INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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August 17, 2007

Mr. Jay Patterson
Lone Star Industries, Inc. dba Buzzi Unicem USA
P.O. Box 486
Greencastle, Indiana 46135

Re: 133-24896-00002
Minor Source Modification to:
Part 70 Operating Permit No. 133-6927-00002

Dear Mr. Patterson:

Lone Star Industries, Inc. dba Buzzi Unicem USA was issued Part 70 Operating Permit No. 133-6927-00002 on April 14, 2004 for a stationary Portland cement manufacturing plant. Letters requesting changes to this permit were received on June 12, 2007. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(g) One (1) alternate raw material feed system, approved for construction in 2007, operating at a maximum capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

(1) Slag pile, identified as one of the materials identified in Point 1-13, controlled with water mist spray as needed.

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(6) Paved delivery roads with particulate emissions controlled by vacuum sweeping.

Insignificant activities:

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, approved for construction in 2007, with a maximum capacity of 10 tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) Two (2) hoppers, identified as 295F and 296F.

(2) Two (2) screw conveyors, identified as 295V and 296V.

(3) Two (2) weight feeders, identified as 295V1 and 296V1.

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC.

(5) Two (2) bucket elevators, identified as 296BE and 297BE.

(g) Storage piles for non-hazardous waste alternate fuels, located inside a three-sided building, with a total maximum throughput rate of 10 tons/hr. [326 IAC 6-4]

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

This minor source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(d) and 326 IAC 2-7-12. The source may begin operation before the minor permit modification has been issued.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 386-1024 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Original signed by,

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC
cc: File – Putnam County
U.S. EPA, Region V
Putnam County Health Department
Air Compliance Section Inspector – David Harrison
Compliance Data Section
Administrative and Development
Technical Support and Modeling - Michele Boner
Billing, Licensing and Training Section – Dan Stamatkin

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PART 70 MINOR SOURCE MODIFICATION PERMIT
OFFICE OF AIR QUALITY

Lone Star Industries, Inc. dba Buzzi Unicem USA
3301 South County Road 150 West
Greencastle, Indiana 46135

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T133-6927-00002	
Issued by: Original Signed by Janet McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: April 14, 2004 Expiration Date: April 14, 2009

Minor Source Modification No.: 133-24896-00002	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: August 17, 2007

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary Portland cement manufacturing plant.

Source Address:	3301 South County Road 150 West, Greencastle, Indiana 46135
Mailing Address:	P.O. Box 486, Greencastle, Indiana 46135
General Source Phone Number:	(765) 653-9766
SIC Code:	3241, 1422
County Location:	Putnam
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD Rules Major Source under Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) Quarry Activities:

(1) Removal and transfer of overburden material, drilling and blasting of limestone, and loading of raw materials using mobile equipment.

(b) Raw Material Sizing Activities:

(1) One (1) primary crusher, identified as Point 1-8 (201G); and one (1) vibrating feeder, identified as Point 1-9A (201V); both constructed in 1969, modified in 1998 and 1999, with a nominal capacity of 1,300 tons of limestone per hour, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(2) Outside storage piles, modified in 1999, utilizing water mist suppression or equivalent dust suppression to control particulate emissions; and

(3) Raw material sizing transfer equipment including:

(A) One (1) apron feeder, identified as Point 1-14 (206V), constructed in 1969 and modified in 1999, with a nominal throughput of 400 tons per hour, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(B) One (1) belt conveyor, identified as Point 1-9B (214V), constructed in 1969, with a nominal throughput of 1,300 tons per hour, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(C) Three (3) vibrating feeders, identified as Point 1-11 (202V-204V), all constructed in 1969 and modified in 1999, with a nominal capacity of 1,300 tons per hour, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(D) Three (3) belt conveyors, identified as Point 1-15 (215V, 305V, 251V), constructed in 1969, 1969, and 2000, respectively, with a nominal capacity of 1,300 tons per hour, equipped with one (1) fabric filter system (FF 1-15, baghouse 209L) to control particulate emissions; and

(E) One (1) secondary crusher system, identified as SC-1, constructed in 2001, with a nominal capacity of 600 tons of limestone and additives per hour; controlled by three baghouses (208L, 208L1, 210L), exhausting to three (3) stacks (208L, 208L1, 210L), respectively. The secondary crusher system is totally enclosed and consists of the following pieces of equipment:

(i) One (1) belt conveyor, identified as Point 1-16A (202G2V2), with a nominal capacity of 525 tons per hour; one (1) screen, identified as Point 1-16B (205G), with a nominal capacity of 600 tons per hour; one (1) crusher, identified as Point 1-16C (202G2), with a nominal capacity of 525 tons per hour; one (1) belt conveyor, identified as Point 1-16D (202G2V3), with a nominal capacity of 525 tons per hour; all constructed in 2001, equipped with one (1) fabric filter system (FF 1-16, baghouse 208L1) to control particulate emissions;

(ii) One (1) apron feeder, identified as Point 1-24 (202G2V1), with a nominal capacity of 600 tons per hour, constructed in 2001, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(iii) One (1) belt conveyor, identified as Point 1-25C (202G1V1); one (1) crusher, identified as Point 1-25D (202G1); one (1) belt conveyor, identified as Point 1-25E (202G1V2); and one (1) belt conveyor, identified as Point 1-25F (202GV2); each with a nominal capacity of 600 tons per hour, all constructed in 2001, equipped with one (1) fabric filter system (FF 1-25, baghouse 208L) to control particulate emissions; and

(iv) One (1) screen, identified as Point 1-26C (204G); one (1) belt conveyor, identified as Point 1-26D (202GV3); and one (1) belt conveyor, identified as Point 1-26E (202GV4); each with a nominal capacity of 600 tons per hour, all constructed in 2001, equipped with one (1) fabric filter system (FF 1-26, baghouse 210L) to control particulate emissions.

(c) One (1) gypsum material handling process, constructed in 2002, with a nominal production of 150 tons per hour of the blended synthetic gypsum material, including the following units:

(1) One (1) synthetic gypsum transporting system, identified as 1-20, with fugitive emissions;

(2) One (1) granulated slag/rock transporting system, identified as 1-31, with fugitive emissions;

(3) One (1) outdoor gypsum storage pile, identified as 1-27, with a nominal storage capacity of 10,000 tons and a nominal throughput of 67,000 tons per year, using water suppression to control particulate emissions;

(4) One (1) outdoor granulated slag/rock storage pile, identified as 1-32, with a nominal storage capacity of 5,000 tons and a nominal throughput of 22,400 tons per year, using water suppression to control particulate emissions;

(5) One (1) synthetic gypsum hopper (230F), one (1) conveyor belt (230FV), and one (1) weigh belt (230V), all with a nominal throughput of 90 tons per hour; and one (1) conveyor belt (232V), with a nominal throughput of 120 tons per hour; all collectively identified as 1-34;

(6) One (1) granulated slag/rock hopper (231F), one (1) conveyor belt (231FV), and one (1) weigh belt (231V), collectively identified as 1-35, each with a nominal throughput of 30 tons per hour;

(7) One (1) enclosed pug mill (232L), identified as 1-36A, with a nominal throughput of 150 tons per hour, with particulate emissions controlled by Dust Collector (232FL), and exhausting through stack S1-36;

(8) One (1) CKD bin (232F) and one (1) discharge screw (232FV), identified as 1 36B and 1-36C, with a nominal throughput of 30 tons per hour, with particulate emissions controlled by Dust Collector (232FL), and exhausting through stack S1-36;

(9) Two (2) belt conveyors (233V, 233V1), identified as 1-41, for finished gypsum material, with a nominal throughput of 150 tons per hour;

(10) One (1) covered storage pile for finished gypsum material, identified as 1-37, with a nominal storage capacity of 5,000 tons and a nominal throughput of 112,000 tons per year; and

(11) One (1) finished gypsum material hopper (234F) and two (2) conveyor belts (234V, 234FV), identified as 1-38, with a nominal throughput of 150 tons per hour.

(d) Raw Material Ball Mill Operation, with a nominal capacity of 360 tons of raw material per hour, including the following units:

(1) Raw material ball mill transfer equipment including four (4) belt conveyors, identified as Point 1-17A (252V-255V); four (4) raw material bins, identified as Point 1-17B (350F-353F); all constructed April 1, 2000, with a nominal capacity of 525 tons per hour, equipped with one (1) fabric filter system (FF 1-17, baghouse 350L) to control particulate emissions;

(2) Four (4) weigh feeders, identified as Point 1-18A (350V-353V); one (1) conveyor belt, identified as Point 1-18B (358V); two (2) apron feeders, identified as Point 1-18C (350V1, 351V1); and two (2) scavenger conveyors, identified as Point 1 18D (350V2, 351V2); all constructed April 1, 2000, with a nominal capacity of 400 tons per hour; all utilizing a building enclosure to control particulate emissions;

(3) One (1) alleviator (357F), identified as Point 1-7, constructed April 1, 2000, with a nominal capacity of 20 tons per hour, equipped with one (1) fabric filter system (FF 1-7, baghouse 351L) to control particulate emissions.

(e) Fly Ash Storage and Additive Activities, including the following units:

(1) Two (2) screw conveyors, identified as Point 1-19A (273V, 274V); and two (2) fly ash hoppers, identified as Point 1-19B (273F, 273FA); all constructed April 1, 2000,

and modified February 8, 2002, with exception of 273FA which was constructed in 2003, each with a nominal capacity of 20 tons per hour, equipped with one (1) fabric filter system (FF 1-20, 274L) to control particulate emissions;

(2) One (1) fly ash silo, identified as Point 1-39 (270F), constructed April 1, 2000, with a nominal capacity of 1,250 tons, equipped with one (1) fabric filter system (FF 1-39, 270L) to control particulate emissions;

(3) One (1) fly ash silo, identified as Point 1-40 (271F), constructed April 1, 2000, with a nominal capacity of 1,250 tons, equipped with one (1) fabric filter system (FF 1-40, 271L) to control particulate emissions;

(4) Two (2) additive silos, identified as Point 1-21A (318F, 328F), each with a nominal capacity of 500 tons, four (4) rotary feeders, identified as Point 1-21B (318V, 318VV, 328V, 328VV), with a nominal capacity of 30 tons per hour each; all constructed May 17, 1996, equipped with one (1) fabric filter system (FF 1-21, baghouse 319L) to control particulate emissions;

(5) One (1) additive feed bin, identified as Point 1-22 (308F), constructed after August 17, 1971 and before May 17, 1996, with a nominal capacity of 200 tons, covered by a building enclosure (BE 1-22) to control particulate emissions; and

(6) Two (2) rotary feeders, identified as Point 1-23A (308V, 308VV), constructed in 1996; and one (1) weigh belt, identified as Point 1-23B (309V), constructed after August 17, 1971; each with a nominal capacity of 30 tons per hour, covered by a building enclosure (BE 1-23) to control particulate emissions.

(f) Coal Mill Operation:

(1) Coal storage piles, modified in 1999, utilizing building enclosures (BE 2-1) or compaction (CMP 2 16) to control particulate emissions;

(2) Coal transfer equipment:

(A) Four (4) vibrating feeders, identified as Point 2-2A (209V-211V, 213V); one (1) belt conveyor, identified as Point 2-2B (222V); and one (1) coal grizzly, identified as Point 2-2C (223V); all constructed before 1974 and modified in 1999, with a nominal capacity of 100 tons per hour each, utilizing water mist suppression or equivalent dust suppression to control particulate emissions and covered by a building enclosure (BE 2-2) to control particulate emissions;

(B) One (1) belt conveyor, identified as Point 2-4 (420V), constructed before 1974 and modified in 2000, with a nominal capacity of 100 tons per hour, covered by a building enclosure (BE 2-4) to control particulate emissions; and

(C) One (1) belt conveyor, identified as Point 2-6B (420V3), constructed May 1, 2000, with a nominal capacity of 100 tons per hour, equipped with one (1) shared fabric filter system (FF 2-6, baghouse 420L2) to control particulate emissions; and

(D) One (1) belt conveyor (420V1), constructed May 1, 2000, with a nominal capacity of 100 tons per hour, equipped with one (1) fabric filter system (baghouse 420L1) which exhausts into the building.

(3) Three (3) coal reject piles, identified as Points 2-3, 2-5, and 2-15, modified in 1999, utilizing mist suppression or equivalent dust suppression to control particulate emissions;

(4) One (1) raw coal bin, identified as Point 2-9 (435F), constructed May 1, 2000, with a nominal capacity of 100 tons, equipped with one (1) fabric filter system (FF 2-9, baghouse 435L) to control particulate emissions;

(5) One (1) weigh feeder, identified as Point 2-10A (435V); and one (1) conveyor belt, identified as Point 2-10B (436V); all constructed May 1, 2000, each with a nominal capacity of 61 tons per hour, covered by a building enclosure (BE 2-10) to control particulate emissions;

(6) One (1) coal mill, identified as Point 2-11A (436G), with a nominal capacity of 40 tons of coal per hour, using a fuel oil fired burner during startup and clinker cooler gas at other times to remove moisture from the coal (Note: For the purposes of NSPS Subpart Y, this is also a thermal dryer); and three (3) screw conveyors, identified as Point 2-11B (436LV, 436L1V, 436GV1), each with a nominal capacity of 40 tons per hour; all constructed May 1, 2000, and equipped with one (1) fabric filter system (FF 2-11, baghouse 436L) to control particulate emissions; and

(7) Two (2) screw conveyors, identified as Point 2-13B (437V, 438V), with a nominal capacity of 40 tons per hour; two (2) rotary feeders, identified as Point 2-13C (436LVV, 436L1VV), with a nominal capacity of 40 tons per hour; and one (1) pulverized coal bin, identified as Point 2-13A (438F), with a nominal capacity of 100 tons; all constructed May 1, 2000, and equipped with one (1) fabric filter system (FF 2-13, baghouse 438L) to control particulate emissions.

