ASH GROVE CEMENT COMPANY

Method 25A VOC Emissions
Seattle, Washington

STR06762

Performed and Reported by:

VALID RESULTS, INC.
12025 Lake City Way NE, Suite B
Seattle, WA 98125-5331

For Submittal To:

Ash Grove Cement
Seattle, Washington

Submitted On:

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SECTION 1. INTRODUCTION

1.1. Test Purpose

Valid Results, Inc. (VR) of Seattle, Washington was contracted by the Ash Grove Cement (AGC) Company to provide services for the emission testing of the main stack exhaust for the coal, tire and natural gas-fired rotary cement kiln located in Seattle, Washington.

Emission tests were conducted on the main stack exhaust to determine the concentration and emission rates of volatile organic compounds (VOC).

The tests were performed for engineering purposes. The Puget Sound Clean Air Agency (PSCAA) was not informed of the test program at least two weeks prior to testing. No representative of the PSCAA was present to witness the testing.

1.2. Test Location

The testing was conducted at the Ash Grove Cement Company facility in Seattle, WA.

1.3. Test Date(s)

The testing was conducted on March 23rd, 2006.

1.4. Parameters Tested

The parameters and test methods used during the test program are summarized below in Table 1-1. The parameters were determined or measured using U.S. Environmental Protection Agency (EPA) test methods that are provided in Title 40, Part 60 (40CFR60), Appendix A of the Code of Federal Regulations (CFR), Part 63 (40CFR63), Appendix A and Section 4, Sampling Analysis Procedures of this report.

TABLE 1-1
SUMMARY OF TEST PARAMETERS AND TEST METHODS

Parameters	EPA Test Methods	Sample Replicates	Sample Run Duration
Sample Points	1	1	N/A
Exhaust Velocity	2	3	15 Minutes
Molecular Weight	3	3	30 Minutes
Exhaust Moisture	4	3	30 Minutes
Methane	18	3	30 Minutes
TOC	25A	3	30 Minutes

1.5. Sampling and Observing Personnel

Tracy Prevo, David Wagner and Erik Tucker with VR performed the testing. Mr. Gerald Brown with AGC coordinated the test program.

SECTION 2. SUMMARY OF RESULTS

2.1. Test Results

The results of the emission testing are summarized in Table 2-1. The test results provided in Table 2-1 are based on the average of the three test runs.

TABLE 2-1
EMISSION TEST RESULTS
ROTARY CEMENT KILN ~~COAL MILL~~

Parameter	~~Coal Mill~~ KILN STACK Outlet
Flow Rate	
Feet/second (ft/sec)	22.73
Dry Standard Cubic Feet per Minute (dscf/m)	120,112
Baghouse Inlet Temperature	
Degrees Celsius (°C)	
Exhaust Temperature	
Degrees Fahrenheit (°F)	264.7
Moisture	
Bws, %	8.70
Fixed Gases	
O_2, % / CO_2, %	8.04 / 23.1
Volatile Organic Compounds	
VOC, ppm as propane	0.17
VOC, mgs/dscm	0.31
VOC, lbs/hr	0.14
VOC, lbs/metric ton of clinker	
VOC, kgs/metric ton of clinker	

2.2. Process Data

Unit operating data was provided and is contained in appendix D.

2.3. Comments: Discussion of Quality Assurance and Variations

All tests were performed using the procedures set forth in Title 40, Chapter I, of the Code of Federal Regulations, Part 60 (40CFR60), Appendix A, Test Methods 1, 2, 3, 4, 18 and 25A. VOC emissions are reported as dry Total Organic Carbon (TOC), measured by Method 25A, less the dry Methane as measured by Method 18.

Quality assurance procedures listed in the test methods referenced in Table 1-1 and the Source Test Plan included in Appendix I were performed and documented. The QA/QC procedures are described in Section 4.3 of the report. Documentation of the QA/QC is provided in Appendix E.