

**TECHNICAL REVIEW AND EVALUATION
SIGNIFICANT PERMIT REVISION NO. 46157 TO AIR QUALITY PERMIT NO. 35426
PHOENIX CEMENT COMPANY**

I. INTRODUCTION

This Class I Significant Revision to Air Quality Permit No. 35426 is being issued to Phoenix Cement Company, the Permittee, for increased explosive usage in blasting operations at the quarry.

A. Company Information

Facility Name: Phoenix Cement Company
Mailing Address: P.O. Box 428
Clarkdale, Arizona 86324
Facility Address: 3000 West Cement Plant Road
Clarkdale, Yavapai County, Arizona 86324

B. Attainment Classification

The facility is located in attainment area for all criteria pollutants.

C. Learning Sites Evaluation

In accordance with ADEQ's "Environmental Permits and Approvals Near Learning Sites" Policy, the Department is required to evaluate if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department has identified 1 learning site within two miles of the facility:

Clarkdale-Jerome Elementary School

The facility had performed a comprehensive modeling analysis as a part of Permit No. 35426 which authorized the addition of Kiln 4. In light of that modeling, the Department has determined that any potential emissions from the increased blasting will not adversely impact the learning site.

D. Background Information

Phoenix Cement Company (PCC) was issued a Title V Permit No. 1001785 on June 27, 2002, for operation of its Portland cement plant at Clarkdale. The facility was subsequently issued a Significant Permit Revision/Renewal Permit No. 35426 on January 31, 2007, to include into the Title V permit, the equipment associated with the Kiln 4 modernization project. PCC permanently retired the existing Kilns 1, 2 and 3 as a result of the modernization.

II. REVISION DESCRIPTION

The facility is comprised of a limestone quarry and a Portland cement plant. In the quarry, limestone is mined after rock blasting. The current permit limits the use of explosives during blasting to 913 tons per year, 70 tons per day, and 10 tons per hour. The facility has experienced an increase in the overburden of about 20%. Through this permit revision, PCC has requested an increase in the allowable explosive usage to 1473 tons per year, 113 tons per day and 15 tons per hour.

III. EMISSIONS

Based on AP-42, Table 13-3-1 (Emission Factors for Detonation of Explosives) the potential increase in emissions due to increased blasting is as following:

Pollutant	Current Actual Emissions	PTE for Increased Explosive Usage	Potential Increase in Emissions	Significance Level
	tons per year	tons per year	tons per year	tons per year
PM	9.19	16.65	7.46	25
PM ₁₀	2.92	5.92	3.00	15
SO ₂	0.65	1.47	0.83	25
NO _x	5.51	12.52	7.01	40
CO	21.71	49.35	27.64	100

The potential increase in emissions due to increased blasting is less than the significance level for all criteria pollutants. The facility-wide emission limits, however, remain unchanged as below.

Pollutant	Emission Limit (tons/year)
PM	773
PM ₁₀	460
SO ₂	401
NO _x	3,271
CO	764

IV. APPLICABLE REQUIREMENTS

There are no new applicable requirements.

V. AIR POLLUTION CONTROL REQUIREMENT

This revision will not require any changes to the air pollution control requirements.

VI. MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

The recordkeeping requirements are revised to include records of hourly, daily and monthly explosives usage.

VII. LIST OF ABBREVIATIONS

A.A.C. Arizona Administrative Code
 ADEQ..... Arizona Department of Environmental Quality

EPA Environmental Protection Agency
CO Carbon Monoxide
lb Pound
NO_x Nitrogen Oxide
PM₁₀ Particulate Matter Nominally less than 10 Micrometers
SO₂ Sulfur Dioxide
TPY Tons per Year
VOC Volatile Organic Compound