(g) One (1) alternate raw material feed system, approved for construction in 2007, operating at a maximum capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

(1) Slag pile, identified as one of the materials identified in Point 1-13, controlled with water mist spray as needed.

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(6) Paved delivery roads with particulate emissions controlled by vacuum sweeping.

(h) Kiln Operation, with a nominal capacity of 360 tons of dry raw feed per hour and 208 tons clinker per hour:

(1) One (1) hammermill dryer, identified as Point 3-1C (440G), constructed May 1, 2000, with a nominal capacity of 258 tons per hour, equipped with one (1) electrostatic precipitator (402L) with a 2,000 HP motor to control particulate emissions, exhausting to stack 3-1;

(2) One (1) pre-heater, pre-calciner Portland cement kiln, originally constructed in 1966 and modified to the semi-dry system in 2000. The semi-dry kiln system includes one (1) coal-fired calciner tower with staged combustion, identified as Point 3-1B (440PH), and one (1) rotary kiln, identified as Point 3-1A (401B), with a combined nominal rated capacity of 827 million British thermal units per hour. An oxygen enrichment system, constructed in 2006, introduces oxygen into the first

stage pre-calciner and the front end of the rotary kiln. The semi-dry kiln system has a nominal rated clinker capacity of 208 tons per hour, using coal and the following supplemental fuel:

(A) Hazardous waste fuel at a maximum rate allowed by the approved Boiler and Industrial Furnace Permit required by 40 CFR 270;

(B) plastic chips, carpet fibers, wood chips, chipped tires, toner, oil filter fluff, cosmetics, and seed corn;

(C) petroleum coke; and

(D) distillate fuel for burner startup activities.

The particulate emissions from the calciner and kiln are controlled by one (1) electrostatic precipitator (402L) with a 2000 HP motor, exhausting to stack 3-1;

(3) Nine (9) screw conveyors, identified as Point 3-1D (403V-410V, 404FV), constructed in 1968 and modified in 1999; and one (1) kiln dust chamber, identified as Point 3-1F (401BF1), constructed January 1, 1969; each with a nominal capacity of 10 tons per hour; with particulate emissions controlled by one (1) electrostatic precipitator (402L) with a 2000 HP motor, exhausting to stack 3-1;

(4) One (1) return dust bin, identified as Point 3-3A (405F), constructed before 1971 and modified in 1999, with a nominal capacity of 100 tons; one (1) waste dust bin, identified as Point 3-3F (404F), constructed before 1971 and modified in 1999, with a nominal capacity of 75 tons; one (1) hopper, identified as Point 3-3C (445F), constructed May 1, 2000, with a nominal capacity of 60 tons per hour; two (2) bucket elevators, identified as Point 3-3G (411V, 413V), constructed before August 17, 1971, with a nominal capacity of 60 tons per hour; and one (1) rotary feeder, identified as Point 3-3H (405FVV) and one (1) screw conveyor, identified as Point 3-3I (405FVV1), both constructed in 2003, each with a nominal capacity of 60 tons per hour; all equipped with one fabric filter system (FF 3-3, baghouse 403L) to control particulate emissions;

(5) One (1) non-routine raw material dust truck loading station, constructed before 1971 and modified in 1999, covered by a building enclosure (BE 3-25) to control particulate emissions;

(6) One (1) conditioning tower, identified as Point 3-5A (480F), with a nominal capacity of 40 tons per hour, using lime injection to control sulfur dioxide emissions; and one (1) alkali bypass system, identified as Point 3-5B, one (1) hopper, identified as Point 3-5C (484F), with a nominal capacity of 10 tons per hour; one (1) dust cyclone, identified as Point 3-5D (480FL), with a nominal capacity of 31 tons per hour; four (4) screw conveyors, identified as Point 3-5E (480LV1-LV3, 480V), each with a nominal capacity of 10 tons per hour; one (1) weigh hopper, identified as Point 3-5I (481FF); and one (1) pug mill, identified as Point 3-5J (484L); all constructed May 1, 2000; and one (1) CKD loadout spout, identified as 481L, constructed in 2002; all equipped with one (1) fabric filter system (FF 3-5, baghouse 480L), which exhausts to stack 3-1, to control particulate emissions;

(7) One (1) reject dust bin for cement kiln dust, identified as Point 3-7A (481F), with a nominal capacity of 150 tons, constructed May 1, 2000, equipped with one (1) fabric filter system (FF 3-7, baghouse 483L) to control particulate emissions;

(8) One (1) alkali bypass system cement kiln dust truck loading station, identified as Point 3-8, constructed in 2000, utilizing mist suppression or equivalent dust suppression to control particulate emissions; and

(9) One (1) non-routine CKD loadout station, including one (1) screw conveyor, identified as Point 3-4B (412V), constructed in 2001, with a nominal capacity of 10 tons per hour, utilizing water mist suppression to control particulate emissions.

(i) Clinker Cooler Operations, with a nominal capacity of 208 tons of clinker per hour:

(1) One (1) clinker cooler, identified as Point 3-9A (401C), constructed before August 17, 1971 and modified in 2000, with a nominal capacity of 208 tons per hour; one (1) clinker breaker, identified as Point 3-9B (401CG), constructed January 1, 1969 and modified in 2000, with a nominal capacity of 208 tons per hour; one (1) dropout chamber, identified as Point 3-9C (401CL), constructed January 1, 1969, with a nominal capacity of 20 tons per hour; two (2) vibrating feeders, identified as Point 3-9F (427V, 428V), constructed before August 17, 1971 and modified in 2000, with a nominal capacity of 208 tons per hour each; and one (1) drag conveyor, identified as Point 3-9G (401CV), and eight (8) screw conveyors (422V, 470CV2, 470CV3, 470CV9, 470CV10, 474V-476V), all constructed before August 17, 1971 and modified in 2001, each with a nominal capacity of 10 tons per hour; all equipped with one (1) fabric filter system (FF 3-9, baghouse 471-CL) to control particulate emissions, exhausting to stack 3-2;

(2) Two (2) belt conveyors, identified as Point 3-11A (421V, 509V); and two (2) bucket elevators, identified as Point 3-11B (418V, 419V); all constructed before 1971 and modified in 2000, with a nominal capacity of 208 tons per hour each (note that belt conveyor (421V) is a non-routine belt). Particulate emissions from 421V, 418V, and 419V are controlled by the one (1) fabric filter system (FF 3-9, baghouse 471-CL). Particulate emissions from 509V are controlled by the one (1) fabric filter system (FF 3-11, baghouse 406L). If needed, particulate emissions from 418V can also be controlled by the one (1) fabric filter system (FF 3-11, baghouse 406L);

(3) One (1) non-routine outdoor clinker pile, identified as Point 3-13, modified in 1999, utilizing water mist suppression or equivalent dust suppression to control particulate emissions;

(4) One (1) belt conveyor (turning tower), identified as Point 3-12 (510V), constructed before 1971 and modified in 2000, with a nominal capacity of 208 tons per hour, equipped with one (1) fabric filter system (FF 3-12, baghouse 506L) to control particulate emissions;

(5) One (1) bucket elevator, identified as Point 3-22 (500V), constructed October 1, 1999, with a nominal capacity of 250 tons per hour, equipped with one (1) fabric filter system (FF 3-22, baghouse 500L) to control particulate emissions;

(6) Two (2) feeders, identified as Point 3-24A (207F, 208F); and one (1) belt conveyor, identified as Point 3-24B (219V); each constructed before August 17, 1971, with a nominal capacity of 300 tons per hour each, equipped with one (1) fabric filter system (FF 3-24, baghouse 220L) to control particulate emissions;

(7) Seven (7) clinker silos, identified as Point 3-14 (501A-507A), constructed before 1971 and modified in 1999, each with a nominal capacity of 5000 tons, equipped with one (1) fabric filter system (FF 3-14, baghouse 503L) to control particulate emissions;

(8) One (1) belt conveyor, identified as Point 3-21 (220V), constructed before August 17, 1971, and one (1) belt scale, constructed in 2003, with a nominal capacity of 300 tons per hour, equipped with one (1) fabric filter system (FF 3-21, baghouse 221L) which was installed in 2001 to control particulate emissions;

(9) One (1) clinker resizing operation, identified as Point 3-24, constructed in 2003, operating parallel to existing clinker feeders and a clinker belt conveyer, comprised of the following activities and facilities:

(A) One (1) loader haul operation, identified as Unit #2 (F3-32), with fugitive emissions;

(B) One (1) vibrating feeder, identified as Unit #2 (F3-33), with a nominal throughput of two hundred fifty (250) tons per hour of weathered clinker, with emissions uncontrolled;

(C) One (1) jaw crusher, identified as Unit #3, with a nominal throughput of two hundred fifty (250) tons per hour of weathered clinker, with emissions controlled by Dust Collector #1, exhausting to stack S3-34; and

(D) Two (2) belt conveyors, identified as Unit #4 and Unit #5, operating in series, feeding existing belt 3-21 (220V), each with a nominal throughput of two hundred fifty (250) tons per hour, with emissions controlled by Dust Collector #1, exhausting to stack S3-34.

(j) Finish Mill Operations:

(1) Four (4) vibrating feeders, identified as Point 3-15 (504V-507V), constructed before 1971 and modified in 1999, with a nominal capacity of 250 tons per hour each, equipped with one (1) fabric filter system (FF 3-15, baghouse 505L) to control particulate emissions;

(2) Four (4) vibrating feeders, identified as Point 3-17A (501V-503V, 508V); and one (1) belt conveyor, identified as Point 3-17B (221V); with a nominal capacity of 250 tons per hour each; all constructed before 1971 and modified in 1999, equipped with one (1) fabric filter system (FF 3-17, baghouse 504L) to control particulate emissions;

(3) Two (2) belt conveyors, identified as Point 3-20B (514V, 511V), constructed before August 17, 1971; one (1) bucket elevator, identified as Point 3-20A (513V), constructed June 1, 2000; and one (1) belt conveyor, identified as 511V2, constructed in 2003; each with a nominal capacity of 250 tons per hour, equipped with one (1) fabric filter system (FF 3-20, baghouse 513L) to control particulate emissions;

(4) One (1) belt conveyor, identified as Point 4-13A (515V), constructed in 1969 and modified in 2000, with a nominal capacity of 250 tons per hour; and four one (4) (1) silos, identified as Point 4-13B (650A-653A) (652), constructed January 1, 1969, with a nominal capacity of 2,440, 2,315, 2,260, and 200 tons respectively, equipped with one (1) fabric filter system (FF 4-13, baghouse 515L) to control particulate emissions. The three (3) silos, 650A, 651A, and 653A, with a nominal capacity of 2,440, 2,315, and 200 tons, respectively, constructed in 1969, and controlled by baghouses 760L, 761L, and 762L (constructed in 2006), respectfully to control particulate emissions. The three (3) silos, 650A, 651A, and 653A, with a nominal capacity of 2,440, 2,315, and 200 tons, respectively, constructed in 1969, and controlled by baghouses 760L, 761L, and 762L (constructed in 2006), respectfully to control particulate emissions;

(5) One (1) belt conveyor, identified as Point 4-14 (516V), constructed January 1, 1969, with a nominal capacity of 250 tons per hour, equipped with one (1) fabric filter system (FF 4-14, baghouse 516L) to control particulate emissions;

(6) No. 1 Finish Mill, modified in 1993, with a nominal capacity of 70 tons of clinker per hour:

(A) Two (2) belt conveyors, identified as Point 4-1A (639V, 640V), constructed in 1971 and modified in 1999, with a nominal capacity of 250 tons per hour each; one (1) clinker bin, identified as Point 4-1B (601F), constructed before 1971 and modified in 1999, with a nominal capacity of 260 tons; one (1) gypsum bin, identified as Point 4-1C (603F), constructed before 1971 and modified in 1999, with a nominal capacity of 240 tons per hour; one (1) spill screw, identified as Point 4-1D (646V), constructed in 2002, with a nominal capacity of 5 tons per hour; and one (1) belt conveyor, identified as 614V, modified in 2003, with a maximum capacity of 250 tons of clinker per hour; all equipped with one (1) fabric filter system (FF 4-1, baghouse 617L) to control particulate emissions;

(B) One (1) No. 1 finish mill, identified as Point 4-2A (603G), constructed before 1971 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; one (1) elevator, identified as Point 4-2B (626V), constructed before 1971 and modified in 1999, with a nominal capacity of 200 tons per hour; and one (1) spill screw, identified as Point 4-2D (642V), constructed 1969 and modified in 1999, with a nominal capacity of 5 tons per hour; all equipped with one (1) fabric filter system (FF 4-2, baghouse 613L) to control particulate emissions;

(C) One (1) air separator, identified as Point 4-3A (605G), constructed in 1994 and modified in 1999, with a nominal capacity of 200 tons per hour; one (1) tailing screw, identified as Point 4-3D (613V), constructed in 1969 and modified in 1999, with a nominal capacity of 200 tons per hour; two (2) cement coolers, identified as Point 4-3E (603C, 604C), constructed in 1969 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour each; one (1) F.K. pump hopper, identified as Point 4-3G (611F), constructed in 1969 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; one (1) mill feed belt, identified as Point 4-3H (641V), constructed in 1974 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; and one (1) clinker F.O.W. belt, identified as Point 4-3I (601V), constructed before 1971 and modified in 1999, with a nominal capacity of 70 tons per hour; equipped with one (1) fabric filter system (FF 4-3, baghouse 606L) to control particulate emissions;

