40 CFR 63.6625(f)]

1.8. Operating Conditions for Emergency Stationary RICE

The permittee must operate any emergency stationary RICE in compliance with the following conditions: [40 CFR 63.6640(f)]

a. There is no time limit on the use of emergency stationary RICE in emergency situations.

b. Emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required maintenance and testing of such units is limited to 50 hours per year.
c. The permittee is prohibited from using its emergency stationary RICE for any non-emergency use including but not limited to peak shaving, demand response operation, and/or generation of income from the sale of power. To perform such activity the permittee must first obtain a modified permit in accordance with Condition 7.2 or a separate permit for power generation that appropriately addresses and allows this activity.

1.9. Operating Conditions for Emergency Stationary RICE

The permittee must keep records of the hours of operation of each emergency stationary RICE that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation used for maintenance checks and readiness testing. [40 CFR 63.6655(f)]

2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

2.1. Concrete Crusher Engine

If the permittee installs a diesel engine to power a concrete crusher, the engine must comply with the New Source Performance Standards (NSPS) for Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII). This regulation includes the requirement for engines with a maximum engine power greater than or equal to 56 kW and less than 130 kW to meet the applicable requirements for 2012 and later model year non-emergency engines. [40 CFR 60.4208(d)] If a third party is contracted to conduct concrete crushing, the third party may have the applicable requirements in their portable permit.

3.0 PLANT SITE EMISSION LIMITS

3.1. Plant Site Emission Limits (PSEL)

The permittee must not cause or allow plant site emissions to exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	tons per year
$PM_{2.5}$	9	tons per year
SO_2	39	tons per year
NO_X	39	tons per year
CO	99	tons per year
VOC	39	tons per year
GHGs (CO_2e)	74,000	tons per year

3.2. Annual Period

The annual plant site emission limits apply to any 12-consecutive calendar month period.

4.0 COMPLIANCE DEMONSTRATION AND SOURCE TESTING

4.1. Monitoring Requirements

The permittee must monitor the operation and maintenance of the organic recovery unit and thermal oxidizer. The temperature of the thermal oxidizer must be continuously monitored and recorded at least every 15 minutes of operation. The operator shall be notified of any flame failure.

4.2. PSEL Compliance Monitoring

The permittee must demonstrate compliance with the PSEL for each 12-consecutive calendar month period based on the following calculation for each pollutant except GHGs:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

Where:

E = pollutant emissions (ton/yr);
EF = pollutant emission factor (see Condition 11.0);
P = process production (see Condition 12.0)

4.3. Emission Factors

The permittee must use the default emission factors provided in Condition 11.0 for calculating pollutant emissions, unless alternative emission factors are approved in writing by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ.

5.0 RECORDKEEPING REQUIREMENTS

5.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

a. Amount of propane fed to the thermal oxidizer (TOU-1), gallons.
b. Amount of material processed through the stabilization, solidification, micro-encapsulation, macro-encapsulation, and bioremediation units, tons.
c. Amount of propane fed to the Organic Recovery Unit (ORU), gallons
d. Amount of landfill gas fed to the Organic Recovery Unit (ORU), $MMft^3$.
e. Miles traveled on unpaved roads, VMT.
f. Amount of cover soil moved, tons.
g. Temperature of thermal oxidizer, °F.
h. If used oil is used as fuel, the permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that the used oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

5.2. Excess Emissions

The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity as a six-minute block average. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).

5.3. Complaint Log

The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

5.4. Retention of Records

Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application and make them available to DEQ upon request. The permittee must maintain the two (2) most recent years of records onsite.

6.0 REPORTING REQUIREMENTS

6.1. Excess Emissions

The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 9.0 by e-mail, telephone, facsimile, or in person.
b. If the excess emissions occur during non-business hours, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
c. The permittee must also submit follow-up reports when required by DEQ.

6.2. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) copies of the following information for the previous calendar year:

a. Operating parameters:
   i. Amount of propane burned in the thermal oxidizer each month;
   ii. Amount of propane and landfill gas burned in the ORU each month;
   iii. Amount of material processed through the stabilization, solidification, micro-encapsulation, macro-encapsulation, and bioremediation units each month;
   iv. Estimate the amount of vehicle miles traveled on unpaved roads each month.
b. A summary of annual pollutant emissions determined each month in accordance with Condition 4.0.
c. Records of all planned and unplanned excess emissions events.
d. Summary of complaints relating to air quality received by permittee during the year.
e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
f. List of major maintenance performed on pollution control equipment.

6.3. Greenhouse Gas Registration and Reporting

If the calendar year emission rate of greenhouse gases (CO_2e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions with DEQ in accordance with OAR 340-215.

6.4. Notice of Change of Ownership or Company Name

The permittee must notify DEQ in writing using a Departmental "Transfer Application" form within 60 days after the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
b. Sale or exchange of the activity or facility.

6.5. Construction or Modification Notices

The permittee must notify DEQ in writing using a Departmental "Notice of Intent to Construct" form, or other permit application forms and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing, installing or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
c. Constructing or modifying any air pollution control equipment.

7.0 ADMINISTRATIVE REQUIREMENTS

7.1. Permit Renewal Application

The permittee must submit the completed application package for renewal of this permit by October 1, 2018. The permittee must submit two (2) copies of the application to the DEQ Permit Coordinator listed in Condition 9.2.

7.2. Permit Modifications

The permittee must submit an application for a modification of this permit not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of DEQ.

8.0 FEES

8.1. Annual Compliance Fee

The permittee must pay the Annual Fee specified in OAR 340-216-8020, Table 2, Part 2 for a Simple ACDP by **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations, will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.**

8.2. Change of Ownership or Company Name Fee

The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 3(a) with an application for changing the ownership or the name of the company.

8.3. Special Activity Fees The permittee must pay the special activity fees specified in OAR 340-216-8020, Table 2, Part 3 (b through k) with an application to modify the permit.

9.0 DEQ CONTACTS / ADDRESSES

9.1. Business Office The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

Department of Environmental Quality
Accounting / Revenue
811 SW Sixth Avenue
Portland, OR 97204-1390

9.2. Permit Coordinator The permittee must submit all Notices and applications that do not include payment to the Eastern Region's Permit Coordinator:

Eastern Region - Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

9.3. Report Submittals Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Eastern Region. If you know the name of the Air Quality staff member responsible for your permit, please include it.

Eastern Region – Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

9.4. Permit Writer/ Inspector The permit writer/inspector can be reached at the following office:

Eastern Region – Pendleton Office
800 SE Emigrant Avenue, Suite 330
Pendleton, OR 97801-2597
541-276-4063

9.5. Website Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at www.oregon.gov/DEQ.

10.0 GENERAL CONDITIONS AND DISCLAIMERS

10.1. Permitted Activities This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.

10.2. Other Regulations In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ.

10.3. Conflicting Conditions In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.

10.4. Masking of Emissions The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.

10.5. DEQ Access The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.

10.6. Permit Availability The permittee must have a copy of the permit available at the facility at all times.

10.7. Open Burning The permittee may not conduct any open burning except as allowed by OAR 340, division 264.

10.8. Asbestos The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.

10.9. Property Rights The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

10.10. Permit Expiration

a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:

   i. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or

   ii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.

b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

10.11. Permit Termination, Revocation, or Modification DEQ may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

11.0 EMISSION FACTORS

Emissions Device or Activity	Pollutant	Emission Factor (EF)	EF Units	EF Reference
Thermal Oxidizer (TOU-1)	$PM/PM_{10}/PM_{2.5}$	0.7	lb/Mgal	AP-42 Table 1.5-1
	SO_2	11.22	lb/Mgal	AP-42 Table 1.5-1
	NO_x	13	lb/Mgal	AP-42 Table 1.5-1
	CO	7.5	lb/Mgal	AP-42 Table 1.5-1
	VOC	1.0	lb/Mgal	AP-42 Table 1.5-1
Organic Recovery Unit (ORU) Propane	$PM/PM_{10}/PM_{2.5}$	0.7	lb/Mgal	AP-42 Table 1.5-1
	SO_2	11.22	lb/Mgal	AP-42 Table 1.5-1
	NO_x	13	lb/Mgal	AP-42 Table 1.5-1
	CO	7.5	lb/Mgal	AP-42 Table 1.5-1
	VOC	0.8	lb/Mgal	AP-42 Table 1.5-1
Organic Recovery Unit (ORU) Landfill Gas	$PM/PM_{10}/PM_{2.5}$	9.35	lb/MMdscf	AP-42 Table 2.4-5
	SO_2	49.9	lb/MMdscf	Source Estimate
	NO_x	37.4	lb/MMdscf	AP-42 Table 2.4-4
	CO	170.5	lb/MMdscf	AP-42 Table 13.5-2
	VOC	77	lb/MMdscf	AP-42 Table 13.5-1
ORU Boiler (ME-1902)	$PM/PM_{10}/PM_{2.5}$	0.7	lb/Mgal	AP-42 Table 1.5-1
	SO_2	11.22	lb/Mgal	AP-42 Table 1.5-1
	NO_x	13	lb/Mgal	AP-42 Table 1.5-1
	CO	7.5	lb/Mgal	AP-42 Table 1.5-1
	VOC	1.0	lb/Mgal	AP-42 Table 1.5-1
Concrete Crusher Engine	$PM/PM_{10}/PM_{2.5}$	2.2E-03	lb/hp-hr	AP-42 Section 3.3
	SO_2	2.05E-03	lb/hp-hr	AP-42 Section 3.3
	NO_x	3.1E-02	lb/hp-hr	AP-42 Section 3.3
	CO	6.68E-03	lb/hp-hr	AP-42 Section 3.3
	VOC	2.47E-03	lb/hp-hr	AP-42 Section 3.3
Waste Oil Heater	PM	3.3	lb/Mgal	AP-42 Section 11.1
	$PM_{10}/PM_{2.5}$	2.85	lb/Mgal	AP-42 Section 11.1
	SO_2	214	lb/Mgal	AP-42 Table 1.11-2
	NO_x	16	lb/Mgal	AP-42 Table 1.11-2
	CO	2.1	lb/Mgal	AP-42 Table 1.11-2
	VOC	1.0	lb/Mgal	AP-42 Table 1.11-2

