

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY SIGNIFICANT PERMIT REVISION NO. 63401
TO OPERATING PERMIT NO. 53336**

I. INTRODUCTION

This Class I Significant Revision to Operating Permit # 53336 is issued to Drake Cement LLC, for the authorization of petroleum coke (petcoke) as a fuel for the cement kiln. Additionally, this revision authorizes the facility to use filter cake as a non-hazardous secondary material to blend in with the raw materials.

A. Company Information

Mailing Address: 5745 N. Scottsdale Road Suite B-135 Scottsdale, AZ. 85250

Facility Address: 5001 E. Drake Road, Paulden, AZ 86334

B. Attainment Classification

This area is designated as attainment for all pollutants.

II. BACKGROUND INFORMATION

The current Class I renewal permit No. 53336 was issued on September 12, 2012, for the operation of a Portland cement plant. The cement plant is comprised of equipment used for raw material receiving/processing, coal preparation/processing, pyroprocessing/clinker production, and final product finishing.

III. REVISION DESCRIPTION

This revision authorizes the facility to combust petroleum coke in combination with coal in the cement kiln. This revision also allows the facility to blend in filter cake with the raw materials as a non-hazardous secondary material. In accordance with 40 CFR 241.3(b)(3) non-hazardous secondary materials are not considered solid wastes if they meet the legitimacy criteria specified in 40 CFR 241.3(d)(2). The filter cake is mainly comprised of calcium fluoride which is a valuable ingredient in the cement process, and has been shown to improve combustion and quality of the product produced in the cement process.

IV. EMISSIONS

The authorization for the use of petcoke and filter cake result in an increase of as show in in Table 1 below:

Table 1 – Net Emissions Change

| Pollutant | Existing Potential Emissions (tpy) | Post Revision Potential Emissions (tpy) |
|-----------|------------------------------------|---|
| PM | 163 | 164.3 |

| | | |
|-------------------|------|-------|
| PM ₁₀ | 107 | 107.4 |
| PM _{2.5} | 35 | 35.4 |
| NO _x | 420 | 420 |
| SO ₂ | 22 | 22 |
| CO | 1332 | 1332 |
| VOC | 57 | 57 |
| Fluoride | 0 | 2.76 |

V. APPLICABLE REQUIREMENTS

The changes being made as part of this revision do not trigger any new applicable requirements not already included in the permit.

VI. MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

In order to ensure that total fluoride emissions remain under the significance level, the facility will take an annual limit on the amount of filter cake introduced into the process of 9,200 tons. The facility will be required to maintain daily records of the amount of filter cake processed.

VII. LIST OF ABBREVIATIONS

- A.A.C. Arizona Administrative Code
- ADEQ Arizona Department of Environmental Quality
- CFR Code of Federal Regulations
- CO Carbon Monoxide
- NOX Nitrogen Oxide
- PM Particulate Matter
- PM10 Particulate Matter Nominally less than 10 Micrometers
- PM2.5 Particulate Matter Nominally less than 2.5 Micrometers
- SO2 Sulfur Dioxide
- VOC Volatile Organic Compound