

Facility Name: **Cemex, Inc.**
 City: Clinchfield
 County: Houston
 AIRS #: 04-13-153-00003

Application #: TV-12062
 Date SIP Application Received: N/A
 Date Title V Application Received: February 14, 2000
 Date of Draft Permit:
 Permit No: 3241-153-0003-V-02-0

Program	Review Engineers	Review Managers
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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached SIP permit to construct and/or draft/proposed operating permit. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to identify state and federal air requirements applicable to the modification/construction to be performed at Cemex, Inc. and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Existing Permits

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
3241-153-0003-V-01-0	June 19, 1998	✓	
3241-153-0003-C-01-0	February 13, 1998	✓	
3241-153-0003-C-01-1	December 15, 1999 (Amendment)	✓	
3241-153-0003-C-01-2	May 1, 2000 (Amendment)	✓	
3241-153-0003-C-01-3	May 23, 2000 (Amendment)	✓	

Table 2: Comments on Specific Permits

Permit Number	Comments
3241-153-0003-V-01-0	Initial Title V permit issued to Medusa-Citadel, Inc.
3241-153-0003-C-01-0	A construction permit was issued for a major two-phase plant upgrade dubbed " <i>Clinchfield Project 2000</i> ." The denoted three amendments were issued subsequent to this.

B. Regulatory Status

1. PSD/NSR

This Plant is presently classified as a major source as defined by federal Prevention of Significant Air Quality Deterioration (PSD) regulation, 40 CFR §52.21; specifically, it has the potential to emit more than 250 tons per year of sulfur dioxide, nitrogen oxides, carbon monoxide, and particulate matter.

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	Yes	No	No
PM ₁₀	Yes	Yes	No	No
SO ₂	Yes	Yes	No	No
VOC	Yes	Yes	No	No
NO _x	Yes	Yes	No	No
CO	Yes	Yes	No	No
TRS	Yes	No	No	Yes
H ₂ S	Yes	No	No	Yes
Individual HAP	Yes	Yes	No	No
Total HAPs	Yes	Yes	No	No

Regulatory Analysis

II. Proposed Modification

A. Description of Modification

Title V Application No. TV-12062 is an update, which was required by construction permit 3241-153-0003-C-01-0, issued on February 13, 1998 and, as noted in Table 1 above, was amended 3 times. It is, also, meant to incorporate the provisions of the federal NESHAP, 40 CFR Part 63 Subpart LLL, "*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*," in the Title V permit. Furthermore, this review tackles Applications No. 11091, 11192, 12755, 12914, 13645, and 14525 received on September 21, 1998, January 26, 1999, September 11, 2000, March 6, 2001, March 7, 2002, and June 9, 2003; respectively. Moreover, changes allowed under the operational flexibility, in addition to those requested in Cemex's June 3, 2003 correspondence, are being adopted in this permit. The following table indicates the purpose of each of the said Applications.

Application Number	Comments
11091	Request for revisions of the pressure drops ranges stipulated in the Title V Permit. No pressure drops ranges are being specified in the enclosed permit. The " <i>Operations and Maintenance Plan</i> " required by 40 CFR Part 63 Subpart LLL, and mentioned in conditions 2.2.3 & 5.2.8 is an appropriate place for them.
11192	Request for a name change from Medusa-Citadel, Inc. to Southdown, Inc.
12755	Request for revisions of the pressure drops ranges stipulated in the Title V Permit. No pressure drops ranges are being specified in the enclosed permit (See note on Application No. 11091).
12914	Request for a name change from Southdown, Inc. to Cemex, Inc.
13645	Request to modify Roller Mill configuration by installing 2 Belt Conveyors (RSB1 & RSB2), Bucket Elevator (RSBE), and 4 Dust Collectors (REC1, REC2, REC3, & REC4). The Company was allowed to carry it this project out, under the operational flexibility provisions, in a letter dated March 26, 2002. On July 2, 2003, Mr. Eric Hodek, Cemex's Environmental Manager at its Clinchfield Cement Plant informed me that Cemex might alter its plan and decide not to install the 4 Dust Collectors and he sent the enclosed e-mail showing transfer points 325, 327, & 330 are enclosed. Entries have been reflected in Table 3.1.
14525	<p><u>Requests for permission to:</u></p> <ol style="list-style-type: none"> Delete the 27% limit on the firing rate of scrap tires in the #5 kiln. Remove Dust Collector 281 (located in the mine) because the material being conveyed has 16.7% moisture by average. Extension for Phase 2 of the Clinchfield 2000 project until April 1, 2010 (Cemex maintained that Phase 1 is considered complete and it doesn't intend to pursue some of the changes allowed in Phase 1). <p>The enclosed permit grants all of those requests.</p>

Since Georgia Air Quality Rule 391-3-1-.03(4) does not allow the transfer of a permit from an owner to another, a new permit is being issued. The original issuance and expiration date remain unaltered. Furthermore, and although the five year expiration date of this permit has passed, EPD received an application for renewal from Cemex, Inc.; accordingly, the permit remains in effect until EPD takes final action on the renewal application as specified in condition 8.5.3 of the permit.