Emissions Device or Activity	Pollutant	Emission Factor (EF)	EF Units	EF Reference
Stabilization	PM	1.36E-04	lb/ton	AP-42 Section 13.2.4
	PM_{10}	6.45E-05	lb/ton	AP-42 Section 13.2.4
	$PM_{2.5}$	9.77E-06	lb/ton	AP-42 Section 13.2.4
Solidification	PM	0.12	lb/ton	AP-42 Equation 11.12-1
	PM_{10}	0.04	lb/ton	AP-42 Equation 11.12-1
	$PM_{2.5}$	1.29E-05	lb/ton	AP-42 Equation 11.12-1
Micro-Encapsulation	PM	0.143	lb/ton	Source Estimate
	PM_{10}	0.045	lb/ton	Source Estimate
	$PM_{2.5}$	0.00001	lb/ton	Source Estimate
Macro-Encapsulation	PM	0.13	lb/ton	Source Estimate
	PM_{10}	0.0587	lb/ton	Source Estimate
	$PM_{2.5}$	0.00001	lb/ton	Source Estimate
Unpaved Roads	PM	1.31	lb/VMT	AP-42 Section 13.2.2
	PM_{10}	0.35	lb/VMT	AP-42 Section 13.2.2
	$PM_{2.5}$	0.04	lb/VMT	AP-42 Section 13.2.2
Cover Soil	PM	0.118	lb/ton	AP-42 Section 11.9
	PM_{10}	0.095	lb/ton	AP-42 Section 11.9
	$PM_{2.5}$	0.034	lb/ton	AP-42 Section 11.9

12.0 PROCESS/PRODUCTION RECORDS

Emissions Device or Activity	Process or Production Parameter	Frequency
Thermal Oxidizer (TOU-1)	1000 Gallons Propane	Monthly
Organic Recovery Unit (ORU)	1000 Gallons Propane MMdscf Landfill Gas	Monthly
ORU Boiler (ME-1902)	1000 Gallons Propane	Monthly
Concrete Crusher Engine	hp-hr	Monthly
Waste Oil Heater	1000 Gallons Waste Oil	Monthly
Stabilization, Solidification, Micro-Encapsulation, Macro-Encapsulation, Cover Soil	Tons Material	Monthly
Travel on Unpaved Roads	VMT	Monthly

13.0 ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
Gal	Gallon(s)
GHG	Greenhouse Gas
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
lb	Pound(s)
LFG	Landfill Gas
MMBtu	Million British thermal units
NA	Not Applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and Maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in size
ppm	part per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
Special Control Area	as defined in OAR 340-204-0070
VE	Visible Emissions
VMT	Vehicle Mile Traveled
VOC	Volatile Organic Compound
year	A period consisting of any 12-consecutive calendar months

State of Oregon Department of Environmental Quality

SIMPLE AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Department of Environmental Quality
Eastern Region

Source Information:

SIC	4953
NAICS	562211

Source Categories (Table 1 Part, code)	B,85
Public Notice Category	I

Compliance and Emissions Monitoring Requirements:

FCE	No
Compliance schedule	No
Unassigned emissions	No
Emission credits	No
Special Conditions	No

Source test [date(s)]	No
COMS	No
CEMS	No
PEMS	No
Ambient monitoring	No

Reporting Requirements

Annual report (due date)	2/15
Quarterly report (due dates)	No

Monthly report (due dates)	No
Excess emissions report	No
Other (specify)	No

Air Programs

Synthetic Minor (SM)	No
SM -80	No
NSPS (list subparts)	IIII
NESHAP (list subparts)	ZZZZ
Part 68 Risk Management	No
CFC	No

NSR	No
PSD	No
RACT	No
TACT	X
Other (specify)	No

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PERMITTING

PERMITTEE IDENTIFICATION

1. Chemical Waste Management of the Northwest, Inc. operates a hazardous waste and polychlorinated biphenyl (PCB) treatment, storage, and disposal facility about 12 miles south-southwest of Arlington.

PERMITTING ACTION

2. The proposed permit is a modification of an existing Air Contaminant Discharge Permit (ACDP) that was issued on 2/7/2014 is scheduled to expire on 2/1/2019.

OTHER PERMITS

3. Other permits issued or required by the DEQ for this source include a Hazardous Waste Treatment Storage and Disposal Permit ORD089452353 and a NPDES Storm Water Permit 100043.

ATTAINMENT STATUS

4. The source is located in an attainment area for all pollutants.

5. The source is not located within 10 kilometers of any Class I Air Quality Protection Area.

SOURCE DESCRIPTION

OVERVIEW

6. The permittee operates a hazardous waste and PCB treatment, storage and disposal facility. The facility began accepting waste about 1977.

7. The following changes have been made to the facility since the last permit renewal:

   a. The permittee has proposed to supplement the indirect heating of the ORU using treated landfill gas generated at the adjacent Columbia Ridge Landfill and Recycling Center. Currently the 30 MMBtu/hr burners of the ORU are fueled by propane only. The burners will be allowed to combust propane, landfill gas, or any combination of the two fuels.
   b. A new 6 MMBtu/hr thermal oxidizer has been proposed to replace the existing elevated enclosed flare on the ORU.

c. Several above-ground storage tanks associated with the ORU are being added to the inventory of tanks at the facility. These 20 new tanks have a capacity of 20,000 gallons or less and are not subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Subpart Kb). Due to the vapor pressure of the liquids stored in these tanks, emissions from these units are considered to have de-minimus emissions.
d. A system for collecting vapor from the waste feed hopper and conveyors will be installed on the ORU. The vapors will be routed to the thermal oxidizer.
e. A series of heat exchangers, cooling towers, carbon and sand filters, and pumping systems will be installed on the ORU. These systems are sealed units used to process liquids and will not vent to the atmosphere.
f. New fuel storage tanks for propane and landfill gas used to heat the ORU will be installed.
g. A new propane-fired 1.046 MMBtu/hr boiler will be installed.
h. A new emergency 600 bhp generator will provide backup power in case of emergencies.

PROCESS AND CONTROL DEVICES

8. Hazardous waste is received packaged in according to U.S. Dept. of Transportation standards. Containers are temporarily stored to allow for sampling and waste conformance before processing. Wastes that are similar may be stored in approved areas to facility on-site treatment or subsequent treatment off-site.

a. **Bulk Storage:** Bulk materials received by the facility are stored in bulk storage buildings B-1, B-2, B-4 and B-5. These buildings operate under negative pressure to prevent fugitives and vent through baghouses that have a 98% control efficiency.
b. **Solidification** involves treatment of liquids and semi-solids with reagents that form a solid material and does not necessarily involve a chemical reaction between the contaminants and the solidifying reagents. Contaminant migration is thus restricted. The process takes place outdoors, but the material is wet which suppresses fugitive dust emissions. Emissions are uncontrolled.
c. **Stabilization/Encapsulation** involves treatment with reagents that chemically reduce the hazard potential of waste by converting the contaminants into less soluble, mobile or toxic forms. Macro encapsulation also includes the use of a high density polyethylene (HDPE) vault to encapsulate the waste that has been mixed with the stabilization agent. Stabilization is performed outdoors. Water may be added to mitigate fugitive dust emissions.
d. **Solar Evaporation Impoundments:** Aqueous liquid wastes are placed into a surface impoundment for evaporation. These wastes have been treated in the Wastewater Treatment Unit or otherwise treated to meet RCRA standards. These units are insignificant sources of volatile compounds.

e. **Bioremediation** relies on micro-organisms such as bacteria or fungi to transform hazardous chemicals (petroleum hydrocarbons, nitroaromatics and nitroamines, chlorinated pesticides and other select organics) into less toxic or non-toxic substances. Bioremediation activities occur in building B-5, which employs a baghouse for dust control.

f. **Landfilling Operation:** The wastes disposed of on-site are previously treated or treated on-site to meet the stringent standards for disposal under the RCRA regulations. Due to the RCRA pre-treatment requirements, the wastes placed in the landfill organic emissions from the landfill are insignificant. A limited amount of cover soil is used during the landfilling activities which produce some particulate emissions.

g. **Organic Recovery Unit (ORU):** The organic recovery unit was originally constructed in 2008 and will be modified with this permit modification. The ORU physically treats soil or other media contaminated with petroleum products or other organics. The organics are thermally desorbed from the media at low temperatures using indirect heat. The media is cooled, moisturized and tested for compliance with RCRA requirements before being landfilled. The organic vapors are condensed with the resulting liquid being recycled or treated prior to disposal. Any residual non-condensable gas is destroyed in a thermal oxidizer.

COMPLIANCE

9. The facility was inspected on 10/29/2012 and found to be out of compliance with permit conditions for failure to properly monitor operation of the ORU. This was also a violation of conditions in the Hazardous Waste Permit. The Air Quality Program did not refer this violation for enforcement since it was referred by the Hazardous Waste Program. On 1/23/2013 an $18,400 civil penalty was assessed for the violation. Conditions which led to the violation have since been corrected.