(D) One (1) fringe bin for off specification cement and cement kiln dust, identified as Point 4-16A (604F), constructed before August 17, 1971, with a nominal capacity of 66 tons; and two (2) screw feeders, identified as Point 4-16B (611V, 604F1V), constructed January 1, 1969, with a nominal capacity of 20 tons per hour each; equipped with one (1) fabric filter system (FF 4-16, baghouse 605L) to control particulate emissions; and

(E) One (1) weigh belt, identified as Point 4-15A (605V), and one (1) belt conveyor, identified as Point 4-15B (616V), constructed before 1974, covered by a building enclosure to control particulate matter;

(7) No. 2 Finish Mill, with a capacity of 70 tons of clinker per hour:

(A) Two (2) conveyor belts, identified as Point 4-4A (639V, 640V), constructed 1969 and modified in 1999, with a nominal capacity of 250 tons per hour; one (1) clinker bin, identified as Point 4-4B (602F), constructed before 1971 and modified in 1999, with a nominal capacity of 260 tons; one (1) gypsum bin, identified as Point 4-4C (603F), constructed before 1971 and modified in 1999, with a nominal capacity of 240 tons; one (1) clinker F.O.W. belt, identified as Point 4-4D, (602V), constructed before 1971 and modified in 1999, with a nominal capacity of 70 tons per hour; and one (1) feed belt, identified as Point 4-4E (644V), constructed in 1975 and modified

in 1999, with a nominal capacity of 70 tons of clinker per hour; all equipped with one (1) fabric filter system (FF 4-4, 636L) to control particulate emissions;

(B) One (1) No. 2 finish mill, identified as Point 4-5A (602G), constructed before 1971 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; and one (1) spill screw, identified as Point 4-5B (645V), constructed in 1969 and modified in 1999, with a nominal capacity of 5 tons per hour; all equipped with one (1) fabric filter system (FF 4-5, baghouse 603L) to control particulate emissions; and

(C) One (1) air separator, identified as Point 4-6A (604G), constructed before 1971 and modified in 1999, with a nominal capacity of 200 tons per hour; one (1) elevator, identified as Point 4-6B (621V), constructed before 1971 and modified in 1999, with a nominal capacity of 200 tons per hour; one (1) tailing screw, identified as Point 4-6D (612V), constructed in 1969 and modified in 1999, with a nominal capacity of 200 tons per hour; two (2) cement coolers, identified as Point 4-6E (601C, 602C), constructed in 1969 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour each; one (1) F.K. pump hopper, identified as Point 4-6F (610F), constructed in 1969 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; and one (1) mill feed belt, identified as Point 4-6G (644V), constructed in 1975 and modified in 1999, with a nominal capacity of 70 tons of clinker per hour; all equipped with one (1) fabric filter system (FF 4-6, baghouse 602L) to control particulate emissions;

(8) No. 3 Finish Mill, with a nominal capacity of 95 tons of clinker per hour:

(A) One (1) No. 3 finish mill, identified as Point 4-9 (660G), constructed June 1, 2000, with a nominal capacity of 95 tons of clinker per hour, equipped with one (1) fabric filter system (FF 4-9, baghouse 660L) to control particulate emissions;

(B) One (1) hopper, identified as Point 4-10C (667F), with a nominal capacity of 95 tons of clinker per hour; one (1) cooler, identified as Point 4-10D (664C), with a nominal capacity of 95 tons of clinker per hour; and one (1) feed belt, identified as Point 4-10E (654V), with a nominal capacity of 95 tons of clinker per hour; all constructed June 1, 2000, equipped with one (1) fabric filter system (FF 4-10, baghouse 661L) to control particulate emissions;

(C) One (1) fringe bin for off specification cement and cement kiln dust, identified as Point 4-11B (665F), with a nominal capacity of 80 tons; one (1) elevator, identified as Point 4-11C (661V), with a nominal capacity of 230 tons per hour; and one (1) rotary feeder, identified as Point 4-11D (665FV), with a nominal capacity of 50 tons per hour; all constructed June 1, 2000 and equipped with one (1) fabric filter system (FF 4-11, baghouse 665L) to control particulate emissions;

(D) One (1) air separator, identified as Point 4-12A (664G), constructed June 1, 2000, with a nominal capacity of 230 tons per hour, and equipped with one (1) fabric filter system (FF 4-12, baghouse 664L) to control particulate emissions; and

(E) Two (2) weigh feeders, identified as Point 4-17 (652V, 653V), constructed January 1, 1969; and two (2) weigh feeders (650V, 651V), constructed January 1, 1969, equipped with two (2) dust collectors (650L, 651L), installed in 2000, venting indoors; with a nominal capacity of 40 tons per

hour each, covered by a building enclosure (BE 4-17) to control particulate emissions.

(k) Cement Storage, Loading, and Packaging Activities:

(1) Three (3) Group 5 silos, identified as Point 5-1 (705A, 707A, 709A), constructed before 1971 and modified in 1999, with a nominal storage capacity of 10,000 tons each, with particulate emission controlled by one (1) fabric filter system (FF 5-1, baghouse 757L);

(2) Three (3) Group 5 silos, identified as Point 5-2 (706A, 708A, 710A), constructed before 1971 and modified in 1999, with a nominal storage capacity of 10,000 tons each, with particulate emissions controlled by one (1) fabric filter systems (FF 5-2, baghouse 758L);

(3) Two (2) Group 4 silos, identified as Point 5-3 (702A, 704A), constructed in 1967 and modified in 1999, with a nominal storage capacity of 5,000 tons each, with particulate emissions controlled by one (1) fabric filter system (FF 5-3, baghouse 702L);

(4) Two (2) Group 4 silos, identified as Point 5-4 (701A, 703A), constructed in 1967 and modified in 1999, with a nominal storage capacity of 5,000 tons each, with particulate emissions controlled by one (1) fabric filter system (FF 5-4, baghouse 701L);

(5) Two (2) silos, identified as Point 5-29 (711A, 712A), constructed in January 1, 1969, with a nominal storage capacity of 5,000 tons each, with particulate emissions controlled by one (1) fabric filter system (FF 5-29, baghouse 713L);

(6) One (1) screen, identified as Point 5-5C (701G), constructed before 1971 and modified in 1999; and one (1) truck loader, identified as Point 5-5D (708L), constructed before 1971 and modified in 1999; each with a nominal capacity of 500 tons per hour, equipped with one (1) fabric filter system (FF 5-5, baghouse 703L) to control particulate emissions;

(7) One (1) screen, identified as Point 5-6B (702G), constructed before 1971 and modified in 1999; and one (1) railcar/truck loader, identified as Point 5-6C (709L), constructed before 1971 and modified in 1999; each with a nominal capacity of 500 tons per hour, equipped with one (1) fabric filter system (FF 5-6, baghouse 706L) to control particulate emissions;

(8) One (1) hopper, identified as Point 5-7B (701F), constructed before 1971 and modified in 1999, with a nominal capacity of 40 tons per hour, equipped with one (1) fabric filter system (FF 5-7, baghouse 710L) to control particulate emissions;

(9) One (1) hopper, identified as Point 5-8 (730F), constructed before 1971 and modified in 1999, with a nominal capacity of 40 tons per hour, equipped with one (1) fabric filter system (FF 5-8, baghouse 715L) to control particulate emissions;

(10) Three (3) screw conveyors, identified as Point 5-9A (809V, 809V1, 809V2), constructed before 1971, with a nominal capacity of 40 tons per hour each; one (1) alleviator, identified as Point 5-9C, constructed before 1971, with a nominal capacity of 40 tons per hour; and fourteen (14) Group 2 silos, identified as Point 5-9B (2S-7S, 9S, 11S-17S), constructed in 1924, with a combined nominal capacity of 24,842 tons; all equipped with one (1) fabric filter (FF 5-9, baghouse 808L) to control particulate matter;

(11) One (1) silo, identified as Point 5-10 (8S), constructed in 1924 and modified in 1999, with a nominal capacity of 5420 tons, equipped with one (1) fabric filter system (FF 5-10, baghouse 807L) for particulate control;

(12) One (1) silo, identified as Point 5-11 (10S), constructed in 1924 and modified in 1999, with a nominal capacity of 5420 tons, equipped with one (1) fabric filter system (FF 5-11, baghouse 810L) for particulate control;

(13) Four (4) Group 3 silos, identified as Point 5-13 (26S, 27S, 28S, and 29S), constructed in 1924 and modified in 1999, with a nominal capacity of 2,736 tons each, equipped with one (1) fabric filter system (FF 5-13, baghouse 27DC) to control particulate emissions;

(14) Three (3) Group 3 silos, identified as Point 5-14 (18S, 20S, 22S), constructed in 1924 and modified in 1999, with a nominal capacity of 3,112 tons each, equipped with one (1) fabric filter system (FF 5-14, baghouse 22DC) to control particulate emissions;

(15) Two (2) Group 3 silos, identified as Point 5-15 (24S, 30S), constructed in 1924 and modified in 1999, with a nominal capacity of 2,780 tons each, equipped with one (1) fabric filter system (FF 5-15, baghouse 24DC) to control particulate emissions;

(16) Four (4) Group 3 silos, identified as Point 5-17 (19S, 21S, 23S, 25S), constructed in 1924 and modified in 1999, with a nominal capacity of 2,736 tons each, equipped with one (1) fabric filter system (FF 5-17, baghouse 25DC) to control particulate emissions;

(17) One (1) screens elevator, identified as Point 5-18 (829V2), constructed before 1971, with a nominal capacity of 40 tons per hour, covered by a building enclosure (BE 5-18) to control particulate emissions;

(18) One (1) elevator, identified as Point 5-19 (829V1), constructed before 1971, with a nominal capacity of 40 tons per hour, covered by a building enclosure (BE 5-19) to control particulate emissions;

(19) Two (2) bulk tanks, identified as Point 5-23A (831F, 833F), with a nominal capacity of 20 tons each; and one (1) truck loader, identified as Point 5-23C, with a nominal capacity of 40 tons per hour; all constructed before 1971 and modified in 1999, except for 831V2 which was constructed in 2003, and equipped with one (1) fabric filter system (FF 5-23, baghouse 833L) to control particulate emissions;

(20) Three (3) bulk tanks, identified as Point 5-24A (832F, 834F, 835F), with a nominal capacity of 20 tons each, constructed before 1950 and modified in 1999, and equipped with one (1) fabric filter system (FF 5-24, baghouse 835L) to control particulate emissions;

(21) One (1) silo, identified as Point 5-26A (782F), with a nominal capacity of 2,430 tons; and one (1) bucket elevator, identified as Point 5-26B (781V), with a nominal capacity of 500 tons per hour; all constructed December 1, 2000, and equipped with one (1) fabric filter system (FF 5-26, baghouse 782L) to control particulate emissions;

(22) One (1) lump breaker, identified as Point 5-27B (783V3); one (1) spout, identified as Point 5-27C (785L); and one (1) truck loader, identified as Point 5-27D; all constructed December 1, 2000, with a nominal capacity of 500 tons per hour each, and equipped with one (1) fabric filter system (FF 5-27, baghouse 783L) to control particulate emissions;

(23) One (1) lump breaker, identified as Point 5-28B (784V3); one (1) spout, identified as Point 5-28C (786L); and one (1) truck loader, identified as Point 5-28D; all constructed December 1, 2000, with a nominal capacity of 500 tons per hour each, and equipped with one (1) fabric filter system (FF 5-28, baghouse 784L) to control particulate emissions;

(24) Five (5) screw conveyors, identified as Point 5-30B (755V, 759V-762V), constructed in 1978; six (6) rotary feeders, identified as Point 5-30C (755M-760M), constructed in 1978; and one (1) hopper, identified as Point 5-30D (750F), constructed before August 17, 1971; with a nominal capacity of 40 tons per hour each, covered by a building enclosure (BE 5-30) to control particulate emissions; and

(25) Nineteen (19) screw conveyors, identified as Point 5-33A (818V1-825V1, 818V2-825V2, 828V1, 828V2, 830V); and three (3) screen screws, identified as Point 5-33B (806V, 829V4, 830V1); all constructed before 1950, with a nominal capacity of 40 tons per hour each, and covered by a building enclosure (BE 5-33) to control particulate emissions.