B. Emissions Change

Table 4: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	Yes	None	None
PM ₁₀	Yes	None	None
SO ₂	Yes	None	None
VOC	Yes	None	None
NO _x	Yes	None	None
CO	Yes	None	None
TRS	Yes	None	None
H ₂ S	Yes	None	None
Individual HAP	Yes	None	None
Total HAPs	Yes	None	None

C. PSD/NSR Applicability

None associated with this permit.

III. Facility Wide Requirements

A. Emission and Operating Caps:

Portland cement plants are one of the 28 source categories listed under 40 CFR Part 52 Section §52.21 relating to Prevention of Significant Air Quality Deterioration (PSD). Although the plant has no facility wide emissions caps or operation limits, Cemex has taken emissions and production limits to avoid 40 CFR §52.21 regulations pertaining to 5 years contemporaneous changes.

B. Applicable Rules and Regulations

The State rules, cited in Section 8 of this permit, apply. This is in addition to general requirements of the New Source Performance Standards (NSPS) 40 CFR part 60 & 63.

C. Compliance Status

There are no noncompliance issues associated with this permit.

D. Operational Flexibility

None associated with the enclosed permit. Condition 7.1.2 is being added to explain changes allowed under the cumulative modifications provisions of the State rules.

E. Permit Conditions

No new facility wide permit conditions except the general NSPS requirements, those of 40 CFR part 60 & 63, and the provisions of the *"Operational and Maintenance Plan"* required by the applicable provisions of 40 CFR Part 63 Subpart LLL *"National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry."*

IV. Regulated Equipment Requirements

A. Brief Process Description

This Title V permit involves no new process changes.

B. Equipment List for the Process

Please see the Table in Section 3.1.

C. Equipment & Rule Applicability

Emission and Operating Caps – The following Table shows the limits that, currently, exist in Air Quality Permit No. 3241-153-0003-V-01-0, construction Permit No. 3241-153-0003-C-01-0, and its 3 amendments. The 2nd column cites the reason for the limit and the 3rd where it is found in the referenced permits. The 4th column deals with whether the limit is being adopted in the enclosed permit and the reasoning for doing so.

Limit	Reason	Where	Action
Sulfur content of coal used in the #5 Dryer to 1.34%.	PSD avoidance (Placed when the dryer switched from burning oil to coal).	3.2.1 of 3241-153-0003-V-01-0	Condition is no longer needed (#5 Dryer was removed).
Firing rate of on-site generated waste oils listed in Attachment D in the #5 kiln and #5 dryer to 13,000 gallons.	PSD avoidance (amount was established in the permit application to burn waste materials).	3.2.2. Also, pertaining to it are conditions 3.2.3, & 3.3.4 of 3241-153-0003-V-01-0	Adopted in 3.2.1, 3.2.2, & 3.2.3
Firing rate of scrap tires in the #5 kiln to 27 percent (on a weight basis) of the total fuel consumed in the kiln.	PSD avoidance (27% was the figure upon which testing background information was developed).	3.2.5 of 3241-153-0003-V-01-0	Cemex requested removing this limit in Application No. 14525 dated June 4, 2003. I recommend granting this request because the limit is meant to curb NOx & SO2 emissions and condition 3.2.4 achieves the same purpose.
Clinker ladder dust collector (CLDC) stack emissions to 3.5 lb/hr of particulate matter.	PSD avoidance.	3.2.6 of 3241-153-0003-V-01-0 Also, 15 of 3241-153-0003-C-01-0	Condition is no longer needed (Equipment was removed).
Emissions from the Kiln	PSD avoidance. Limits were associated with permitting production increases.	3.2.7, 3.2.8, 3.2.9 of 3241-153-0003-V-01-0. Also, 8, 9 & 10 of 3241-153-0003-V-0C-0. Also, 47 & 48 of 3241-153-0003-V-0C-1.	Adopted, in their most recent format, in 3.2.4.