10. During the prior permit period there were no, complaints recorded for this facility.

EMISSIONS

11. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	0	0	0	24	24	0
PM_{10}	0	0	0	14	14	0
$PM_{2.5}$	0	0	0	9	9	0
SO_2	0	0	0	39	39	0
NO_x	0	0	0	39	39	0
CO	0	0	0	99	99	0
VOC	0	0	0	39	39	0
GHG (CO_2e)	0	0	0	74,000	74,000	0

a. The netting basis is zero for Simple ACDPs in accordance with OAR 340-222-0040(3).
b. The previous PSEL is the PSEL in the last permit.
c. For Simple ACDPs, The proposed PSELs for all pollutants are equal to the Generic PSEL in accordance with OAR 340-216-0064(3)(b). The actual emissions are calculated in the Detail Sheets attached to this Review Report.
d. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

12. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

13. An analysis of the proposed PSEL increases over the Netting Basis is shown in the following table.

Pollutant	SER	Requested Increase Over Previous Netting Basis	Increase Due to Utilizing Capacity that Existed in Baseline Period	Increase Due to Physical Changes or Changes in Method of Operation	Increase Due to Changes to Rules (i.e., the Generic PSEL)
PM	25	24	0	13	11
PM_{10}	15	14	0	6	8
$PM_{2.5}$	10	9	0	3	6
SO_2	40	39	0	12	27
NO_x	40	39	0	23	16
CO	100	99	0	30	69
VOC	40	39	0	15	24
GHG (CO_2e)	75,000	74,000	0	27,480	46,520

TITLE V MAJOR SOURCE APPLICABILITY

14. A major source is a facility that has the potential to emit 100 tons/yr or more of any criteria pollutant or 10 tons/yr or more of any single HAP or 25 tons/yr or more of combined HAPs. This facility is not a major source of emissions. The basis for this determination can be found in the Detail Sheets attached to this Review Report.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

15. The New Source Performance Standards (NSPS) for boilers (Subparts D, Da, Db, and Dc) do not apply to the new boiler (unit ME-1902) because the rated design heat capacity for this boiler is 1.046 MMBtu/hr which is less than the minimum 10 MMBtu/hr regulated by these standards.

16. The permittee may either contract with a third party to operate a concrete crusher on-site or install its own concrete crusher. If a third party is used, they should have any applicable permits from DEQ. If the permittee decides to install and operate their own concrete crusher they may be subject to some additional regulations. The concrete crusher would not be subject to the NSPS for nonmetallic mineral processing plants (Subpart OOO) because concrete does not fit the definition of nonmetallic minerals (40 CFR 60.671).

17. A diesel engine may be used to power the concrete crushing operation or to provide backup power to the facility in case of emergencies. These engines would be subject to the NSPS for Stationary Compression Ignition Internal Combustion Engines (Subpart IIII). The engine supporting concrete crushing would be approximately 100 kW in size and have a displacement of less than 30 liters per cylinder. This engine must be certified to meet the emission standards applicable for the model year. [40 CFR 60.4204(b)]

    The emergency generator is rated at 600 bhp (447 kW) and must also be certified to meet the emission standards applicable for the model year. [40 CFR 60.4205(b)]

NESHAPS/MACT APPLICABILITY

18. The National Emission Standard for Hazardous Air Pollutants (NESHAP) for boilers at area sources of HAP emissions (Subpart JJJJJJ) does not apply to the new boiler (unit ME-1902) because gas-fired units (including propane gas) are exempt from this regulation. [40 CFR 63.11195(e)]

19. The NESHAP for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ) is applicable to the emergency generator and concrete crusher engines. Both engines would be considered new (commenced construction after 6/12/2006). As new engines located at an area source of HAP emissions the NESHAP requirements are met by meeting the requirements of NSPS Subpart IIII. No further NESHAP requirements under Subpart ZZZZ are applicable. [40 CFR 63.6590(c)]

RACT APPLICABILITY

20. The RACT rules are not applicable to this source because it is not in the Portland AQMA, Medford AQMA, or Salem SKATS.

TACT APPLICABILITY

21. The source is meeting the states TACT/Highest and Best Rules by monitoring the temperature of the organic recovery unit and thermal oxidizer.

PUBLIC NOTICE

22. Pursuant to OAR 340-216-0064(4)(b)(A), a simple technical permit modification of a Simple Air Contaminant Discharge Permit requires no prior public notice or opportunity for participation in accordance with OAR 340-209-0030(3)(a). However, DEQ will maintain a list of all simple technical permit modifications and make the list available for public review.

DW:ww

ATTACHMENT A: DETAIL SHEETS

Particulate

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Stabilization	45,000	ton/yr	1.36E-04	lb/ton[a]	AP-42 Section 13.2.4	0.003
Solidification	12,000	ton/yr	0.120	lb/ton[b]	AP-42 Eq 11.12-1	0.72
Micro Encapsulation	2,500	ton/yr	0.143	lb/ton	Source Estimate	0.18
Macro Encapsulation	8,000	ton/yr	0.13	lb/ton	Source Estimate	0.52
Rock Crusher-Building B1	78,000	ton/yr	1.08E-04	lb/ton[c]	AP-42 Table 11.19.2-2	0.004
Building B4	15,000	ton/yr	9.24E-07	lb/ton[d]	AP-42 Section13.2.4	6.93E-06
Bioremediation/ORU Storage Building B5	438,000	ton/yr	1.02E-08	lb/ton[e]	AP-42 Section13.2.4	2.23E-06
Propane (ORU)	1,500	Mgal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	0.53
LFG (ORU)	245.46	MMdscf/yr[f]	9.35	lb/MMdscf	AP-42 Table 2.4-4	1.15
Thermal Oxidizer (TOU-1)	714	Mgal/yr	0.7	lb/MMdscf[g]	AP-42 Table 1.5-1	0.25
ORU Discharge (V-1503)	438,000	ton/yr	2.56E-07	lb/ton[h]	AP-42 Section 13.2.4	5.61E-05
ORU Boiler (ME-1902)	100.69	Mgal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	3.52E-02
Unpaved Roads	12,480	VMT/yr	1.31	lb/VMT[i]	AP-42 Section 13.2.2	8.2
Cover Soil	20,000	ton/yr	0.118	lb/ton[j]	AP-42 Section 11.9	1.2
Material Transfer-Offload	100,000	ton/yr	1.46E-04	lb/ton	AP-42 Section 13.2.4	0.007
Reagent Transfer	100,000	ton/yr	1.46E-04	lb/ton	AP-42 Section 13.2.4	0.007
Concrete Crushing	78,000	ton/yr	1.46E-03	lb/ton[k]	AP-42 Section 11.19.2	0.06
Generator	209,196	hp-hr/yr[l]	0.0022	lb/hp-hr	AP-42 Section 3.3	0.2
Waste Oil Heater	2,200	gal/yr	3.3	lb/Mgal	AP-42 Section 1.11-1	0.004
Propane Heater	1,400	gal/yr	0.7	lb/Mgal	AP-42 Section 1.5-1	0.0005
Total Particulate Emissions						**13.07**

a. Assumes 7 mph wind and 21% moisture
b. Assumes 7 mph wind and 60% moisture
c. Assumes baghouse control of 98%
d. Assumes 0.001 mph wind (inside building) and 0.2% moisture
e. Assumes 0.001 mph wind (inside building) and 5% moisture
f. 467 cfm of LFG flow for 8760 hr/yr, emission factor 17 lb/MMdscf methane, LFG is 55% methane
g. Assumes both fume and pilot emissions similar to propane emissions
h. Assumes 0.001 mph wind (inside building), 0.5% moisture, 98% control (BH)
i. Assumes 80% control of particulate due to watering
j. Combination of activities: bulldozing (AP-42 Table 11.9-1, 7% silt, 20% moisture, 32 ton/day, 10 hr/day)+scraper removing topsoil (AP-42 Table 11.9-4)+unload topsoil (AP-42 Table 11.9-4), 75% control
k. Combination of activities: controlled emissions for truck unload, transfer to crusher, tertiary crushing, and truck load
l. Assumes 100 kW (134.1 hp) diesel engine operating 1560 hr/yr.

PM_{10}

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Stabilization	45,000	ton/yr	6.45E-05	lb/ton[a]	AP-42 Section 13.2.4	0.001
Solidification	12,000	ton/yr	0.040	lb/ton[b]	AP-42 Eq 11.12-1	0.24
Micro Encapsulation	2,500	ton/yr	0.045	lb/ton	Source Estimate	0.06
Macro Encapsulation	8,000	ton/yr	0.0587	lb/ton	Source Estimate	0.23
Rock Crusher-Building B1	78,000	ton/yr	4.80E-05	lb/ton[c]	AP-42 Table 11.19.2-2	0.002
Building B4	15,000	ton/yr	4.37E-07	lb/ton[d]	AP-42 Section13.2.4	3.28E-06
Bioremediation/ORU storage Building B5	438,000	ton/yr	4.82E-09	lb/ton[e]	AP-42 Section13.2.4	1.06E-06
Propane (ORU)	1,500	Mgal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	0.53
LFG (ORU)	245.46	MMdscf/yr[f]	9.35	lb/MMdscf	AP-42 Table 2.4-5	1.15
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	0.7	lb/MMdscf[g]	AP-42 Table 1.5-1	0.25
ORU Discharge (V-1503)	438,000	ton/yr	2.42E-09	lb/ton[h]	AP-42 Section 13.2.4	5.31E-07
ORU Boiler (ME-1902)	100,690	gal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	3.52E-02
Unpaved Roads	12,480	VMT/yr	0.35	lb/VMT[i]	AP-42 Section 13.2.2	2.2
Cover Soil	20,000	ton/yr	0.095	lb/ton[j]	AP-42 Section 11.9	0.9
Material Transfer-Offload	100,000	ton/yr	6.91E-05	lb/ton	AP-42 Section 13.2.4	0.003
Reagent Transfer	100,000	ton/yr	6.91E-05	lb/ton	AP-42 Section 13.2.4	0.003
Concrete Crushing	78,000	ton/yr	7.02E-04	lb/ton[k]	AP-42 Section 11.19.2	0.03
Generator	209,196	hp-hr/yr[l]	0.0022	lb/hp-hr	AP-42 Section 3.3	0.2
Waste Oil Heater	2,200	gal/yr	2.85	lb/Mgal	AP-42 Section 1.11-1	3.14E-03
Propane Heater	1,400	gal/yr	0.7	lb/Mgal	AP-42 Section 1.5-1	4.90E-04
Total PM_{10} Emissions						**5.92**