(l) One (1) blend facility, consisting of the following units:

(1) Five (5) screw conveyors, identified as Point 5-35A (22SC, 24SCG, 24SC, 30SC, 31SC), all constructed in 1989, with a nominal capacity of 40 tons per hour each, covered by a building enclosure (BE 5-35) to control particulate emissions;

(2) One (1) transfer pod, identified as Point 5-36 (22) constructed in August 1989, with a nominal area of 25 cubic feet, equipped with one (1) fabric filter system (FF 5-36, filter 22-PVDC) to control particulate emissions;

(3) One (1) transfer pod, identified as Point 5-37 (24-G), constructed in August 1989, with a nominal area of 25 cubic feet, equipped with one (1) fabric filter system (FF 5-37, filter 24-PVDC-G) to control particulate emissions;

(4) One (1) transfer pod, identified as Point 5-38 (24), constructed in August 1989, with a nominal area of 25 cubic feet, equipped with one (1) fabric filter system (FF 5-38, filter 24-PVDC) to control particulate emissions;

(5) One (1) transfer pod, identified as Point 5-39 (30), constructed in August 1989, with a nominal area of 25 cubic feet, equipped with one (1) fabric filter system (FF 5-39, filter 30-PVDC) to control particulate emissions;

(6) One (1) receiving tank, identified as Point 5-40, constructed in August 1989, with a nominal capacity of 20 tons, equipped with one (1) fabric filter system (FF 5-40, baghouse 40-DC) to control particulate emissions;

(7) One (1) blending tank, identified as Point 5-41A, with a nominal capacity of 20 tons; and one (1) blending pod, identified as Point 5-41C, with a nominal capacity of 25 cubic feet; all constructed in August 1989, equipped with one (1) fabric filter system (FF 5-41, baghouse 41-DC) to control particulate emissions;

(8) Two (2) silos, identified as Point 5-42 (50S, 51S), constructed August 1989, with a nominal capacity of 175 tons each, equipped with one (1) fabric filter system (FF 5-42, baghouse 50-DC) to control particulate emissions;

(9) Two (2) silos, identified as Point 5-43 (52S, 53S), constructed August 1989, with a nominal capacity of 175 tons each, equipped with one (1) fabric filter system (FF 5-43, baghouse 53-DC) to control particulate emissions; and

(10) One (1) transfer pod, identified as Point 5-44B (50PV), constructed in August 1989, with a nominal capacity of 40 tons per hour each, equipped with one (1) fabric filter system (FF 5-44, filter 50-PVDC) to control particulate emissions.

(m) Packhouse operations consisting of the following:

(1) One (1) elevator, identified as Point 6-1A (838V), constructed in 1945; one (1) packer bin, identified as Point 6-1B (Bin #1), constructed in 1946; one (1) packing machine, identified as Point 6-1C (842LF), constructed in 1945; two (2) circulating tanks, identified as Point 6-1D (842F, 842FA), constructed in 1946; two (2) rotary feeders, identified as Point 6-1E (842M, 842MA), constructed in 1946; and four (4) screw conveyors, identified as Point 6-1F (842LV1, 837V, 837V1, 831V2), constructed in 1945; all modified in 1999, with a nominal capacity of 34 tons per hour, and equipped with one (1) fabric filter system (FF 6-1, baghouse 842L) for particulate control;

(2) One (1) elevator, identified as Point 6-2A (838V1), constructed in 1945; one (1) packer bin, identified as Point 6-2B (Bin #2), constructed in 1946; one (1) packing machine, identified as Point 6-2C (843LF), constructed in 1945; two (2) circulating tanks, identified as Point 6-2D (843F, 843FA), constructed in 1945; two (2) rotary feeders, identified as Point 6-2E (843M, 843MA), constructed before 1971; and four (4) screw conveyors (843LV1, 817V1, 817V3, 817V7), identified as Point 6-2G; constructed in 1945; all modified in 1999, with a nominal capacity of 46 tons per hour, and equipped with one (1) fabric filter system (FF 6-2, baghouse 843L) for particulate control;

(3) One (1) elevator, identified as Point 6-3A (838V2), constructed in 1945; one (1) packer bin, identified as Point 6-3B (Bin #3), constructed in 1946; one (1) packing machine, identified as Point 6-3C (844LF), constructed in 1945; two (2) circulating tanks, identified as Point 6-3D (844F, 844FA), constructed in 1945; two (2) rotary feeders, identified as Point 6-3E (844M, 844MA), constructed before 1971; and one (1) screw conveyor, identified as Point 6-3F (844LV1), constructed before 1971; all modified in 1999, with a nominal capacity of 65 tons per hour, and equipped with one (1) fabric filter system (FF 6-3, baghouse 844L) for particulate control;

(4) One (1) elevator, identified as Point 6-4A (838V3), constructed in 1945; one (1) packer bin, identified as Point 6-4B (Bin #4), constructed in 1946; one (1) packing machine, identified as Point 6-4C (845LF), constructed in 1945; two (2) circulating tanks, identified as Point 6-4D (845F, 845FA), constructed in 1945; two (2) rotary feeders, identified as Point 6-4E (845M, 845MA), constructed before 1971; and one (1) screw conveyor, identified as Point 6-4F (845LV1), constructed before 1971; all modified in 1999, with a nominal capacity of 40 tons per hour, and equipped with one (1) fabric filter system (FF 6-4, baghouse 845L) for particulate control;

(5) Fourteen (14) conveyors, identified as Point 6-5 (842V-846V, 848V, 845V1, 847V1, 847V2, 848V1, 848V2, 849V1, 849V2, 849V3), constructed before 1971, with a nominal capacity of 185 tons per hour, covered by a building enclosure (BE 6-5) to control particulate emissions;

(6) Two (2) palletizers, identified as Point 6-6 (900H, 901H), constructed before 1971, with a nominal capacity of 185 tons per hour, covered by a building enclosure (BE 6-6) to control particulate emissions; and

(7) One (1) truck loader, identified as Point 6-7, constructed before 1971, with a nominal capacity of 185 tons per hour, covered by a building enclosure (BE 6 7) to control particulate emissions.

(n) Eight (8) above-ground, liquid organic waste tanks, identified as Tanks 1-8, all constructed in 1988, except for Tank 8 (Burn Tank #8) which was constructed in 1999, with a combined

nominal storage capacity of 400,000 gallons, with VOC and HAP emissions controlled by an existing vapor balancing system and a closed vent, carbon adsorption vapor system that exhaust to the existing tank farm stack identified as S-001.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment [326 IAC 6-3-2];

(b) Cutting 200,000 linear feet or less of one inch (1'') plate or equivalent [326 IAC 6-3-2];

(c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone [326 IAC 6-3-2]; and

(d) Conveyors as follows [326 IAC 6-3-2]:

(1) Covered conveyors for coal or coke conveying or less than or equal to 360 tons per day;

(2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;

(3) Uncovered coal conveying of less than or equal to 120 tons per day; and

(4) Underground conveyors; and

(e) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 [326 IAC 8-3-2] [326 IAC 8-3-5].

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, approved for construction in 2007, with a maximum capacity of 10 tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) Two (2) hoppers, identified as 295F and 296F.

(2) Two (2) screw conveyors, identified as 295V and 296V.

(3) Two (2) weight feeders, identified as 295V1 and 296V1.

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC.

(5) Two (2) bucket elevators, identified as 296BE and 297BE.

(g) Storage piles for non-hazardous waste alternate fuels, located inside a three-sided building, with a total maximum throughput rate of 10 tons/hr. [326 IAC 6-4]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.4 FACILITY OPERATION CONDITIONS - ALTERNATE RAW MATERIAL FEED SYSTEM, KILN OPERATION

Facility Description [326 IAC 2-7-5(15)]:

(g) One (1) alternate raw material feed system, approved for construction in 2007, operating at a maximum capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

(1) Slag pile, identified as one of the materials identified in Point 1-13, controlled with water mist spray as needed.

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, and exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, and exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(6) Paved delivery roads with particulate emissions controlled by vacuum sweeping.

(h) Kiln Operation, with a nominal capacity of 360 tons of dry raw feed per hour and 208 tons clinker per hour:

(1) One (1) hammermill dryer, identified as Point 3-1C (440G), constructed May 1, 2000, with a nominal capacity of 258 tons per hour, equipped with one (1) electrostatic precipitator (402L) with a 2000 HP motor to control particulate emissions, exhausting to stack 3-1;

(2) One (1) pre-heater, pre-calciner Portland cement kiln, originally constructed in 1966 and modified to the semi-dry system in 2000. The semi-dry kiln system includes one (1) coal-fired calciner tower with staged combustion, identified as Point 3-1B (440PH), and one (1) rotary kiln, identified as Point 3-1A (401B), with a combined nominal rated capacity of 827 million British thermal units per hour. An oxygen enrichment system, constructed in 2006, introduces oxygen into the first stage pre-calciner and the front end of the rotary kiln. The semi-dry kiln system has a nominal rated clinker capacity of 208 tons per hour, using coal and the following supplemental fuel:

(A) Hazardous waste fuel at a maximum rate allowed by the approved Boiler and Industrial Furnace Permit required by 40 CFR 270;

(B) plastic chips, carpet fibers, wood chips, chipped tires, toner, oil filter fluff, cosmetics, and seed corn;

(C) petroleum coke; and

(D) distillate fuel for burner startup activities.

The particulate emissions from the calciner and kiln are controlled by one (1) electrostatic precipitator (402L) with a 2000 HP motor, exhausting to stack 3-1;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] (Continued):

(3) Nine (9) screw conveyors, identified as Point 3-1D (403V-410V, 404FV), constructed in 1968 and modified in 1999; and one (1) kiln dust chamber, identified as Point 3-1F (401BF1), constructed in 1969; each with a nominal capacity of 10 tons per hour; with particulate emissions controlled by one (1) electrostatic precipitator (402L) with a 2000 HP motor, exhausting to stack 3-1;

(4) One (1) return dust bin, identified as Point 3-3A (405F), constructed before 1971 and modified in 1999, with a nominal capacity of 100 tons; one (1) waste dust bin, identified as Point 3-3F (404F), constructed before 1971 and modified in 1999, with a nominal capacity of 75 tons; one (1) hopper, identified as Point 3-3C (445F), constructed May 1, 2000, with a nominal capacity of 60 tons per hour; two (2) bucket elevators, identified as Point 3-3G (411V, 413V), constructed before August 17, 1971, with a nominal capacity of 60 tons per hour; and one (1) rotary feeder, identified as Point 3-3H (405FVV) and one (1) screw conveyor, identified as Point 3-3I (405FVV1), both constructed in 2003, each with a nominal capacity of 60 tons per hour; all equipped with one fabric filter system (FF 3-3, baghouse 403L) to control particulate emissions;

(5) One (1) non-routine raw material dust truck loading station, constructed before 1971 and modified in 1999, covered by a building enclosure (BE 3-25) to control particulate emissions;

(6) One (1) conditioning tower, identified as Point 3-5A (480F), with a nominal capacity of 40 tons per hour, using lime injection to control sulfur dioxide emissions; and one (1) alkali bypass system, identified as Point 3-5B, one (1) hopper, identified as Point 3-5C (484F), with a nominal capacity of 10 tons per hour; one (1) dedust cyclone, identified as Point 3-5D (480FL), with a nominal capacity of 31 tons per hour; four (4) screw conveyors, identified as Point 3-5E (480LV1-LV3, 480V), each with a nominal capacity of 10 tons per hour; one (1) weigh hopper, identified as Point 3-5I (481FF); and one (1) pug mill, identified as Point 3-5J (484L); all constructed May 1, 2000; and one (1) CKD loadout spout, identified as 481L, constructed in 2002; all equipped with one (1) fabric filter system (FF 3-5, baghouse 480L), which exhausts to stack 3-1, to control particulate emissions;

(7) One (1) reject dust bin for cement kiln dust, identified as Point 3-7A (481F), with a nominal capacity of 15 tons, constructed May 1, 2000, equipped with one (1) fabric filter system (FF 3-7, baghouse 483L) to control particulate emissions;

(8) One (1) alkali bypass system cement kiln dust truck loading station, identified as Point 3-8, constructed in 2000, utilizing mist suppression or equivalent dust suppression to control particulate emissions; and

(9) One (1) non-routine CKD loadout station, including one (1) screw conveyor, identified as Point 3-4B (412V), constructed in 2001, with a nominal capacity of 10 tons per hour, utilizing water mist suppression to control particulate emissions.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to all the units listed under Condition D.4.2, except when otherwise specified in 40 CFR 63, Subpart LLL.

D.4.2 Particulate Matter Emission Limitation [326 IAC 20] [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63, Subpart LLL (NESHAP for the Portland Cement Manufacturing Industry), the visible emissions from the following emission units shall be less than 10 percent opacity:

Operations	Units
Alternate Raw Material Feed System	one (1) slag hopper (289F) one (1) weight feeder (289V) three (3) belt conveyors (290V, 291V, 294V) one (1) bucket elevator (292V)

D.4.3 Particulate Matter Emission Limitation [326 IAC 2-2]

(a) Pursuant to CP133-10159-00002, issued on April 16, 1999, and 326 IAC 2-2 (Prevention of Significant Deterioration BACT), the following limitations apply to the following units:

Units	Point	Filterable PM limits	Filterable PM10 Limits
one (1) hammermill dryer (440G) one (1) calciner tower (440PH) one (1) rotary kiln (401B) one (1) alkali bypass system (3-5B)	Stack 3-1	0.016 gr/dscf 91.3 lbs/hr	0.014 gr/dscf 88.7 lbs/hr
one (1) return dust bin (405F) one (1) waste dust bin (404F)	FF 3-3 (403L)	0.020 gr/dscf 1.40 lbs/hr	0.020 gr/dscf 1.40 lbs/hr
one (1) reject dust bin for cement kiln dust (481F)	FF 3-7 (483L)	0.010 gr/dscf 0.64 lbs/hr	0.010 gr/dscf 0.64 lbs/hr

(b) Pursuant to 326 IAC 2-2 (PSD BACT), the following emission units shall use the control methods listed in the table below:

Units	Control Method
one (1) non-routine raw material dust truck loading station	building enclosure (BE 3-25)
one (1) alkali bypass system cement kiln dust truck loading station (3-8)	water mist suppression or equivalent

(c) In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the following emission units shall use water mist suppression, as needed, to control the particulate emissions:

one (1) non-routine CKD loadout station, including one (1) screw conveyor (412V).