Limit	Reason	Where	Action
of Subpart F	NSPS limits	3.3.1, 3.3.2, 3.3.3 of 3241-153-0003-V-01-0 & 3 of 3241-153-0003-C-01-0	Removed. § 63.1356 of 40 CFR 63 Subpart LLL exempts source subject to Subpart LLL from NSPS Subparts F and OOO.
on PM emissions	PSD avoidance. Limits were associated with permitting production increases.	11, 12, 16, 17 of 3241-153-0003-C-01-0 50, 51 of 3241-153-0003-C-01-1 45, 50, 51 of 3241-153-0003-C-02-0	Adopted, in their most recent format, in 3.2.6
on the Kiln's production	PSD avoidance. Limits were associated with permitting production increases.	13 of 3241-153-0003-C-01-0 46 of 3241-153-0003-C-01-1 56 & 57 of 3241-153-0003-C-01-3	Adopted, in their most recent format, in 3.2.5

Applicable Rules and Regulations -

In addition the State rules, summed up in Section 3.4 of the enclosed permit, this Portland cement plant is currently subject to, 40 CFR Part 60 Subpart OOO "*Standards of Performance for Nonmetallic Mineral Processing Plants,*" 40 CFR Part 60 Subpart Y "*Standards of Performance for Coal Preparation Plants*" and Subpart LLL, "*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry,*" of 40 CFR Part 63 "*National Emission Standards for Hazardous Air Pollutants for Source Categories.*" However, the plant will neither be subject to the Greenfield or the Brownfield provisions of Subpart LLL because its construction commenced prior to March 24, 1998. The plant is, also, subject to 40 CFR Part 60 Subpart Y "*Standards of Performance for Coal Preparation Plants.*"

This facility is no longer subject to 40 CFR Part 60 Subpart F "*Standards of Performance for Portland Cement Plants;*" because, § 63.1356, of 40 CFR 63 Subpart LLL, exempts, any affected source subject to the provisions of Subpart LLL, from any otherwise applicable new source performance standard contained in Subpart F or Subpart OOO of 40 CFR Part 60. This is in addition to the fact that § 63.1356 waives some of the requirements of, the abovementioned, 40 CFR Part 60 Subpart Y. Specifically, those pertaining to conveying system transfer points used to convey coal from the mill to the kiln that are associated with coal preparation at a Portland cement plant that is a major source under 40 CFR Part 63 Subpart LLL.

D. Compliance Status

No noncompliance issues are associated with this permit.

E. Operational Flexibility

Condition 7.1.2 is being introduced to make operational flexibility more tailored towards this type of mineral sources.

F. Permit Conditions

The conditions in Section 3.3, of Permit No. 3241-153-0003-V-01-0, concerning to 40 CFR Part 60 Subpart F have been removed and replaced with conditions pertaining to 40 CFR 63 Subpart LLL and 40 CFR Part 60 Subpart OOO and Y (The same thing was done to most of the conditions in the "Allowable Emissions" Section of Permit No. 3241-153-0003-C-01-0).

The limits taken by Cemex in conditions 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, of Permit No. 3241-153-0003-C-01-0, 42, 45, 46, 47, 48, 49, 50, 51 of 3241-153-0003-C-01-1, and 50, 51 of 3241-153-0003-C-01-2, were carried over in their most updated format in condition 3.2.4 and 3.2.6. It is worth noting that the company pledged, in its request for approval of the "Clinchfield 2000 Project" in application No. 10214 (dated September 9, 1997 and received on September 10, 1997), to limit emissions from the baghouses controlling the Finish Mills to 0.02 gr/acf and from the ones controlling equipment which is part of Phase 1 of 2 of its project to 0.01 gr/acf. Those limits were incorrectly altered in conditions 45, 50, & 51 of 3241-153-0003-C-01-2 and condition 3.2.6 of the enclosed permit rectifies this situation.

Condition 39, of 3241-153-0003-C-01-0, dealing with the Kiln's daily feed and production rates is being adopted in 6.2.1 & 6.2.5(x).