a. Assumes 7 mph wind and 21% moisture
b. Assumes 7 mph wind and 60% moisture
c. Assumes baghouse control of 98%
d. Assumes 0.001 mph wind (inside building) and 0.2% moisture
e. Assumes 0.001 mph wind (inside building) and 5% moisture
f. 467 cfm of LFG flow for 8760 hr/yr, emission factor 17 lb/MMdscf methane, LFG is 55% methane
g. Assumes both fume and pilot emissions similar to propane emissions
h. Assumes 0.001 mph wind (inside building), 0.5% moisture, 98% control (BH)
i. Assumes 80% control of particulate due to watering
j. Combination of activities: bulldozing (AP-42 Table 11.9-1, 7% silt, 20% moisture, 32 ton/day, 10 hr/day)+scraper removing topsoil (AP-42 Table 11.9-4)+unload topsoil (AP-42 Table 11.9-4), 75% control
k. Combination of activities: controlled emissions for truck unload, transfer to crusher, tertiary crushing, and truck load
l. Assumes 100 kW (134.1 hp) diesel engine operating 1560 hr/yr.

$PM_{2.5}$

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Stabilization	45,000	ton/yr	9.77E-06	lb/ton[a]	AP-42 Section 13.2.4	0.0002
Solidification	12,000	ton/yr	1.29E-05	lb/ton[b]	AP-42 Eq 11.12-1	0.0001
Micro Encapsulation	2,500	ton/yr	0.00001	lb/ton	Source Estimate	1.25E-05
Macro Encapsulation	8,000	ton/yr	0.00001	lb/ton	Source Estimate	4.00E-05
Rock Crusher-Building B1	78,000	ton/yr	1.30E-05	lb/ton	AP-42 Table 11.19.2-2	0.001
Building B4	15,000	ton/yr	6.62E-08	lb/ton[c]	AP-42 Section13.2.4	4.96E-07
Bioremediation/ORU storage Building B5	438,000	ton/yr	7.31E-10	lb/ton[d]	AP-42 Section13.2.4	1.60E-07
Propane (ORU)	1,500	Mgal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	0.53
LFG (ORU)	245.46	MMdscf/yr[e]	9.35	lb/MMdscf	AP-42 Table 2.4-5	1.15
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	0.7	lb/MMdscf[f]	AP-42 Table 1.5-1	0.25
ORU Discharge (V-1503)	438,000	ton/yr	1.38E-09	lb/ton[g]	AP-42 Section 13.2.4	3.03E-07
ORU Boiler (ME-1902)	100,690	gal/yr	0.7	lb/Mgal	AP-42 Table 1.5-1	3.52E-02
Unpaved Roads	12,480	VMT/yr	0.04	lb/VMT[h]	AP-42 Section 13.2.2	0.2
Cover Soil	20,000	ton/yr	0.034	lb/ton[i]	AP-42 Section 11.9	0.3
Material Transfer-Offload	100,000	ton/yr	1.05E-05	lb/ton	AP-42 Section 13.2.4	0.001
Reagent Transfer	100,000	ton/yr	1.05E-05	lb/ton	AP-42 Section 13.2.4	0.001
Concrete Crushing	78,000	ton/yr	2.29E-04	lb/ton[j]	AP-42 Section 11.19.2	0.009
Generator	209,196	hp-hr/yr[k]	0.0022	lb/hp-hr	AP-42 Section 3.3	0.2
Waste Oil Heater	2,200	gal/yr	2.85	lb/Mgal	AP-42 Section 1.11-1	3.14E-03
Propane Heater	1,400	gal/yr	0.7	lb/Mgal	AP-42 Section 1.5-1	4.90E-04
Total $PM_{2.5}$ Emissions						**2.77**

a. Assumes 7 mph wind and 21% moisture
b. Assumes 7 mph wind and 60% moisture
c. Assumes 0.001 mph wind (inside building) and 0.2% moisture
d. Assumes 0.001 mph wind (inside building) and 5% moisture
e. 467 cfm of LFG flow for 8760 hr/yr, emission factor 17 lb/MMdscf methane, LFG is 55% methane
f. Assumes both fume and pilot emissions similar to propane emissions
g. Assumes 0.001 mph wind (inside building), 0.5% moisture, 98% control (BH)
h. Assumes 80% control of particulate due to watering
i. Combination of activities: bulldozing (AP-42 Table 11.9-1, 7% silt, 20% moisture, 32 ton/day, 10 hr/day)+scraper removing topsoil (AP-42 Table 11.9-4)+unload topsoil (AP-42 Table 11.9-4), 75% control
j. Combination of activities: controlled emissions for truck unload, transfer to crusher, tertiary crushing, and truck load
k. Assumes 100 kW (134.1 hp) diesel engine operating 1560 hr/yr.

SO_2

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Propane (ORU)	1,500	Mgal/yr	11.22	lb/Mgal[a]	AP-42 Section 1.5	8.41
LFG (ORU)	245.46	MMdscf/yr	49.9	lb/MMdscf[b]	Source Estimate	6.12
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	11.22	lb/Mgal[a]	AP-42 Table 1.5-1	4.01
ORU Boiler (ME-1902)	100,690	gal/yr	11.22	lb/Mgal[a]	AP-42 Table 1.5-1	0.56
Crusher Generator	209,196	hp-hr/yr[c]	2.05E-03	lb/hp-hr	AP-42 Section 3.3	0.2
Waste Oil Heater	2,200	gal/yr	214	lb/Mgal[d]	AP-42 Section 1.11-2	0.24
Propane Heater	1,400	gal/yr	0.01	lb/Mgal[e]	AP-42 Section 1.5-1	7.00E-06
Total SO_2 Emissions						**19.56**

a. Assumes 15 grains sulfur/100 gallons
b. Assumes 300 ppmv sulfur content of LFG
c. Assumes 100 kW (134.1 hp) diesel engine operating 1560 hr/yr
d. Assumes 2% sulfur
e. Assumes 0.1 grain sulfur per 100 cf of gas

NO_x

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Propane (ORU)	1,500	Mgal/yr	13	lb/Mgal	AP-42 Table 1.5-1	9.75
LFG (ORU)	245.46	MMdscf/yr	37.4	lb/MMdscf	AP-42 Table 13.5-1	4.59
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	13	lb/MMdscf	AP-42 Table 1.5-1	4.64
ORU Boiler (ME-1902)	100,690	gal/yr	13	lb/Mgal	AP-42 Table 1.5-1	0.65
Crusher Generator	209,196	hp-hr/yr	0.031	lb/hp-hr	AP-42 Section 3.3	3.2
Waste Oil Heater	2,200	gal/yr	16	lb/Mgal	AP-42 Section 1.11-2	0.02
Propane Heater	1,400	gal/yr	13	lb/Mgal	AP-42 Section 1.5-1	0.01
Total NO_x Emissions						**22.9**

CO

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Propane (ORU)	1,500	Mgal/yr	7.5	lb/Mgal	AP-42 Table 1.5-1	5.63
LFG (ORU)	245.46	MMdscf/yr	170.5	lb/MMdscf	AP-42 Table 13.5-2	20.93
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	7.5	lb/MMdscf	AP-42 Table 1.5-1	2.68
ORU Boiler (ME-1902)	100,690	gal/yr	7.5	lb/Mgal	AP-42 Table 1.5-1	0.38
Crusher Generator	209,196	hp-hr/yr	6.68E-03	lb/hp-hr	AP-42 Section 3.3	0.7
Waste Oil Heater	2,200	gal/yr	2.1	lb/Mgal	AP-42 Section 1.11-2	0.002
Propane Heater	1,400	gal/yr	7.5	lb/Mgal	AP-42 Section 1.5-1	5.25E-03
Total CO Emissions						**30.3**

VOC

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Bioremediation/ORU storage Building B5	438,000	ton/yr			Ch Waste Model	4.46
Propane (ORU)	1,500	Mgal/yr	0.8	lb/Mgal	AP-42 Table 1.5-1	0.60
LFG (ORU)	245.46	MMdscf/yr	77	lb/MMdscf	AP-42 Table 13.5-1	9.45
Thermal Oxidizer (TOU-1)	714.223	Mgal/yr	1.0	lb/MMdscf	AP-42 Table 1.5-1	0.36
ORU Boiler (ME-1902)	100,690	gal/yr	1	lb/Mgal	AP-42 Table 1.5-1	0.05
Crusher Generator	209,196	hp-hr/yr	2.47E-03	lb/hp-hr	AP-42 Section 3.3	0.3
Waste Oil Heater	2,200	gal/yr	1.0	lb/Mgal	AP-42 Section 1.11-3	1.10E-03
Propane Heater	1,400	gal/yr	1.0	lb/Mgal	AP-42 Section 1.5-1	7.00E-04
Vehicle Fueling/Storage	27,312	gal/yr			EPA Tanks	0.03
ORUTNK1	6,300,000	gal/yr			EPA Tanks	0.006
ORUTNK2	6,300,000	gal/yr			EPA Tanks	0.006
Total VOC Emissions						**15.2**