D.4.4 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, and listed in Table 1 of 40 CFR 63, Subpart EEE, apply to the units listed in Condition D.4.5 except when otherwise specified in 40 CFR Part 63, Subpart EEE.

D.4.5 NESHAP Emissions Limitation [326 IAC 2-4.1] [326 IAC 20-1][40 CFR Part 63, Subpart EEE]

Pursuant to 326 IAC 2-4.1 (Hazardous Air Pollutants) and 40 CFR 63.1204 (NESHAP for Hazardous Waste Combustors), the emissions from the following units:

Operations	Units	Emission Point
Kiln Operations	*one (1) hammermill dryer (440G)	Stack 3-1
	one (1) calciner tower (440PH) one (1) rotary kiln (401B)	Stack 3-1
	*nine (9) screw conveyors (403V-410V, 404FV)	Stack 3-1
	*one (1) conditioning tower (480F) *one (1) alkali bypass system (3-5B) *one (1) hopper, identified as (484F) *four (4) screw conveyors (480LV1-LV3, 480V) one (1) weight hopper (481FF) one (1) pug mill (484L) one (1) CKD loadout spout (481L)	Stack 3-1

*Note: When these units are not venting through kiln stack (3-1), the emissions from these units shall comply with the requirements in 40 CFR 63, Subpart LLL.

shall be limited as follows:

(a) Dioxin/Furan emissions shall be limited to 0.20 ng TEQ/dscm corrected to seven percent oxygen; or 0.40 ng TEQ/dscm corrected to seven percent oxygen, when the average of the performance test run average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.

(b) Mercury emissions shall be limited to 120 micrograms/dscm corrected to seven percent oxygen.

(c) Lead and cadmium combined emissions shall be limited to 330 micrograms/dscm corrected to seven percent oxygen.

(d) Arsenic, beryllium, and chromium combined emissions shall be limited to 56 micrograms/dscm corrected to seven percent oxygen.

(e) Carbon monoxide and hydrocarbon emissions shall comply with the following:

Carbon monoxide in the bypass duct shall not exceed 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to seven percent oxygen; and in addition, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons in the bypass duct shall not exceed 10 parts per million by volume over an hourly rolling average (monitoring continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane.

(f) Hydrochloric acid and chlorine gas combined emissions shall not exceed 130 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.

(g) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.

(h) Visible emissions shall be limited to twenty percent (20%) opacity.

D.4.6 Alternate Emission Limitations [40 CFR 63.1206, Subpart EEE]

Pursuant to 40 CFR 63, Subpart EEE, the emission standards and operating requirements of 40 CFR 63, Subpart EEE, shall not apply during those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has:

(a) Submitted a one-time written notice to the Administrator documenting compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129; and

(b) Documented in the operating record that the source is complying with such applicable requirements in lieu of the emission standards and operating requirements of this subpart.

During those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has complied with (a) and (b) above, the following conditions shall apply instead of the limits listed in Condition D.4.5.

(a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.

(b) Visible emissions shall be limited to twenty percent (20%) opacity.

(c) Dioxin/Furan emissions shall be limited to 8.7 x 10-11 grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen; or 1.7 x 10-10 grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.

(d) The kiln shall be operated such that the temperature of the gas at the inlet to the kiln's particulate matter control device does not exceed the average of the run average temperatures determined during the performance tests required in Condition D.4.24, based upon a 3-hour rolling average.

D.4.7 General Provisions Relating to NESHAP [326 IAC 14-1] [40 CFR Part 61, Subpart A]

The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14-1, apply to the facilities described in Condition D.4.8 except when otherwise specified in 40 CFR Part 61, Subpart FF.

D.4.8 National Emission Standard for Benzene Waste Operations [326 IAC 14] [40 CFR Part 61, Subpart FF]

Pursuant to 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations, the Permittee shall design, install, operate and maintain the kiln (3-1A, 401B) to destroy the benzene contained in waste streams meeting the criteria specified in 40 CFR 61.340(b).

(a) Pursuant to 40 CFR 61.348(a)(1)(iii), the Permittee shall destroy the benzene in the waste stream by incinerating the waste in a cement kiln that achieves a destruction efficiency of ninety-nine percent (99%) or greater for benzene.

(b) As provided in 40 CFR 61.348(a)(4), the Permittee may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with part (a) of this condition.

(c) Pursuant to 40 CFR 61.348(c), the Permittee shall demonstrate that the cement kiln achieves ninety-nine percent (99%) destruction efficiency by conducting performance tests using test methods and procedures specified in 40 CFR 61.355(f) and Condition D.4.24.

(d) Pursuant to 40 CFR 61.348(e)(3), the Permittee may operate the cement kiln with an opening that is not sealed and kept closed at all times if the cover and closed-vent system operate such that the cement kiln is maintained at a pressure less than atmospheric pressure and the following conditions are met:

(1) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(2) The opening is designed to operate with no detectable emissions as indicated by a instrument reading of less than 500 ppmv above background, as determined at least once per year by the methods specified in 40 CFR 60.355(h) and Condition D.4.24; and

(3) The pressure is monitored continuously to ensure that the pressure in the treatment process unit remains below atmospheric pressure.

(e) Pursuant to 40 CFR 61.348(g), the Permittee shall monitor the cement kiln in accordance with the applicable requirements in 40 CFR 61.354(a)(2) and the following:

(1) The Permittee shall install, calibrate, operate, and maintain according to manufacturer's specifications equipment to continuously monitor and record a process parameter (or parameters) that indicates proper system operation.

(2) The Permittee shall inspect at least once each operating day the data recorded by the equipment to ensure that the kiln is operating properly.

D.4.9 Sulfur Dioxide Emission Limitations [326 IAC 2-2]

Pursuant to CP133-10159-00002, issued on April 16, 1999, the SO2 emissions from Stack 3-1 of the semi-dry process kiln and calciner tower shall not exceed 4.13 pounds of SO2 per ton of clinker produced and 1.01 lbs/MMBtu. Combined with the clinker production limit of 1,606,000 tons/yr, this is equivalent to 3,317 tons/yr of SO2 emissions. This limit ensures that the increase in SO2 emissions from the 1999 modification does not exceed 40 tons/yr. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

D.4.10 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO2 Emissions Limitations), the SO2 emissions from the kiln operation shall comply with the following:

(a) Less than 6.0 pounds per MMBtu heat input, when combusting coal or coal blend.

(b) Less than 0.5 pounds per MMBtu heat input, when combusting fuel oil.

Compliance shall be demonstrated on a calendar month average.

D.4.11 Nitrogen Oxide Emission Limitations [326 IAC 2-2]

Pursuant to CP133-10159-00002, issued on April 16, 1999, the NOx emissions from Stack 3-1 of the semi-dry process kiln shall be controlled by the low-NOX calciner and good combustion practices and shall not exceed 5.47 pounds per ton of clinker produced. Combined with the clinker production limit of 1,606,000 tons/yr, this is equivalent to 4,428 tons/yr of NOx emissions. This limit ensures that the increase in NOx emissions from the 1999 modification does not exceed 40 tons/yr. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

D.4.12 Nitrogen Oxide Emissions [326 IAC 10-3]

The preheater, precalciner cement kiln (3-1A, 401B) is subject to 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories) because it has a process rate greater than twenty-two (22) tons per hour. Pursuant to this rule, the following requirements apply:

(a) Pursuant to 326 IAC 10-3-3(a)(3), the Permittee shall use semi-dry precalciner kiln processing and the NOx emissions from the cement kiln shall not exceed 5.10 pounds per ton of clinker produced during the ozone control period, which is defined as May 31 to September 30 for the year of 2004 and during the period from May 1 to September 30 for every year after.

(b) Pursuant to 326 IAC 10-3-4, beginning May 31, 2004 and each ozone control period thereafter, the NOx emissions during the ozone control period of each year shall be monitored using a NOx CEMS in accordance with 40 CFR 60, Subpart A and 40 CFR 60, Appendix B. The Permittee shall also comply with the quality assurance procedures specified in 40 CFR 60, Appendix F and 326 IAC 3, as applicable.

D.4.13 Carbon Monoxide Emission Limitations [326 IAC 2-2]

Pursuant to CP133-10159-00002, issued on April 16, 1999, the CO emissions from Stack 3-1 of the semi-dry process kiln shall be controlled by good combustion practices and shall not exceed 3.65 pounds per ton of clinker produced. Combined with the clinker production limit of 1,606,000 tons/yr, this limitation is equivalent to 2,930 tons/yr of CO emissions. This limit ensures that the increase in CO emissions from the 1999 modification does not exceed 100 tons/yr. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

D.4.14 Lead Emissions [326 IAC 2-2]

The emissions of lead from the kiln shall be less than 0.00106 pounds per ton of clinker produced. This is equivalent to lead emission of less than 0.85 tons per year. This limit ensures that the lead emission increase from the 1999 modification is below the PSD significant threshold of 0.6 tons/yr. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) do not apply.

D.4.15 Beryllium Emissions [326 IAC 2-2]

The emissions of beryllium from the kiln shall be less than 7.8 x 10-7 pounds per ton of clinker produced. This is equivalent to beryllium emission of less than 0.00063 tons per year. This limit ensures that the beryllium emission increase from the 1999 modification is below the PSD significant threshold of 0.0004 tons/yr. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) do not apply.

D.4.16 Mercury Emissions [326 IAC 2-2]

The emissions of mercury from the kiln shall be less than 0.000224 pounds per ton of clinker produced. This is equivalent to mercury emissions of less than 0.18 tons per year. This limit ensures that the mercury emission increase from the 1999 modification is below the PSD significant threshold of 0.1 tons/yr. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) do not apply.

D.4.17 Operation Standards [326 IAC 2-2]

Pursuant to CP133-10159-00002, issued on April 16, 1999, and 326 IAC 2-2 (Prevention of Significant Deterioration BACT), the Permittee shall comply with the following throughput limitations:

(a) the raw material feed input rate to the kiln system shall not exceed 3,149,427 tons per twelve (12) consecutive month period with compliance determined at the end of each month;

(b) the total coal input rate to the kiln and calciner burner systems shall not exceed 313,552 tons per twelve (12) consecutive month period with compliance determined at the end of each month; and

(c) the clinker production rate shall not exceed 1,606,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.4.18 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the following facilities shall be limited as follows when operating at the listed process weight rate:

Processes	Process Weight Rate (ton/hr) (P)	Allowable Emissions For All Units Combined (lbs/hour) (E)
Alternate Raw Material Feed System	20	30.5
Kiln Operations, excluding the units venting through stack 3-1, baghouses 403L and 483L	208	58.9

NOTE: Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed that shown in this table, provided the concentration

of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

The limitations for these facilities were calculated using one of the following equations:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.4.19 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices. If the Operations and Maintenance Plan required by Condition D.4.25 is developed in accordance with Section B - Preventive Maintenance Plan, then once it has been developed, the Operations and Maintenance Plan shall satisfy this condition.

Compliance Determination Requirements

D.4.20 Particulate and Nitrogen Oxide (NOx)

(a) In order to comply with Conditions D.4.2, D.4.3(a), and D.4.5, the electrostatic precipitator for particulate control shall be in operation and control emissions from all the emission units which vent through kiln stack (Stack 3-1) at all times that these facilities are in operation.

(b) In order to comply with Conditions D.4.2, D.4.3 (a), and D.4.5, the baghouses for particulate control shall be in operation and control emissions from the units associated with baghouses 403L and 483L all times that these facilities are in operation.

(c) In order to comply with Conditions D.4.11 and D.4.12, the low-NOx calciner shall be in operation and control emissions from the kiln (3-1A, 401B) at all times that the kiln (3-1A, 401B) is in operation.

D.4.21 Water Spray Operating Condition

Pursuant to CP133-10159-00002, issued April 16, 1999, and in order to demonstrate compliance with Conditions D.4.2, D.4.3(b), and D.4.5, the water mist spray systems associated with the kiln operation shall be operated on an as needed basis while its associated equipment is in operation and the temperature is above 35 degrees Fahrenheit.

D.4.22 Lime Injection Operation

Pursuant to CP-133-10159-00002, issued April 16, 1999, the lime injection system associated with the conditioning tower (3-5A) shall be operated as necessary to demonstrate compliance with the sulfur dioxide limit in Conditions D.4.9 and D.4.10.

D.4.23 Gas Suspension Absorber

Pursuant to CP-133-10159-00002, issued April 16, 1999, the gas suspension absorber system associated with the alkali bypass system (3-5B-F) shall be operated at all times when the kiln gases are exhausting through the bypass system.

D.4.24 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63, Subpart EEE] [40 CFR 61, Subpart FF]

(a) In order to demonstrate compliance with Conditions D.4.5 and D.4.8, the Permittee shall demonstrate compliance by commencing performance test for the kiln (stack 3-1), in accordance with 40 CFR 63.1207, 40 CFR 63.1349, and Section C - Performance Testing. These tests shall also establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. A comprehensive test shall be repeated once every five (5) years and dioxin/furan, PM, PM10, and opacity tests shall be repeated once every two and one half (2 ½) years from the date of the last valid compliance demonstration.

During each stack test required above, the following items shall be performed:

(1) Certified continuous opacity monitoring (COM) data shall be observed and recorded or EPA Method 9 opacity tests shall be performed.

(2) The kiln temperature shall be measured and recorded at the first stage outlet. The oxygen concentration shall be measured and recorded at the bypass duct.