Condition 40 and 41, of 3241-153-0003-C-01-0, deal with the submittal of another Part 70 operating permit; the earlier has been satisfied and the later has be removed because it deals with few equipment that remain to be constructed as part of Phase 2 of the "Clinchfield 2000 Project." Namely:

Source	Emission Unit ID	Control ID
Coal Mill/Dryer and Air Separator*	650	0655*
Kiln Coal Mill Bin*	651	0660*
Precalciner Coal Bin*	652	0665*
Clinker Storage Silos*	7000	7030*

Condition 43, 3241-153-0003-C-01-0, requiring the removal of the existing Coal Mill after a new one is installed is not necessary and has been removed (The plant can not used to Coal Mills at the same time and there is a likelihood that he new Coal Mill/Dryer and Air Separator (650) won't be installed). In its June 12, 2003 letter Cemex maintained that it "does not consider the coal mill (648) to be a thermal dryer pursuant to the definition of "thermal dryer" as specified in 40 CFR 60.251 (g). The coal mill system uses heated air from the clinker cooler and an additional air heater to dry the coal but does not vent to the atmosphere. This air is used to transport the coal into the burner pipe and is also used as air in combustion." Wherefore, condition 3.3.5 refers only to Subpart Y pertinent to coal processing, storage, transfer, and loading equipment. The new Coal Mill/Dryer and Air Separator (650), to be constructed in Phase 2 of the "Clinchfield 2000 Project," and will be subject to Subpart LLL and would most properly be defined as a thermal dryer. Thus, condition 3.3.4 mentions all 40 CFR Part 60 Subpart Y "Standards of Performance for Coal Preparation Plants" provisions that will, perhaps, be applicable to it. 40 CFR 60.253 (a)(1), of Subpart Y, requires temperature monitoring only; thus no excursion reporting is being required.

Conditions 56 & 57, 3241-153-0003-C-01-3, are adopted in condition 3.2.5 of enclosed permit.

V. Testing Requirements (with Associated Record Keeping and Reporting)**A. Individual Equipment:**

Conditions 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, of Permit No. 3241-153-0003-C-01-0, pertain to testing some of which was carried out and other remains to be done. Part 4 of the permit adopts required federal testing using the most relevant wording in the Code of Federal Register; and it is important to note that 40 CFR 63 Subpart LLL initial compliance testing has already been carried out.

PSD verification testing for Phase 1 of the "*Clinchfield 2000 Project*," required by condition 25 of construction permit No. 3241-153-0003-C-01-0, was carried out. Condition 4.2.5(c) is meant to carry over the PSD verification testing for Phase 2 required by condition 26 of said construction permit.

This permit, also, contain generic testing conditions requiring NSPS testing shall the need arise.

B. Equipment Groups (all subject to the same test requirements):

None required by this permit other than the mandated testing of Subpart LLL.

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**A. Individual Equipment:**

a. Specific monitoring requirements: None other than that mandated by Subpart LLL. The monitoring required in conditions 5.2.1, 5.2.9, 5.2.10, and Subpart LLL is meant also to cover compliance with limits taken to avoid PSD.

b. Record keeping for monitoring: None other than that mandated by Subpart LLL and covering compliance with limits taken to avoid PSD.

c. Reporting for monitoring: None other than that mandated by Subpart LLL and covering compliance with limits taken to avoid PSD.

B. Equipment Groups (all subject to the same monitoring requirements):

a. Specific monitoring requirements : None.

b. Record keeping for monitoring: None

c. Reporting for monitoring: None.

VII. Other Record Keeping and Reporting Requirements

40 CFR Part 60 "*Standards of Performance for New Stationary Sources*" and 40 CFR Part 63 "*National Emission Standards for Hazardous Air Pollutants for Source Categories*" monitoring, recordkeeping, and reporting provisions are being adopted in the conditions of Section 5 and 6 of the enclosed permit.

VIII. Specific Requirements

- A. Operational Flexibility
 - None.
- B. Alternative Requirements
 - None.
- C. Insignificant Activities
 - None.
- D. Temporary Sources
 - None.
- E. Short-Term Activities
 - None.
- F. Compliance Schedule/Progress Reports
 - None
- G. Emissions Trading
 - None.
- H. Acid Rain Requirements
 - None.
- I. Prevention of Accidental Releases
 - None.
- J. Stratospheric Ozone Protection Requirements
 - None

K. Pollution Prevention

- None.

L. Specific Conditions

- None

[End of Narrative]

Addendum to Narrative

No comments were received from EPA, the company, or the public. On August 11, 2003, Mr. Richard McDonald and myself met with Ms. Lillian and Mr. Eric Hodek of Cemex environmental management and discussed the Company's concerns about some permit conditions (primarily condition 5.2.9). Also, on August 27, 2003, Mr. Hodek called to inform me that the East Clay Bin (I. D. Code 250) has an enclosed transfer point. Accordingly, this minor change has been made and the rest of the permit stands as it was issued in its original draft format.