Greenhouse Gas (GHG)

Emission Point	Operating Parameters		Emission Factor			ton/yr
			Rate		Reference	
Propane (ORU) CO_2	1,500	Mgal/yr	12,613	lb/Mgal	40 CFR 98 Table C-1	9,460
CH_4 (CO_2e)			15.0	lb/Mgal	40 CFR 98 Table C-2	11
N_2O (CO_2e)			35.88	lb/Mgal	40 CFR 98 Table C-2	27
LFG (ORU) CO_2	245.46	MMdscf/yr	103592.8	lb/MMdscf	40 CFR 98, LANDGEM	12,714
CH_4 (CO_2e)			81.6	lb/MMdscf	40 CFR 98, Table C-2	10
N2O (CO2e)			191.4	lb/MMdscf	40 CFR 98, Table C-2	23
Thermal Ox (TOU-1) CO_2	714.223	Mgal/yr	12613	lb/Mgal	40 CFR 98 Table C-1	4,504
CH_4 (CO_2e)			15.0	lb/Mgal	40 CFR 98 Table C-2	5
N_2O (CO_2e)			35.88	lb/Mgal	40 CFR 98 Table C-2	13
ORU Boiler (ME-1902) CO_2	100,690	gal/yr	12,613	lb/Mgal	40 CFR 98 Table C-1	635
CH_4 (CO_2e)			15.0	lb/Mgal	40 CFR 98 Table C-2	0.8
N_2O (CO_2e)			35.88	lb/Mgal	40 CFR 98 Table C-2	1.8
Crusher Generator CO_2	209,196	hp-hr/yr	0.41	lb/hp-hr	40 CFR 98 Table C-1	43
CH_4 (CO_2e)			4.20E-04	lb/hp-hr	40 CFR 98 Table C-2	0.04
N_2O (CO_2e)			1.00E-03	lb/hp-hr	40 CFR 98 Table C-2	0.10
Waste Oil Heater CO_2	2,200	gal/yr	22,513	lb/Mgal	40 CFR 98 Table C-1	25
CH_4 (CO_2e)			23	lb/Mgal	40 CFR 98 Table C-2	0.03
N_2O (CO_2e)			54	lb/Mgal	40 CFR 98 Table C-2	0.06
Propane Heater CO_2	1,400	gal/yr	12,613	lb/Mgal	40 CFR 98 Table C-1	8.8
CH_4 (CO_2e)			15.0	lb/Mgal	40 CFR 98 Table C-2	0.01
N_2O (CO_2e)			35.88	lb/Mgal	40 CFR 98 Table C-2	0.03
Total GHG Emissions						**27,482**

Hazardous Air Pollutants

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
1,1,2,2-Tetrachloroethane						
ORU LFG	245.5	MMscf/yr	2.15E-03	lb/MMscf	Engineering Estimate	**2.64E-04**
1,1,1-Trichloroethane						
ORU LFG	245.5	MMscf/yr	3.12E-04	lb/MMscf	Engineering Estimate	**3.83E-05**
1,1,2-Trichloroethane						
Waste Handling/Inspection	629	ton/yr	4.96	lb/ton	Engineering Estimate	1.56
Landfill	1,258,172	lb/yr	0.00274	lb/ton	Engineering Estimate	8.62E-04
Macro Encapsulation	599,024	lb/yr	7.68E-03	lb/ton	Engineering Estimate	1.15E-03
Stabilization	652,380	lb/yr	2.32E-05	lb/ton	Engineering Estimate	3.78E-06
Solidification	10,120	lb/yr	6.76E-05	lb/ton	Engineering Estimate	1.71E-07
Bioremediation	24,440	lb/yr	2.59E-02	lb/ton	Engineering Estimate	1.58E-04
Total						**1.56**
1,2,4-Trichlorobenzene						**-**
Waste Handling/Inspection	99,480	lb/yr	1.500E-04	lb/ton	Engineering Estimate	3.73E-06
Landfill	99,480	lb/yr	2.700E-06	lb/ton	Engineering Estimate	6.71E-08
Total						**3.8E-06**
1,4-Dichlorobenzene						**-**
Waste Handling/Inspection	202,000	lb/yr	0.000122	lb/ton	Engineering Estimate	6.16E-06
Macro Encapsulation	518,240	lb/yr	0.00918	lb/ton	Engineering Estimate	1.19E-03
Bioremediation	87,120	lb/yr	0.0134	lb/ton	Engineering Estimate	2.92E-04
Total						**1.5E-03**
1,1-Dichloroethane						
ORU LFG	245.5	MMscf/yr	1.10E-03	lb/MMscf	Engineering Estimate	**1.35E-04**
1,2-Dichloroethane						
ORU LFG	245.5	MMscf/yr	6.07E-03	lb/MMscf	Engineering Estimate	**7.44E-04**
1,1-Dichloroethene						
ORU LFG	245.5	MMscf/yr	2.27E-04	lb/MMscf	Engineering Estimate	**2.78E-05**
1,2-Dichloropropane						
ORU LFG	245.5	MMscf/yr	2.64E-04	lb/MMscf	Engineering Estimate	**3.25E-05**
7,12-Dimethylbenz(a)anthr						
ORU Boiler	100,690	gal/yr	4.450E-04	lb/Mgal	AP-42 Table 1.4-3	**2.24E-05**
1,3-Butadiene						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	32.46	lb/MMscf	Engineering Estimate	0.33
Concrete Crush Engines	7,941	MMBtu/yr	3.91E-05	lb/MMBtu	AP-42 Table 3.3-2	1.55E-04
Total						**0.33**
1,4-Dioxane						
Macro Encapsulation	1,332,262	lb/yr	2.550E-04	lb/ton	Engineering Estimate	**8.49E-05**
3-Methylchloranthrene						
ORU Boiler	100,690	gal/yr	5.000E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
2-Methylnaphthalene						
ORU Boiler	100,690	gal/yr	6.670E-04	lb/Mgal	AP-42 Table 1.4-3	**3.36E-05**
2-Nitropropane						
Waste Handling/Inspection	280,292	lb/yr	0.007	lb/ton	Engineering Estimate	5.25E-04
Landfill	20,200	lb/yr	0.103	lb/ton	Engineering Estimate	5.20E-04
Macro Encapsulation	226,576	lb/yr	0.00148	lb/ton	Engineering Estimate	8.38E-05

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Stabilization	1,320	lb/yr	10.5	lb/ton	Engineering Estimate	3.47E-03
Total						**4.6E-03**
2,4-Dinitrotoluene						
Macro Encapsulation	511,200	lb/yr	0.00761	lb/ton	Engineering Estimate	**9.73E-04**
2,4,5 Trichlorophenol						
Macro Encapsulation	797,692	lb/yr	0.000426	lb/ton	Engineering Estimate	**8.50E-05**
Acetaldehyde						
Concrete Crush Engines	7,941	MMBtu/yr	7.67E-04	lb/MMBtu	AP-42 Table 3.3-2	**3.05E-03**
Acenaphthene						
ORU Boiler	100,690	gal/yr	5.000E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Acetonitrile						
Macro Encapsulation	1,335,002	lb/yr	0.0000572	lb/ton	Engineering Estimate	**1.91E-05**
Acrolein						
Concrete Crush Engines	7,941	MMBtu/yr	9.25E-05	lb/MMBtu	AP-42 Table 3.3-2	**3.67E-04**
Acrylonitrile						
ORU LFG	245.5	MMscf/yr	1.06E-04	lb/MMscf	Engineering Estimate	**1.31E-05**
Anthracene						
ORU Boiler	100,690	gal/yr	6.670E-05	lb/Mgal	AP-42 Table 1.4-3	**3.36E-06**
Antimony						
Waste Oil Heater	2,200	gal/yr	0.0045	lb/Mgal	AP-42 Sec 1.11	**4.95E-06**
Arsenic						
Waste Oil Heater	2,200	gal/yr	0.06	lb/Mgal	AP-42 Sec 1.11	6.60E-05
Propane Space Heater	1,400	gal/yr	0.00013	lb/Mgal	CATEF	9.10E-08
Total						**6.61E-05**
Asbestos						
Macro Encapsulation	40,610	lb/yr	0.0575	lb/ton	Engineering Estimate	**5.84E-04**
Benz(a)anthracene						
ORU Boiler	100,690	gal/yr	5.00E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Benzene						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	18.98	lb/MMscf	Engineering Estimate	0.19
ORU LFG	245.5	MMscf/yr	7.40E-03	lb/MMscf	Engineering Estimate	9.08E-04
ORU Propane	0.2	MM scf/yr	2.10E-03	lb/MM sf	Engineering Estimate	2.10E-07
ORU Boiler	100,690	gal/yr	5.84E-02	lb/Mgal	AP-42 Table 1.4-3	2.94E-03
Concrete Crush Engines	7,941	MMBtu/yr	9.33E-04	lb/MMBtu	AP-42 Table 3.3-2	3.70E-03
Waste Handling/Inspection	1,251,332	lb/yr	0.0000284	lb/ton	Engineering Estimate	8.88E-06
Landfill	1,251,332	lb/yr	0.00011	lb/ton	Engineering Estimate	3.44E-05
Macro Encapsulation	2,233,411	lb/yr	0.00188	lb/ton	Engineering Estimate	1.05E-03
Stabilization	652,380	lb/yr	0.0000742	lb/ton	Engineering Estimate	1.21E-05
Gas Tank	9,927	gal/yr	0.77	% VOC	AP-42 Sec 7.1	2.68E-04
Bioremediation	2,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-05
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Bioremediation	257,480	lb/yr	0.0132	lb/ton	Engineering Estimate	8.50E-04
Bioremediation	440	lb/yr	1.98	lb/ton	Engineering Estimate	2.18E-04
Total						**0.20**
Benzo(a)pyrene						
ORU Boiler	100,690	gal/yr	3.34E-05	lb/Mgal	AP-42 Table 1.4-3	**1.68E-06**