(3) The kiln feed rate shall be measured and recorded.

(4) Pursuant to 326 IAC 3-6-3(b)(2), 40 CFR 63.7(e) and 40 CFR 63.1207(g), the tests shall be conducted under conditions representative of the extreme range of normal operating conditions.

(5) Pursuant to 326 IAC 3-6-3(b)(3), during the performance tests, the kiln must be operating at 95 percent of its maximum production capacity or other capacities or conditions specified and approved by IDEM to be considered a valid test.

(b) Certified continuous opacity monitoring (COM) data shall be performed concurrently with the particulate matter compliance tests for Stack 3-1 of the semi-dry process kiln (3-1A, 401B) unless meteorological conditions require rescheduling the opacity tests to another date.

(c) In order to demonstrate compliance with Condition D.4.8, the Permittee shall demonstrate that the cement kiln achieves ninety-nine percent (99%) destruction efficiency by conducting performance tests using test methods and procedures specified in 40 CFR 61.355(f).

(d) Pursuant to 40 CFR 61.348(e)(3), the Permittee must demonstrate no detectable emissions for openings in the cement kiln by performing a test, at least once per year, in accordance with 40 CFR 61.355(h).

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.25 NESHAP Monitoring Requirements [326 IAC 20] [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall maintain a written operation and maintenance plan for the units listed in Condition D.4.2 by June 14, 2002, which is the compliance date for the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry, or within 180 days after startup, whichever is later. The plan shall include the following information:

(a) Procedures for proper operation and maintenance of the affected sources and associated air pollution control device(s) in order to meet the emission limits in Condition D.4.2; and

(b) Procedures to be used to periodically monitor the facilities listed in this section, which are subject to opacity standards under 40 CFR 63.1348. Such procedures must include the following provisions:

(1) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.

(2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(3) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(4) If visible emissions are observed during any Method 22 test, the Permittee must conduct a 6-minute test of opacity in accordance with 40 CFR 60, Subpart A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.

(5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs (1) through (4) of this section for each such conveying system transfer point located within the building, or for the building itself, according to paragraph (7) of this section.

(7) If visible emissions from a building are monitored, the requirements of paragraphs (1) through (4) of this section apply to the monitoring of the building, and the Permittee 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.

(c) Corrective actions to be taken when required by paragraph (b).

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

D.4.26 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 20-1] [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2, and 40 CFR 63, Subpart EEE, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring the opacity from the kiln, pursuant to 326 IAC 3-5. The continuous monitoring system shall be installed and operational prior to conducting the performance tests required in Condition D.4.24. The continuous monitoring system shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c). 326 IAC 3-5 is not federally enforceable.

(b) Pursuant to 40 CFR 63.1209(a)(1)(i), the Permittee shall install, calibrate, maintain, and operate a carbon monoxide continuous emissions monitor to demonstrate continuous compliance with the carbon monoxide limit specified in 40 CFR 63 and Condition D.4.5. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the carbon monoxide level to 7 percent oxygen.

In the event that the carbon monoxide continuous emissions monitor fails, the Permittee shall monitor the oxygen content and temperature once per hour. Pursuant to 40 CFR 63.1209(a)(6)(iii)(B), the Permittee is not subject to the CEMS requirements of 40 CFR 63, Subpart EEE during periods of time that the Permittee meets the requirements of 40 CFR 63.1206(b)(1)(ii). If the oxygen content or temperature is outside the range established in the latest compliance stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(c) The Permittee shall comply with all other monitoring requirements pursuant to 40 CFR 63.1209.

(d) Pursuant to CP133-10159-00002 issued April 16, 1999 and 326 IAC 2-2 (Prevention of Significant Deterioration), and 326 IAC 12, and in order to comply with Conditions D.4.2(b), D.4.5(h), D.4.9, D.4.10, D.4.11, and D.4.12, the Permittee shall continuously monitor and record the following parameters from the semi-dry process kiln:

(1) Opacity;

(2) Sulfur dioxide emission rates; and

(3) Nitrogen oxides.

The continuous monitors shall be operated according to Conditions C.13 and C.14.
In the event that the sulfur dioxide continuous emissions monitor fails, the Permittee shall perform fuel sampling and analysis on each new shipment of fuel. If lime injection is used, the lime injection rate shall be monitored once every hour. If the lime injection rate is outside the range established in the latest compliance stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

In the event that the nitrogen oxide continuous emissions monitor fails, the Permittee shall monitor the oxygen content and temperature once per hour. If the oxygen content or temperature is outside the range established in the latest compliance stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.4.27 NESHAP Monitoring Requirements [326 IAC 20] [40 CFR 63, Subpart EEE]

Upon issuance of the permit, the Permittee shall perform the following monitoring requirements:

(a) The Permittee shall maintain a written operations and maintenance plan for the kiln. The plan shall include the following information:

(1) Procedures for proper operation, inspection, maintenance, and corrective measures for all components of the kiln and associated air pollution control device(s) in order to meet the emissions limits in Conditions D.4.4 and D.4.5; and

(2) Procedures for operating and maintaining the kilns in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

(b) The Permittee shall perform the monitoring requirements specified in 40 CFR 63.1209.

D.4.28 Visible Emissions Notations

(a) Once per day visible emission notations of each baghouse stack exhaust associated with the kiln operations, excluding the kiln exhaust stack (3-1), shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.4.29 ESP Parametric Monitoring

(a) The Permittee shall monitor and record the total KVA (Kilovolt-Amperes) of the ESP every minute when the kiln is in operation as provided in 326 IAC 1-5-3. When for any one rolling hourly average KVA is below the normal minimum of 153, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. The Compliance Response Plan shall also contain troubleshooting contingency and response steps for when any one (1) minute reading drops five (5) KVA below the predetermined baseline. This parameter can be adjusted to incorporate values determined from a compliant stack test. A KVA reading or a rolling hourly average KVA that is below the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the total power shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

(b) An inspection of the ESP shall be performed at least twice per year. Inspections required by this condition shall be performed at least three (3) months apart. A record shall be kept of the results of the inspections and the number of ESP parts replaced.

(c) Pursuant to CP133-10159-00002, issued April 16, 1999, in the event that an ESP failure has been observed:

(1) All reasonable measures shall be taken to correct, as expeditiously as practicable, the condition causing the emissions to exceed the allowable limits.

(2) All possible steps shall be taken to minimize the impact of the excessive emissions on ambient air quality which may include, but not limited to, curtailment of operations and/or shutdown of the facility.

D.4.30 Baghouse Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (403L and 483L) used in conjunction with the kiln operation at least once per day when the controlled units are in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1 and 8 inches of water, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.31 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the kiln operation. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.4.32 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.33 Record Keeping Requirements

(a) To document compliance with 40 CFR 63, Subpart EEE, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:

(1) The Permittee shall maintain files of all information (including all reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).

(2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:

(A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.

(B) All records of applicability determination, including supporting analyses.

(3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).

(b) Pursuant to 40 CFR 61.356(e)(1), the Permittee shall maintain a statement signed and dated by the Permittee certifying that the treatment unit (cement kiln) is designed to operate at the documented performance level when the waste stream entering the unit is at the highest stream flow rate and benzene content expected to occur. The documentation shall be retained for the life of the cement kiln.

(c) Pursuant to 40 CFR 61.356(e)(3), the Permittee shall maintain all test information necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(3)(i) through (iv).

(d) Pursuant to 40 CFR 61.356(i), the Permittee shall maintain documentation that includes the following information regarding the cement kiln operation:

(1) Dates of startup and shutdown of the units.

(2) For a process parameter monitored in accordance with 40 CFR 61.354(a)(2), the Permittee shall maintain records that include a description of the operating parameter (or parameters) to be monitored to ensure that the units will be operated in conformance with the standard in 40 CFR 61.348(c) and the units' design specifications, and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the equipment.

(3) Periods when the units are not operated as designed.

(e) Pursuant to 326 IAC 10-3-5 and to document compliance with Condition D.4.12, beginning May 31, 2004 and each ozone control period thereafter, the Permittee shall maintain records of the following:

(1) Emissions, in pounds of NOx per ton of clinker produced from each affected Portland cement kiln; and

(2) Daily clinker production records.

(f) To document compliance with Condition D.4.17, the Permittee shall maintain records of the raw material feed input to the kiln system, the total coal input rate to the kiln and calciner burner systems, and the clinker production rate in order to establish compliance with the limits established in Condition D.4.17.

(g) To document compliance with Conditions D.4.24, D.4.26, D.4.28, and D.4.29, the Permittee shall maintain records in accordance with (1) through (8) below. Records shall be complete and sufficient to establish compliance with the limits established in this section.

(1) Data and results from the most recent stack test.

(2) All continuous emissions monitoring data.

(3) Total KVA of ESP on a one (1) hour rolling average.

(4) The results of the ESP inspections required under Condition D.4.29(b).

(5) Visible emission notations once per day for all baghouses.

(6) Method 9 opacity readings for the kiln whenever required by this permit.

(7) All preventive maintenance measures taken.

(8) All response steps taken and the outcome for each.

(h) To document compliance with Condition D.4.30, the Permittee shall maintain once per day records of the total static pressure drop across the baghouses during normal operation.

(i) To document compliance with Condition D.4.31, the Permittee shall maintain records of the results of the inspections required under Condition D.4.31.

(j) To document compliance with 40 CFR 63, Subpart LLL, the Permittee shall maintain all records required by 40 CFR 63.1355. These records include the following:

(1) The Permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355(a) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).

(2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:

(A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.

(B) All records of applicability determination, including supporting analyses.

(k) To document compliance with Condition D.4.19, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

(l) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.34 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.4.17 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A quarterly summary of excess opacity emissions, as defined in 326 IAC 3-5-7 (and 40 CFR 60.63(d) if applicable), from the continuous monitoring system, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.

(c) The Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63, Subpart A. This report shall be submitted when CMS downtime is 5% or greater in accordance with 40 CFR 63.10(e)(3)(viii).

(d) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total continuous monitoring system (CMS) downtime for any CO, hydrocarbon, SO2, NOx, CEM, or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee

shall submit an excess emissions and CMS performance report along with the summary report.

(e) To document compliance with 326 IAC 2-4.1 and 40 CFR 63, Subpart EEE, the Permittee shall report the information required by 40 CFR 63.1211, including, but not limited to the following:

(1) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.

(2) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1207.

(3) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.

(4) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, 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.

(5) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.

(6) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.

(f) Pursuant to 40 CFR 61.357(d)(7)(ii) and (v), the Permittee shall submit to the US EPA and IDEM, OAQ a quarterly report containing the following information:

(1) Each 3-hour period of operation, during times when waste is being combusted, during which the average value of the monitored parameter is outside the range of acceptable values or during which the cement kiln is not operating as designed

(2) Any period, during times when waste is being combusted, in which the pressure in cement kiln is equal to or greater than atmospheric pressure.

(g) Pursuant to 326 IAC 10-3-5, the Permittee shall submit the following:

(1) by May 31, 2004, the Permittee shall submit the following information:

(A) The identification number and type of each unit subject to this rule;

(B) The name and address of the plant where the unit is located;

(C) The name and telephone number of the person responsible for demonstrating compliance with this rule; and

(D) Anticipated control measures, if any.

(2) A report documenting the total NOx emissions and the average NOx emission rate for the ozone control period of each year by October 31, beginning in 2003 and each year thereafter. For Portland cement kilns complying with 326 IAC 10-3-3(a)(1), estimated emissions and emissions rate shall be determined in accordance with 326 IAC 10-3-3(d) or from CEMS data and a certification that the low NOx calciner was installed, operated, and maintained according to 326 IAC 10-3 shall be included with this report.

(h) To document compliance with 40 CFR 63, Subpart LLL, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:

(1) The plan required by 40 CFR 63.1350 shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry, or upon startup, whichever is later.

(2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.

(3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.

(4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.

(5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317)233-5674 or facsimile (FAX) transmission at (317)233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, 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.

(i) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Pursuant to 40 CFR 63.10(d)(5)(i) and (ii), the reports submitted by the Permittee shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.8 FACILITY OPERATION CONDITIONS - INSIGNIFICANT ACTIVITIES

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment [326 IAC 6-3-2];

(b) Cutting 200,000 linear feet or less of one inch (1'') plate or equivalent [326 IAC 6-3-2];

(c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone [326 IAC 6-3-2]; and

(d) Conveyors as follows [326 IAC 6-3-2]:

(1) Covered conveyors for coal or coke conveying or less than or equal to 360 tons per day;

(2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;

(3) Uncovered coal conveying of less than or equal to 120 tons per day; and

(4) Underground conveyors; and

(e) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 [326 IAC 8-3-2] [326 IAC 8-3-5].

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, approved for construction in 2007, with a maximum capacity of 10 tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) Two (2) hoppers, identified as 295F and 296F.

(2) Two (2) screw conveyors, identified as 295V and 296V.

(3) Two (2) weight feeders, identified as 295V1 and 296V1.

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC.

(5) Two (2) bucket elevators, identified as 296BE and 297BE.