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Benzo(b)fluoranthene						
ORU Boiler	100,690	gal/yr	5.00E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Benzo(g,h,i)perylene						
ORU Boiler	100,690	gal/yr	3.34E-05	lb/Mgal	AP-42 Table 1.4-3	**1.68E-06**
Benzo(k)fluoranthene						
ORU Boiler	100,690	gal/yr	5.00E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Beryllium						
Waste Oil Heater	2,200	gal/yr	0.0018	lb/Mgal	AP-42 Sec 1.11	1.98E-06
Propane Space Heater	1,400	gal/yr	0.00003	lb/Mgal	CATEF	2.10E-08
Total						**2.00E-06**
Cadmium						
Waste Oil Heater	2,200	gal/yr	0.012	lb/Mgal	AP-42 Sec 1.11	1.32E-05
Propane Space Heater	1,400	gal/yr	0.00006	lb/Mgal	CATEF	4.20E-08
Total						**1.32E-05**
Carbon Disulfide						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.95	lb/MMscf	Engineering Estimate	0.01
ORU LFG	245.5	MMscf/yr	8.91E-04	lb/MMscf	Engineering Estimate	1.09E-04
Waste Handling/Inspection	927,392	lb/yr	0.0000199	lb/ton	Engineering Estimate	4.61E-06
Landfill	927,392	lb/yr	0.000282	lb/ton	Engineering Estimate	6.54E-05
Macro Encapsulation	226,550	lb/yr	0.000141	lb/ton	Engineering Estimate	7.99E-06
Stabilization	648,420	lb/yr	0.0000105	lb/ton	Engineering Estimate	1.70E-06
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**1.01E-02**
Carbon Tetrachloride						
ORU LFG	245.5	MMscf/yr	3.60E-04	lb/MMscf	Engineering Estimate	4.42E-05
Waste Handling/Inspection	980,272	lb/yr	0.0000189	lb/ton	Engineering Estimate	4.63E-06
Landfill	980,272	lb/yr	0.000122	lb/ton	Engineering Estimate	2.99E-05
Macro Encapsulation	743,516	lb/yr	0.00516	lb/ton	Engineering Estimate	9.59E-04
Stabilization	2,640	lb/yr	0.00105	lb/ton	Engineering Estimate	6.93E-07
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**1.20E-03**
Carbonyl Sulfide						
ORU LFG	245.5	MMscf/yr	6.70E-04	lb/MMscf	Engineering Estimate	**8.22E-05**
Chlordane						
Macro Encapsulation	552,588	lb/yr	0.00694	lb/ton	Engineering Estimate	**9.59E-04**
Chlorobenzene						
ORU LFG	245.5	MMscf/yr	2.63E-04	lb/MMscf	Engineering Estimate	3.23E-05
Waste Handling/Inspection	10,013,702	lb/yr	0.000234	lb/ton	Engineering Estimate	5.86E-04
Landfill	10,013,702	lb/yr	0.000137	lb/ton	Engineering Estimate	3.43E-04
Macro Encapsulation	752,616	lb/yr	0.00523	lb/ton	Engineering Estimate	9.84E-04
Stabilization	652,380	lb/yr	0.0000487	lb/ton	Engineering Estimate	7.94E-06
Solidification	9,240	lb/yr	0.0315	lb/ton	Engineering Estimate	7.28E-05
Bioremediation	24,440	lb/yr	0.00259	lb/ton	Engineering Estimate	1.58E-05
Total						**2.04E-03**
Chloroform						
ORU LFG	245.5	MMscf/yr	2.79E-04	lb/MMscf	Engineering Estimate	**3.43E-05**

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Waste Handling/Inspection	5,280	lb/yr	0.00000001	lb/ton	Engineering Estimate	1.32E-11
Landfill	5,280	lb/yr	0.00000006	lb/ton	Engineering Estimate	7.92E-11
Macro Encapsulation	511,200	lb/yr	0.0075	lb/ton	Engineering Estimate	9.59E-04
Total						**9.93E-04**
Chromium						
Waste Oil Heater	2,200	gal/yr	0.18	lb/Mgal	Engineering Estimate	**1.98E-04**
Chrysene						
ORU Boiler	100,690	gal/yr	5.00E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Cobalt						
Waste Oil Heater	2,200	gal/yr	0.0052	lb/Mgal	Engineering Estimate	**5.72E-06**
Copper						
Propane Space Heater	1,400	gal/yr	0.00031	lb/Mgal	Engineering Estimate	**2.17E-07**
Cresol						
Waste Handling/Inspection	854,796	lb/yr	0.00000457	lb/ton	Engineering Estimate	9.77E-07
Landfill	840,876	lb/yr	0.00000003	lb/ton	Engineering Estimate	6.31E-09
Macro Encapsulation	2,751,996	lb/yr	0.00397	lb/ton	Engineering Estimate	2.73E-03
Stabilization	3,960	lb/yr	0.00582	lb/ton	Engineering Estimate	5.76E-06
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**2.90E-03**
Cyanide compounds						
Waste Handling/Inspection	12,320	lb/yr	0.0838	lb/ton	Engineering Estimate	2.58E-04
Landfill	12,320	lb/yr	1.27	lb/ton	Engineering Estimate	3.91E-03
Macro Encapsulation	4,980	lb/yr	0.000308	lb/ton	Engineering Estimate	3.83E-07
Leachate	489,840	lb/yr	0.0417	lb/ton	Engineering Estimate	5.11E-03
Total						**9.28E-03**
Dibenzo(a,h)anthracene						
ORU Boiler	100,690	gal/yr	3.34E-05	lb/Mgal	AP-42 Table 1.4-3	**1.68E-06**
Dibutylphthalate						
Macro Encapsulation	1,284,132	lb/yr	0.0000421	lb/ton	Engineering Estimate	**1.35E-05**
Dichlorobenzene						
ORU LFG	245.5	MMscf/yr	1.23E-03	lb/MMscf	Engineering Estimate	1.51E-04
ORU Propane	0.2	MM scf/yr	1.20E-03	lb/MM sf	Engineering Estimate	1.20E-07
ORU Boiler	100,690	gal/yr	3.34E-02	lb/Mgal	AP-42 Table 1.4-3	1.68E-03
Total						**1.83E-03**
Dimethyl Sulfate						
Waste Handling/Inspection	680	lb/yr	0.0375	lb/ton	Engineering Estimate	6.38E-06
Landfill	680	lb/yr	0.000285	lb/ton	Engineering Estimate	4.85E-08
Stabilization	680	lb/yr	52.5	lb/ton	Engineering Estimate	8.93E-03
Total						**8.93E-03**
Epichlorohydrin						
Waste Handling/Inspection	37,120	lb/yr	0.00327	lb/ton	Engineering Estimate	3.03E-05
Landfill	37,120	lb/yr	0.00167	lb/ton	Engineering Estimate	1.55E-05
Solidification	880	lb/yr	21	lb/ton	Engineering Estimate	4.62E-03
Total						**4.67E-03**
Ethyl Benzene						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.97	lb/MMscf	Engineering Estimate	0.01

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
ORU LFG	245.5	MMscf/yr	3.96E-02	lb/MMscf	Engineering Estimate	4.86E-03
Waste Handling/Inspection	1,493,160	lb/yr	0.0000199	lb/ton	Engineering Estimate	7.43E-06
Landfill	1,493,160	lb/yr	0.00000881	lb/ton	Engineering Estimate	3.29E-06
Macro Encapsulation	1,705,445	lb/yr	0.000955	lb/ton	Engineering Estimate	4.07E-04
Stabilization	649,300	lb/yr	0.0000122	lb/ton	Engineering Estimate	1.98E-06
Solidification	10,120	lb/yr	0.192	lb/ton	Engineering Estimate	4.86E-04
Gas Tank	9,927	gal/yr	0.04	% VOC	AP-42 Sec 7.1	1.39E-05
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Bioremediation	440	lb/yr	1.98	lb/ton	Engineering Estimate	2.18E-04
Total						**1.64E-02**
Ethyl Carbamate						
Macro Encapsulation	494	lb/yr	0.000151	lb/ton	Engineering Estimate	**1.86E-08**
Ethyl Chloride						
ORU LFG	245.5	MMscf/yr	1.33E-03	lb/MMscf	Engineering Estimate	1.63E-04
Waste Handling/Inspection	9,240	lb/yr	0.00015	lb/ton	Engineering Estimate	3.47E-07
Landfill	9,240	lb/yr	0.00402	lb/ton	Engineering Estimate	9.29E-06
Solidification	9,240	lb/yr	0.21	lb/ton	Engineering Estimate	4.85E-04
Total						**6.58E-04**
Ethylene Dibromide						
ORU LFG	245.5	MMscf/yr	4.40E-04	lb/MMscf	Engineering Estimate	5.40E-05
Waste Handling/Inspection	99,480	lb/yr	0.00015	lb/ton	Engineering Estimate	3.73E-06
Total						**5.77E-05**
Ethyl Dichloride						
Waste Handling/Inspection	4,797,690	lb/yr	0.0000002	lb/ton	Engineering Estimate	2.40E-07
Landfill	4,797,690	lb/yr	0.00000373	lb/ton	Engineering Estimate	4.47E-06
Total						**4.71E-06**
Ethylene Dichloride						
Macro Encapsulation	519,280	lb/yr	0.00751	lb/ton	Engineering Estimate	**9.75E-04**
Fluoranthene						
ORU Boiler	100,690	gal/yr	8.34E-05	lb/Mgal	AP-42 Table 1.4-3	**4.20E-06**
Fluorene						
ORU Boiler	100,690	gal/yr	7.78E-05	lb/Mgal	AP-42 Table 1.4-3	**3.92E-06**
Formaldehyde						
ORU Propane	0.2	MM scf/yr	7.50E-02	lb/MM sf	Engineering Estimate	7.50E-06
ORU Boiler	100,690	gal/yr	2.09E+00	lb/Mgal	AP-42 Table 1.4-3	1.05E-01
Concrete Crush Engines	7,941	MMBtu/yr	1.18E-03	lb/MMBtu	AP-42 Table 3.3-2	4.69E-03
Waste Handling/Inspection	68,626	lb/yr	0.0107	lb/ton	Engineering Estimate	1.84E-04
Landfill	68,626	lb/yr	0.629	lb/ton	Engineering Estimate	1.08E-02
Macro Encapsulation	513,908	lb/yr	0.0075	lb/ton	Engineering Estimate	9.64E-04
Solidification	41,556	lb/yr	20.8	lb/ton	Engineering Estimate	2.16E-01
Total						**0.34**
Heptachlor						
Macro Encapsulation	526,228	lb/yr	0.00729	lb/ton	Engineering Estimate	**9.59E-04**
Hexachlorobenzene						
Macro Encapsulation	511,200	lb/yr	0.00751	lb/ton	Engineering Estimate	**9.60E-04**

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Hexachlorocyclopentadiene						
Macro Encapsulation	511,200	lb/yr	0.0075	lb/ton	Engineering Estimate	**9.59E-04**
Hexachloroethane						
Macro Encapsulation	528,530	lb/yr	0.00728	lb/ton	Engineering Estimate	**9.62E-04**
Hexane						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	1.32	lb/MMscf	Engineering Estimate	0.01
ORU LFG	245.5	MMscf/yr	1.12E-02	lb/MMscf	Engineering Estimate	1.37E-03
ORU Propane	0.2	MM scf/yr	1.80	lb/MM sf	Engineering Estimate	1.80E-04
ORU Boiler	100,690	gal/yr	5.00E+01	lb/Mgal	AP-42 Table 1.4-3	2.52E+00
Gas Tank	9,927	gal/yr	1.84	% VOC	Engineering Estimate	6.40E-04
Total						**2.53**
Hydrochloric Acid						
ORU LFG	245.5	MMscf/yr	9.55E-02	lb/MMscf	Engineering Estimate	1.17E-02
Waste Handling/Inspection	1,509,560	lb/yr	0.0384	lb/ton	Engineering Estimate	1.45E-02
Landfill	1,509,560	lb/yr	0.164	lb/ton	Engineering Estimate	6.19E-02
Macro Encapsulation	17,900	lb/yr	0.206	lb/ton	Engineering Estimate	9.22E-04
Stabilization	49,060	lb/yr	249	lb/ton	Engineering Estimate	3.05
Solidification	440	lb/yr	1150	lb/ton	Engineering Estimate	1.27E-01
Total						**3.27**
Hydrogen Fluoride						
Waste Handling/Inspection	2,332,660	lb/yr	0.0242	lb/ton	Engineering Estimate	1.41E-02
Landfill	2,332,660	lb/yr	0.454	lb/ton	Engineering Estimate	2.65E-01
Macro Encapsulation	3,640	lb/yr	0.0226	lb/ton	Engineering Estimate	2.06E-05
Stabilization	650,620	lb/yr	0.109	lb/ton	Engineering Estimate	1.77E-02
Solidification	440	lb/yr	10.5	lb/ton	Engineering Estimate	1.16E-03
Total						**2.98E-01**
Indeno(1,2,3-cd)pyrene						
ORU Boiler	100,690	gal/yr	5.00E-05	lb/Mgal	AP-42 Table 1.4-3	**2.52E-06**
Lead						
Leachate	849,840	lb/yr	0.00162	lb/ton	Engineering Estimate	3.44E-04
Waste Oil Heater	2,200	gal/yr	0.025	lb/Mgal	Engineering Estimate	2.75E-05
Propane Space Heater	1,400	gal/yr	0.00051	lb/Mgal	Engineering Estimate	3.57E-07
Total						**3.72E-04**
Lindane						
Waste Handling/Inspection	2,640	lb/yr	0.0376	lb/ton	Engineering Estimate	2.48E-05
Landfill	2,640	lb/yr	0.00000004	lb/ton	Engineering Estimate	2.64E-11
Macro Encapsulation	545,548	lb/yr	0.00703	lb/ton	Engineering Estimate	9.59E-04
Stabilization	2,640	lb/yr	52.6	lb/ton	Engineering Estimate	3.47E-02
Total						**3.57E-02**
Manganese						
Waste Oil Heater	2,200	gal/yr	0.05	lb/Mgal	AP-42 Sec 1.11	5.50E-05
Propane Space Heater	1,400	gal/yr	0.00131	lb/Mgal	CATEF	9.17E-07
Total						**5.59E-05**
Methanol						
Macro Encapsulation	1,555,478	lb/yr	0.00109	lb/ton	Engineering Estimate	4.24E-04
Solidification	43,933	lb/yr	134	lb/ton	Engineering Estimate	1.47E+00

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**1.47E+00**
Methoxychlor						
Macro Encapsulation	512,960	lb/yr	0.00748	lb/ton	Engineering Estimate	**9.59E-04**
Methyl Bromide						
Waste Handling/Inspection	513,908	lb/yr	0.00751	lb/ton	Engineering Estimate	9.65E-04
Stabilization	513,908	lb/yr	10.5	lb/ton	Engineering Estimate	1.35E+00
Total						**1.35E+00**
MIBK						
ORU LFG	245.5	MMscf/yr	1.45E-02	lb/MMscf	Engineering Estimate	1.78E-03
Waste Handling/Inspection	1,465,072	lb/yr	0.0224	lb/ton	Engineering Estimate	8.20E-03
Macro Encapsulation	1,708,303	lb/yr	0.0209	lb/ton	Engineering Estimate	8.93E-03
Stabilization	648,420	lb/yr	0.0691	lb/ton	Engineering Estimate	1.12E-02
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Bioremediation	21,580	lb/yr	0.0334	lb/ton	Engineering Estimate	1.80E-04
Total						**3.05E-02**
Methyl Methacrylate						
Macro Encapsulation	1,332,562	lb/yr	0.00024	lb/ton	Engineering Estimate	**8.00E-05**
Methyl Chloride						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.42	lb/MMscf	Engineering Estimate	0.004
ORU LFG	245.5	MMscf/yr	2.36E-04	lb/MMscf	Engineering Estimate	2.90E-05
Total						**4.38E-03**
Methylene Chloride						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.62	lb/MMscf	Engineering Estimate	0.006
ORU LFG	245.5	MMscf/yr	5.21E-03	lb/MMscf	Engineering Estimate	6.39E-04
Waste Handling/Inspection	1,230,295	lb/yr	0.00016	lb/ton	Engineering Estimate	4.92E-05
Macro Encapsulation	1,671,007	lb/yr	0.0275	lb/ton	Engineering Estimate	1.15E-02
Stabilization	648,420	lb/yr	0.0000126	lb/ton	Engineering Estimate	2.04E-06
Solidification	11,880	lb/yr	0.171	lb/ton	Engineering Estimate	5.08E-04
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**1.92E-02**
Naphthalene						
ORU Propane	0.2	MM scf/yr	6.10E-04	lb/MM sf	Engineering Estimate	6.10E-08
ORU Boiler	100,690	gal/yr	1.70E-02	lb/Mgal	AP-42 Table 1.4-3	8.56E-04
Concrete Crush Engines	7,941	MMBtu/yr	8.48E-05	lb/MMBtu	AP-42 Table 3.3-2	3.37E-04
Waste Handling/Inspection	657,880	lb/yr	0.00144	lb/ton	Engineering Estimate	2.37E-04
Macro Encapsulation	33,240	lb/yr	0.0000682	lb/ton	Engineering Estimate	5.67E-07
Solidification	5,960	lb/yr	63	lb/ton	Engineering Estimate	9.39E-02
Bioremediation	72,160	lb/yr	0.00125	lb/ton	Engineering Estimate	2.26E-05
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Total						**9.56E-02**
Nickel						
Waste Oil Heater	2,200	gal/yr	0.16	lb/Mgal	AP-42 Sec 1.11	1.76E-04
Propane Space Heater	1,400	gal/yr	0.00208	lb/Mgal	CATEF	1.46E-06
Total						**1.77E-04**
Nitrobenzene						