(g) Storage piles for non-hazardous waste alternate fuels, located inside a three-sided building, with a total maximum throughput rate of 10 tons/hr. [326 IAC 6-4]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), Particulate emissions from the listed facilities (a) through (d), and (f) shall not exceed the pounds per hour limitation calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

D.8.2 Cold Cleaner Operations [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for degreasers constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.8.3 Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs and constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^{o}C) (one hundred degrees Fahrenheit (100^{o}F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{o}C) (one hundred degrees Fahrenheit (100^{o}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{o}C) (one hundred degrees Fahrenheit (100^{o}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{o}C) (one hundred twenty degrees Fahrenheit (120^{o}F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility constructed after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification and a Part 70 Minor Permit Modification

Source Description and Location

Source Name:	Lone Star Industries, Inc. dba Buzzi Unicem USA
Source Location:	3301 South County Road 150 West, Greencastle, Indiana 46135
County:	Putnam
SIC Code:	3241, 1422
Operation Permit No.:	T133-6927-00002
Operation Permit Issuance Date:	April 14, 2004
Minor Source Modification No.:	133-24896-00002
Minor Permit Modification No.:	133-25090-00002
Permit Reviewer:	ERG/YC

Existing Approvals

The source was issued Part 70 Operating Permit No. 133-6927-00002 on April 14, 2004. The source has since received the following approvals:

(a) First Minor Permit Modification #133-19255-00002, issued on September 20, 2005.

(b) First Administrative Amendment #133-21744-00002, issued on October 28, 2005.

(c) Second Administrative Amendment #133-22491-00002, issued on February 13, 2006.

(d) Third Administrative Amendment #133-23605-00002, issued on December 7, 2006.

(e) Second Minor Permit Modification #133-23892-00002, issued on May 7, 2007.

(f) First Significant Permit Modification #133-24198-00002, on public notice.

County Attainment Status

The source is located in Putnam County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(a) Putnam County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.

(b) Volatile organic compounds (VOC) emissions and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Putnam County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Putnam County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 (i.e., portland cement plants), fugitive emissions are counted toward the determination of PSD applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	356
PM10	331
SO_2	3,326
VOC	19.2
CO	2,940
NO_x	4,402

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2) because at least one of the regulated pollutants is emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) These emissions are based upon the technical support document (TSD) for T133-6927-00002 issued on April 14, 2004.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/year)
A Single HAP	Greater than 10
Total	Greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Emissions (tons/year)
PM	68
PM10	68
SO_2	196
VOC	0.0
CO	509
NO_x	1,695
A Single HAP	Not Reported
Total HAP	Not Reported

Description of Proposed Modification

Lone Star is an existing Portland cement manufacturing plant that is a major source for HAPs. The Permittee previously requested permission to redesign the existing alternate raw material feed system (permitted to construct in MSM #133-16137-00002, issued on August 29, 2002) and the existing non-hazardous waste alternate fuels handling process (permitted to construct and operate in MPM #133-19255-00002, issued on September 20, 2005). The Permittee is constructing a three-sided building to store non-hazardous alternate fuels to minimize the exposure of these fuels to the weather. With this building, Lone Star is also upgrading the delivery systems for both the alternate raw materials and the non-hazardous fuels. As a result of these proposed changes, the description of the alternate raw material feed system and the non-hazardous waste alternate fuels handling process included in their Part 70 permit has been revised to read as follows:

(g) One (1) alternate raw material feed system, approved for construction in 2007, operating at a maximum capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

(1) Slag pile, identified as one of the materials identified in Point 1-13, controlled with water mist spray as needed.

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(6) Paved delivery roads with particulate emissions controlled by vacuum sweeping.

Insignificant activities:

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, approved for construction in 2007, with a maximum capacity of 10 tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) Two (2) hoppers, identified as 295F and 296F, with emission uncontrolled.

(2) Two (2) screw conveyors, identified as 295V and 296V, with emission uncontrolled.

(3) Two (2) weight feeders, identified as 295V1 and 296V1, with emission uncontrolled.

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) Two (2) bucket elevators, identified as 296BE and 297BE, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(g) Storage piles for non-hazardous waste alternate fuels, located inside a three-sided building, with a total maximum throughput rate of 10 tons/hr. [326 IAC 6-4]

The Permittee stated that the description for the existing non-hazardous waste alternate fuels handling process in their current Part 70 permit is incorrect. The Permittee stated that the maximum throughput rate for this handling process should be 10 tons per hour, not 4 tons per hour as stated in their current permit. The system was designed to replace up to 4 tons per hour of the coal usage in the kiln. Due to the low heating content of the non-hazardous waste alternate fuel (plastic chips, wood chips, chipped tires, etc), the alternate fuels handling process was designed to handle a maximum of 10 tons per hour of the alternate fuels. Therefore, the description of the maximum throughput rate for this handling process has been revised.

The following conditions are applicable to the existing alternate raw material feed system in T133-6927-00002, issued on April 14, 2004:

(1) Condition D.4.3(c) - the total alternate raw material (slag) throughput is limited to less than 87,600 tons per year.

(2) Condition D.4.3(d) - the Permittee shall apply water suppression to control the emissions from the slag storage piles.

These conditions were established as PSD minor limits in MSM #133-16137-00002, issued on August 29, 2002, for the construction of the alternate raw material feed system. The existing secondary crusher system for raw material (CS-1) was permitted to construct in MSM #133-14452-00002, issued on February 26, 2002. Since both the alternate raw material feed system and the secondary crusher system (CS-1) were permitted to construct in 2002, the total PTE from these two (2) systems are limited to less than 15 tons per year for PM10 and less than 25 tons per year for PM. Conditions D.4.3(c) and D.4.3(d) in T133-6927-00002, issued on April 14, 2004, serves as PSD minor limits to limit the PM/PM10 emissions from the existing alternate raw material feed system. Since the equipment associated with the existing alternate raw material feed system will be removed, Conditions D.4.3(c) and D.4.3(d) in T133-6927-00002 have been removed also. The uncontrolled PTE of the existing secondary crusher system (CS-1) is less than PSD significant modification thresholds and there are no existing PSD minor limits for the existing secondary crusher system (CS-1). Therefore, this modification will not affect any existing requirements in T133-6927-00002, issued on April 14, 2004, for the secondary crusher system (CS-1).

The uncontrolled potential to emit of this modification (consisting of the new alternate raw material feed system and a new non-hazardous waste alternate fuels handling process) is less than 15 tons per year for PM10 and less than 25 tons per year for PM. No PSD minor limits are required for the new alternate raw material feed system and the new non-hazardous waste alternate fuels handling process.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 5).

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	8.24
PM10	3.00
SO_2	-
VOC	-
CO	-
NO_x	-

This modification is being performed through a Part 70 Minor Source Modification pursuant to 326 IAC 2-7-10.5(d) because the potential to emit PM of this modification is greater than 5.0 tons per year and less than 25 tons per year. The permit modification is being performed through a Part 70 Minor Permit Modification pursuant to 326 IAC 2-7-12(b) because this modification meets all the requirements in 326 IAC 2-7-12(b)(1).

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Emissions (tons/year)					
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X
Alternate Raw Material Feed System	2.59	1.14	-	-	-	-
Non-Hazardous Waste Alternate Fuels Handling Process	2.46	1.09	-	-	-	-
Storage Piles - Fugitive	0.55	0.26	-	-	-	-
Paved Roads - Fugitive	2.64	0.51	-	-	-	-
Total PTE of this Modification	8.24	3.00	-	-	-	-
PSD Major Modification Thresholds	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD major modification thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) The alternate raw material received is slag, which does not meet the definition of "nonmetallic mineral" in 40 CFR 60.671. Therefore, the New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plants (40 CFR 60.670-676, Subpart OOO) are not included in this modification.

(b) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this modification.

(c) Prior to the modification, the existing alternate raw material feed system was subject to the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Portland Cement Manufacturing Industry (40 CFR 63, Subpart LLL and 326 IAC 20-27). The proposed new alternate raw material feed system remains subject to 40 CFR 63, Subpart LLL.

Pursuant to 40 CFR 63.1340, the affected sources include each conveying system transfer point and bulk loading or unloading system. Therefore, the transfer points of the slag hopper, weight feeder, the belt conveyors, and the bucket elevator of the new alternate raw material feed system in this modification are subject to 40 CFR 63, Subpart LLL and shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten (10) percent, pursuant to 40 CFR 63.1348.

(d) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR 61, 63) included in this modification.

(e) This proposed alternate raw material feed system or the non-hazardous waste alternate fuels handling process does not involve a pollutant-specific emissions unit:

(1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and

(2) that is subject to an emission limit and has a control device that is necessary to meet that limit.

Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is an existing PSD major source and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). The potential to emit from this modification is less than 25 tons per year for PM and less than 15 tons per year for PM10. Therefore, this modification is not subject to the requirements of 326 IAC 2-2 (PSD).

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the alternate raw material feed system and the non-hazardous waste alternate fuels handling process shall not exceed the emission limits specified in the table below:

Unit Description	Max. Process Weight Rate (tons/hr)	Allowable Particulate Emission Rate (lbs/hr)
alternate raw material feed system	20	30.5
non-hazardous waste alternate fuels handling process	10	19.2

The allowable particulate emission rates were calculated using the equation below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

According to the emissions calculations (see Appendix A), the uncontrolled potential to emit PM from each of the alternate raw material feed system and the non-hazardous alternate waste fuels handling process is less than the above limit. Therefore, the proposed alternate raw material feed system and the non-hazardous waste alternate fuels handling process are in compliance with 326 IAC 6-3-2.

326 IAC 6-4 (Fugitive Dust Emissions)

The modification is subject to 326 IAC 6-4 (Fugitive Dust Emissions) because the source maintains paved roads and material storage piles. The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

Although constructed after December 13, 1985, the provisions of 326 IAC 6-5 do no apply to this modification because the fugitive emissions from this modification are less than 5 tons per year.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 133-6927-00002. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

. . .

(g) One (1) alternate raw material feed system, ~~constructed in 2002~~ **approved for construction in 2007**, operating at a ~~nominal~~ **maximum** capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

. . .

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

~~(2) Four (4) loading hoppers (485F, 486F, 487F, and 488F), identified as Point 1-29A, with emissions controlled with water mist spray as needed; six (6) belt conveyors (485V, 486V, 487V, 488V, 490V, and 491V), identified as Point 1-29B; one (1) weigh belt (489V), identified as Point 1-29C; one (1) bucket elevator (492V), identified as Point 1-29D; and one (1) enclosed screw conveyor (495V), identified as Point 1-29E, controlled with covers and enclosures;~~

~~(3) One (1) covered belt conveyor (494V), identified as Point 3-1D, exhausting to the hammermill dryer and through to the electrostatic precipitator (402L) to control particulate emissions, which has a maximum flow rate of 700,000 acfm, exhausting to stack 3-1; and~~

~~(4)~~**(6)** Paved delivery roads with particulate emissions controlled by vacuum sweeping.

. . .

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

. . .

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, ~~constructed in 2004~~ **approved for construction in 2007**, with a maximum capacity of ~~4.0~~ **10** tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) ~~One (1)~~ **Two (2)** hopper**s, identified as 295F and 296F.**

(2) ~~One (1)~~ **Two (2)** screw conveyor**s, identified as 295V and 296V.**

(3) ~~One (1)~~ **Two (2)** ~~rotary~~ **weight** feeder**s, identified as 295V1 and 296V1.**

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC.

(5) Two (2) bucket elevators, identified as 296BE and 297BE.

(g) ~~One (1) alternate fuels storage~~ **Storage** pile**s for non-hazardous waste alternative fuels, located inside a three-sided building,** with a **total** ~~maximum capacity of 1,000 tons of material and a~~ maximum throughput rate of ~~4.0~~ **10** tons/hr. [326 IAC 6-4]

SECTION D.4 FACILITY OPERATION CONDITIONS - ALTERNATE RAW MATERIAL FEED SYSTEM, KILN OPERATION

Facility Description [326 IAC 2-7-5(15)]:

(g) One (1) alternate raw material feed system, ~~constructed in 2002~~ **approved for construction in 2007**, operating at a ~~nominal~~ **maximum** capacity of 20 tons per hour each, and consisting of the following pieces of equipment:

. . .

(2) One (1) slag hopper, identified as 289F, with emissions uncontrolled.

(3) One (1) weight feeder, identified as 289V, with emissions uncontrolled.

(4) Three (3) covered belt conveyors, identified as 290V, 291V, and 294V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

(5) One (1) bucket elevator, identified as 292V, exhausting to kiln stack 3-1. The exhaust from Stack 3-1 is controlled by electrostatic precipitator 402L.

~~(1) Slag pile, identified as one of the materials identified in Point 1-13, controlled with water mist spray as needed;~~

~~(2) Four (4) loading hoppers (485F, 486F, 487F, and 488F), identified as Point 1-29A, with emissions controlled with water mist spray as needed; six (6) belt conveyors (485V, 486V, 487V, 488V, 490V, and 491V), identified as Point 1-29B; one (1) weigh belt (489V), identified as Point 1-29C; one (1) bucket elevator (492V), identified as Point 1-29D; and one (1) enclosed screw conveyor (495V), identified as Point 1-29E, controlled with covers and enclosures;~~

~~(3) One (1) covered belt conveyor (494V), identified as Point 3-1D, exhausting to the hammermill dryer and through to the electrostatic precipitator (402L) to control particulate emissions, which has a maximum flow rate of 700,000 acfm, exhausting to stack 3-1; and~~

~~(4)~~**(6)** Paved delivery roads with particulate emissions controlled by vacuum sweeping.

. . .