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Waste Handling/Inspection	284,662	lb/yr	0.0000753	lb/ton	Engineering Estimate	5.36E-06
Macro Encapsulation	737,758	lb/yr	0.0052	lb/ton	Engineering Estimate	9.59E-04
Stabilization	1,320	lb/yr	0.00421	lb/ton	Engineering Estimate	1.39E-06
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Total						**1.12E-03**
Pentachlorophenol						
Macro Encapsulation	803,852	lb/yr	0.00513	lb/ton	Engineering Estimate	1.03E-03
Bioremediation	72,160	lb/yr	0.00125	lb/ton	Engineering Estimate	2.26E-05
Bioremediation	77,800	lb/yr	0.00116	lb/ton	Engineering Estimate	2.26E-05
Bioremediation	1,208,400	lb/yr	0.00132	lb/ton	Engineering Estimate	3.99E-04
Total						**1.47E-03**
Phenanthrene						
ORU Boiler	100,690	gal/yr	4.73E-04	lb/Mgal	AP-42 Table 1.4-3	**2.38E-05**
Phenol						
Macro Encapsulation	2,138,019	lb/yr	0.0142	lb/ton	Engineering Estimate	7.59E-03
Solidification	35,916	lb/yr	10.9	lb/ton	Engineering Estimate	9.79E-02
Propane Space Heater	1,400	gal/yr	0.00108	lb/Mgal	CATEF	7.56E-07
Bioremediation	72,160	lb/yr	0.00125	lb/ton	Engineering Estimate	2.26E-05
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Total						**1.06E-01**
Propionaldehyde						
Waste Handling/Inspection	128	lb/yr	0.0000225	lb/ton	Engineering Estimate	7.20E-10
Landfill	128	lb/yr	0.0503	lb/ton	Engineering Estimate	1.61E-06
Stabilization	128	lb/yr	21	lb/ton	Engineering Estimate	6.72E-04
Total						**6.74E-04**
PCB						
Macro Encapsulation	133,571	lb/yr	0.00692	lb/ton	Engineering Estimate	2.31E-04
Bioremediation	87,120	lb/yr	0.0134	lb/ton	Engineering Estimate	2.92E-04
Total						**5.23E-04**
Polycyclic organic matter						
ORU Propane	0.2	MM scf/yr	5.18E-05	lb/MM sf	Engineering Estimate	**5.18E-09**
Pyrene						
ORU Boiler	100,690	gal/yr	1.39E-04	lb/Mgal	AP-42 Table 1.4-3	**7.00E-06**
Selenium						
Propane Space Heater	1,400	gal/yr	0.00013	lb/Mgal	CATEF	**9.10E-08**
Styrene						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.47	lb/MMscf	Engineering Estimate	0.005
Waste Handling/Inspection	1,320	lb/yr	0.3	lb/ton	Engineering Estimate	9.90E-05
Landfill	1,320	lb/yr	0.097	lb/ton	Engineering Estimate	3.20E-05
Total						**4.99E-03**
Tetrachloroethylene						
ORU LFG	245.5	MMscf/yr	6.10E-03	lb/MMscf	Engineering Estimate	7.49E-04
Waste Handling/Inspection	6,873,033	lb/yr	0.0000176	lb/ton	Engineering Estimate	3.02E-05
Landfill	6,873,033	lb/yr	0.0000155	lb/ton	Engineering Estimate	2.66E-05
Macro Encapsulation	2,199,706	lb/yr	0.00191	lb/ton	Engineering Estimate	1.05E-03
Stabilization	652,380	lb/yr	0.0711	lb/ton	Engineering Estimate	1.16E-02

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Solidification	108,440	lb/yr	0.0209	lb/ton	Engineering Estimate	5.67E-04
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Bioremediation	87,120	lb/yr	0.0134	lb/ton	Engineering Estimate	2.92E-04
Bioremediation	70,320	lb/yr	0.0637	lb/ton	Engineering Estimate	1.12E-03
Total						**1.56E-02**
Toluene						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	16.23	lb/MMscf	Engineering Estimate	0.17
ORU LFG	245.5	MMscf/yr	1.33E-01	lb/MMscf	Engineering Estimate	1.64E-02
ORU Propane	0.2	MM scf/yr	3.40E-03	lb/MM sf	Engineering Estimate	3.40E-07
ORU Boiler	100,690	gal/yr	9.45E-02	lb/Mgal	AP-42 Table 1.4-3	4.76E-03
Concrete Crush Engines	7,941	MMBtu/yr	4.09E-04	lb/MMBtu	AP-42 Table 3.3-2	1.62E-03
Waste Handling/Inspection	6,719,434	lb/yr	0.0109	lb/ton	Engineering Estimate	1.83E-02
Landfill	6,719,434	lb/yr	0.0000292	lb/ton	Engineering Estimate	4.91E-05
Macro Encapsulation	2,260,276	lb/yr	0.0242	lb/ton	Engineering Estimate	1.37E-02
Stabilization	651,060	lb/yr	0.153	lb/ton	Engineering Estimate	2.49E-02
Solidification	10,120	lb/yr	0.0192	lb/ton	Engineering Estimate	4.86E-05
Gas Tank	9,927	gal/yr	0.66	wt % VOC	AP-42 Sec 7.1	2.30E-04
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Bioremediation	257,480	lb/yr	0.0132	lb/ton	Engineering Estimate	8.50E-04
Bioremediation	440	lb/yr	1.98	lb/ton	Engineering Estimate	2.18E-04
Total						**0.25**
Toxaphene						
Macro Encapsulation	513,908	lb/yr	0.00746	lb/ton	Engineering Estimate	**9.58E-04**
Trichloroethylene						
ORU LFG	245.5	MMscf/yr	2.42E-03	lb/MMscf	Engineering Estimate	2.97E-04
Waste Handling/Inspection	1,944,282	lb/yr	0.0000261	lb/ton	Engineering Estimate	1.27E-05
Landfill	1,944,282	lb/yr	0.0000547	lb/ton	Engineering Estimate	2.66E-05
Macro Encapsulation	2,022,186	lb/yr	0.00208	lb/ton	Engineering Estimate	1.05E-03
Stabilization	652,380	lb/yr	0.0711	lb/ton	Engineering Estimate	1.16E-02
Solidification	33,730	lb/yr	0.0594	lb/ton	Engineering Estimate	5.01E-04
Bioremediation	87,120	lb/yr	0.0134	lb/ton	Engineering Estimate	2.92E-04
Bioremediation	440	lb/yr	1.03	lb/ton	Engineering Estimate	1.13E-04
Total						**1.39E-02**
Triethylamine						
Waste Handling/Inspection	52,716	lb/yr	0.006	lb/ton	Engineering Estimate	7.91E-05
Landfill	52,716	lb/yr	0.00903	lb/ton	Engineering Estimate	1.19E-04
Solidification	52,716	lb/yr	8.42	lb/ton	Engineering Estimate	1.11E-01
Total						**1.11E-01**
Vinyl Acetate						
Waste Handling/Inspection	2,200	lb/yr	0.00827	lb/ton	Engineering Estimate	4.55E-06
Landfill	2,200	lb/yr	0.0407	lb/ton	Engineering Estimate	2.24E-05
Total						**2.69E-05**
Vinyl chloride						
ORU LFG	245.5	MMscf/yr	2.82E-03	lb/MMscf	Engineering Estimate	**3.46E-04**
Waste Handling/Inspection	812,660	lb/yr	0.0000205	lb/ton	Engineering Estimate	4.16E-06

Compound/Emission Point	Operating Parameters		Emission Factor			Emissions ton/yr
			Rate		Reference	
Landfill	812,660	lb/yr	0.00189	lb/ton	Engineering Estimate	3.84E-04
Macro Encapsulation	2,376,652	lb/yr	0.00000397	lb/ton	Engineering Estimate	2.36E-06
Stabilization	3,080	lb/yr	0.000361	lb/ton	Engineering Estimate	2.78E-07
Solidification	10,120	lb/yr	0.192	lb/ton	Engineering Estimate	4.86E-04
Total						**1.22E-03**
Vinylidene Chloride						
Waste Handling/Inspection	103,000	lb/yr	0.0000769	lb/ton	Engineering Estimate	1.98E-06
Landfill	103,000	lb/yr	0.00206	lb/ton	Engineering Estimate	5.30E-05
Macro Encapsulation	511,640	lb/yr	0.00206	lb/ton	Engineering Estimate	2.63E-04
Stabilization	2,640	lb/yr	0.0063	lb/ton	Engineering Estimate	4.16E-06
Solidification	880	lb/yr	0.00000759	lb/ton	Engineering Estimate	1.67E-09
Total						**3.23E-04**
m,p-Xylenes						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	2.50	lb/MMscf	Engineering Estimate	**0.03**
o-Xylenes						
Thermal Oxidizer (TOU-1)	20.5	MMscf/yr	0.97	lb/MMscf	Engineering Estimate	0.01
ORU LFG	245.5	MMscf/yr	1.15E-01	lb/MMscf	Engineering Estimate	1.41E-02
Concrete Crush Engines	7,941	MMBtu/yr	2.85E-04	lb/MMBtu	AP-42 Table 3.3-2	1.13E-03
Waste Handling/Inspection	1,670,200	lb/yr	0.146	lb/ton	Engineering Estimate	6.10E-02
Landfill	1,732,260	lb/yr	0.0000114	lb/ton	Engineering Estimate	4.94E-06
Macro Encapsulation	2,093,906	lb/yr	0.00252	lb/ton	Engineering Estimate	1.32E-03
Stabilization	651,060	lb/yr	0.142	lb/ton	Engineering Estimate	2.31E-02
Solidification	10,560	lb/yr	0.214	lb/ton	Engineering Estimate	5.65E-04
Gas Tank	9,927	gal/yr	0.05	wt % VOC	AP-42 Sec 7.1	1.74E-05
Bioremediation	24,440	lb/yr	0.0259	lb/ton	Engineering Estimate	1.58E-04
Bioremediation	62,060	lb/yr	0.0148	lb/ton	Engineering Estimate	2.30E-04
Bioremediation	440	lb/yr	1.98	lb/ton	Engineering Estimate	2.18E-04
Total						**0.11**
Zinc						
Propane Space Heater	1,400	gal/yr	0.00308	lb/Mgal	CATEF	**2.16E-06**
TOTAL HAP						**12.27**