D.4.2 Particulate Matter Emission Limitation [326 IAC 20] [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63, Subpart LLL (NESHAP for the Portland Cement Manufacturing Industry), the visible emissions from the following emission units shall be less than 10 percent opacity:

Operations	Units	~~Emission Point~~
Alternate Raw Material Feed System	~~four (4) loading hoppers (485F, 486F, 487F, 488F)~~ ~~six (6) belt conveyors (485V-488V, 490V, 491V)~~ ~~one (1) weigh belt (489V)~~ ~~one (1) bucket elevator (492V)~~ ~~one (1) enclosed screw conveyor (495V)~~ **one (1) slag hopper (289F)** **one (1) weight feeder (289V)** **three (3) belt conveyors (290V, 291V, 294V)** **one (1) bucket elevator (292V)**	~~1-29A -E~~

D.4.3 Particulate Matter Emission Limitation [326 IAC 2-2]

. . .

~~(c) Pursuant to MSM 133-16137-00002, issued August 29, 2002, the throughput rate to the alternate raw material feeding system shall not exceed 87,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~This limit is equivalent to 2.51 tons per year of PM emissions and 1.07 tons per year of PM10 emissions. Combined with the emissions for the secondary crusher system (SC-1), the emissions for both systems combined are limited to less than 25 tons per year of PM and less than 15 tons per year of PM10. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable to the modification permitted in MSM 133-16137-00002.~~

~~(d)~~**(c)** In order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the following emission units shall use water mist suppression, as needed, to control the particulate emissions:

~~slag pile (1-13)~~
one (1) non-routine CKD loadout station, including one (1) screw conveyor (412V).

D.4.5 NESHAP Emissions Limitation [326 IAC 2-4.1] [326 IAC 20-1][40 CFR Part 63, Subpart EEE]

Pursuant to 326 IAC 2-4.1 (Hazardous Air Pollutants) and 40 CFR 63.1204 (NESHAP for Hazardous Waste Combustors), the emissions from the following units:

Operations	Units	Emission Point
~~Alternate Raw Material Feed System~~	~~*one (1) covered belt conveyor (494V)~~	~~Stack 3-1~~
Kiln Operations	*one (1) hammermill dryer (440G)	Stack 3-1
	one (1) calciner tower (440PH) one (1) rotary kiln (401B)	Stack 3-1
	*nine (9) screw conveyors (403V-410V, 404FV)	Stack 3-1
	*one (1) conditioning tower (480F) *one (1) alkali bypass system (3-5B) *one (1) hopper, identified as (484F) *four (4) screw conveyors (480LV1-LV3, 480V) one (1) weight hopper (481FF) one (1) pug mill (484L) one (1) CKD loadout spout (481L)	Stack 3-1

*Note: When these units are not venting through kiln stack (3-1), the emissions from these units shall comply with the requirements in 40 CFR 63, Subpart LLL.

. . .

D.4.18 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the following facilities shall be limited as follows when operating at the listed process weight rate:

Processes	Process Weight Rate (ton/hr) (P)	Allowable Emissions For All Units Combined (lbs/hour) (E)
Alternate Raw Material Feed System~~, excluding the units venting through stack 3-1~~	~~110~~ **20**	~~52.2~~ **30.5**
Kiln Operations, excluding the units venting through stack 3-1, baghouses 403L and 483L	208	58.9

NOTE: Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed that shown in this table, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

The limitations for these facilities were calculated using **one of** the following equations**:**

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$ **where E = rate of emission in pounds per hour and P = process weight rate in tons per hour**

. . .

D.4.33 Record Keeping Requirements

~~(a) To document compliance with Condition D.4.3(c), the Permittee shall maintain records of the throughput to the alternative raw material feed system.~~

. . .

D.4.34 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition~~s D.4.3(c) and~~ D.4.17 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

. . .

SECTION D.8 FACILITY OPERATION CONDITIONS - INSIGNIFICANT ACTIVITIES

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

. . .

(f) One (1) non-hazardous waste alternate fuels handling process, identified as Point 2-18, ~~constructed in 2004~~ **approved for construction in 2007**, with a maximum capacity of ~~4.0~~ **10** tons of non-hazardous waste alternate fuel per hour, consisted of the following: [326 IAC 6-3-2]

(1) ~~One (1)~~ **Two (2)** hopper**s, identified as 295F and 296F**.

(2) ~~One (1)~~ **Two (2)** screw conveyor**s, identified as 295V and 296V**.

(3) ~~One (1)~~ **Two (2)** ~~rotary~~ **weight** feeder**s, identified as 295V1 and 296V1**.

(4) Three (3) covered drag chain conveyors, identified as 296DCC, 297DCC, and 298DCC.

(5) Two (2) bucket elevators, identified as 296BE and 297BE.

(g) ~~One (1) alternate fuels storage~~ **Storage** pile**s for non-hazardous waste alternative fuels, located inside a three-sided building,** with a **total** ~~maximum capacity of 1,000 tons of material and a~~ maximum throughput rate of ~~4.0~~ **10** tons/hr. [326 IAC 6-4]

. . .

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Source Address: 3301 South County Road 150 West, Greencastle, Indiana 46135
Mailing Address: P.O. Box 486, Greencastle, Indiana 46135
Source Modification No.: T133-6927-00002
Facility: The alternate raw material feeding system (SF-1)
Parameter: The raw material throughput
Limit: Less than 87,600 tons per twelve (12) consecutive month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report

Conclusion and Recommendation

The construction of this modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 133-24896-00002 and the operation of this modification shall be subject to the conditions of the attached proposed Part 70 Minor Permit Modification No. 133-25090-00002.

Appendix A: Emission Calculations
PM/PM10 Emissions
From the Alternate Raw Material (Slag) Feed System

Company Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Address: 3301 South County Road 150 West, Greencastle, IN 46135
MSM #: 133-24896-00002
Reviewer: ERG/YC
Date: August 1, 2007

Maximum Throughput Rate:
20 (tons/hr)

Process	Number of Units	PM Emission Factor (lbs/ton)	PTE of PM (lbs/hr/unit)	PTE of PM (tons/yr)	PM10 Emission Factor (lbs/ton)	PTE of PM10 (lbs/hr/unit)	PTE of PM10 (tons/yr)
Hopper*	1	0.0088	0.176	0.77	0.0043	0.086	0.38
Weight Feeder*	1	0.0088	0.176	0.77	0.0043	0.086	0.38
Bucket Elevator**	1	0.0030	0.060	2.63E-01	0.0011	0.022	9.64E-02
Belt Conveyors**	3	0.0030	0.060	7.88E-01	0.0011	0.022	2.89E-01
Total				**2.59**			**1.14**

* The emission factors for the feed hoppers are the emission factors for low silt batch drop in AP-42, Chapter 12.5, Table 12.5-4 for iron and steel mill (01/95).

** The emission factors for the screens and the conveyors are from AP-42, Chapter 11.19, Table 11.19.2-2 for crushed stone processing operations (08/04).

Methodology

PTE of PM/PM10 (lbs/hr/unit) = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton)
PTE of PM/PM10 (tons/yr) = PTE of PM/PM10 (lbs/hr/unit) x Number of Units x 8760 hrs/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
PM/PM10 Emissions
From the Alternate Fuels Handling Process

Company Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Address: 3301 South County Road 150 West, Greencastle, IN 46135
MSM #: 133-24896-00002
Reviewer: ERG/YC
Date: August 1, 2007

Maximum Throughput Rate:
10 (tons/hr)

Process	Number of Units	PM Emission Factor (lbs/ton)	PTE of PM (lbs/hr/unit)	PTE of PM (tons/yr)	PM10 Emission Factor (lbs/ton)	PTE of PM10 (lbs/hr/unit)	PTE of PM10 (tons/yr)
Hoppers*	2	0.0088	0.088	0.77	0.0043	0.043	0.38
Weight Feeders*	2	0.0088	0.088	0.77	0.0043	0.043	0.38
Bucket Elevators**	2	0.0030	0.030	0.26	0.0011	0.011	0.10
Conveyors**	5	0.0030	0.030	0.66	0.0011	0.011	0.24
Total				**2.46**			**1.09**

* The emission factors for the feed hoppers are the emission factors for low silt batch drop in AP-42, Chapter 12.5, Table 12.5-4 for iron and steel mill (01/95).

** The emission factors for the screens and the conveyors are from AP-42, Chapter 11.19, Table 11.19.2-2 for crushed stone processing operations (08/04).

Methodology

PTE of PM/PM10 (lbs/hr/unit) = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton)
PTE of PM/PM10 (tons/yr) = PTE of PM/PM10 (lbs/hr/unit) x Number of Units x 8760 hrs/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Potential PM and PM10 Emissions
From the Storage Piles (Fugitive)

Company Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Address: 3301 South County Road 150 West, Greencastle, IN 46135
MSM #: 133-24896-00002
Reviewer: ERG/YC
Date: August 1, 2007

1. Emission Factors:

According to AP42, Chapter 13.2.4 - Aggregate Handling and Storage Piles (11/06), the PM/PM10 emission factors for storage piles (including emissions from loading materials to the piles) can be estimated from the following equation:

$$Ef = \frac{k \times 0.0032 \times (U/5)^{1.3}}{(M/2)^{1.4}}$$

where:

Ef =	Emission Factor (lbs/ton)		
k =	Particle size multiplers =	0.74 for PM and 0.35 for PM10	
U =	Mean wind speed (mph) =	9.8	mph (provided by the source)
M =	Moisture content (%) =	2.5	% (provided by the source)

Therefore,

PM Emission Factor =	0.004	lbs/ton process
PM10 Emission Factor =	0.002	lbs/ton process

2. Potential to Emit PM/PM10:

Max. Throughput Rate: 30 tons/hr (total for slag and non-hazardous alternate fuel storage piles)

PTE of PM (tons/yr) = 30 tons/hr x 0.004 lbs/ton x 8760 hrs/yr x 1 ton/2000 lbs = **0.55 tons/yr**

PTE of PM10 (tons/yr) = 30 tons/hr x 0.002 lbs/ton x 8760 hrs/yr x 1 ton/2000 lbs = **0.26 tons/yr**

Appendix A: Emission Calculations
Fugitive Emissions From Paved Roads

Company Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Address: 3301 South County Road 150 West, Greencastle, IN 46135
MSM #: 133-24896-00002
Reviewer: ERG/YC
Date: August 1, 2007

1. Emission Factors: AP-42

According to AP-42, Chapter 13.2.1 - Paved Roads (11/06), the PM/PM10 emission factors for paved roads can be estimated from the following equation:

$$E = (k \times (sL/2)^a \times (w/3)^b - C) \times (1 - p/(4 \times 365))$$

where:

E =	emission factor (lb/vehicle mile traveled)	
sL =	road surface silt loading (g/m^2) =	0.6 (g/m^2) (AP-42, Table 13.2.1-3)
w =	mean vehicle weight (tons) =	12.3 tons
k =	empirical constant =	0.082 for PM and 0.016 for PM10
a =	empirical constant =	0.65
b =	empirical constant =	1.5
C =	emission factor for exhaust, brake and tire wear	0.00047 for PM and PM10
p =	number of days per year with 0.01 inches precipitation	120

PM Emission Factor = $(0.082 \times (0.6/2)^{0.65} \times (18.2/3)^{1.5} - 0.00047) \times (1 - 120/1460)$ = **0.29** lbs/mile

PM10 Emission Factor = $(0.016 \times (0.6/2)^{0.65} \times (18.2/3)^{1.5} - 0.00047) \times (1 - 120/1460)$ = **0.06** lbs/mile

2. Potential to Emit (PTE) of PM/PM10 Before Control from Paved Roads:

Vehicle Type	*Ave Weight of Vehicles (tons)	*Trip Number (trips/hr)	* Round Trip Distance (mile/trip)	Vehicle Miles Traveled (VMT) (miles/yr)	Traffic Component (%)	Component Vehicle Weight (tons)	PTE of PM before Control (tons/yr)	PTE of PM10 before Control (tons/yr)
Front End Loader - Slag	1.82	6.0	0.114	5,992	32%	0.59	0.85	0.17
Front End Loader - Alternative Fuel	3.24	2.0	0.114	1,997	11%	0.35	0.28	0.06
Trucks - Slag	20.0	1.0	1.00	8,760	47%	9.47	1.25	0.24
Trucks - Alternative Fuel	20.0	0.2	1.00	1,752	9%	1.89	0.25	0.05
Total				**18,501**	**100%**	**12.3**	**2.64**	**0.51**

* This information is provided by the source.

Methodology

Vehicle Miles Traveled (miles/yr) = Trip Number (trips/hr) x Round Trip Distance (miles/trip) x 8760 hrs/yr
Traffic Component (%) = VMT / Total VMT
Component Vehicle Weight = Ave. Weight of Vehicles (tons) x Traffic Component (%)
PTE of PM/PM10 before Control (tons/yr) = VMT (miles/yr) x PM/PM10 Emission Factors (lbs/mile) x 1 ton/2000 lbs

Appendix A: Emission Calculations
Potential to Emit Summary

Company Name: Lone Star Industries, Inc. dba Buzzi Unicem USA
Address: 3301 South County Road 150 West, Greencastle, IN 46135
MSM #: 133-24896-00002
Reviewer: ERG/YC
Date: August 1, 2007

1. Unlimited Potential To Emit of this Modification

Emission Units	PM (tons/yr)	PM10 (tons/yr)	SO_2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Total HAPs (tons/yr)
Alternate Raw Material Feed System	2.59	1.14	-	-	-	-	-
Alternate Fuels Handling Process	2.46	1.09	-	-	-	-	-
Storage Piles - Fugitive	0.55	0.26	-	-	-	-	-
Paved Roads - Fugitive	2.64	0.51	-	-	-	-	-
Total PTE	**8.24**	**3.00**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**