

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY

2. STATE: KS

3. CITY: CHANUTE

EPA KSD031203318

REGION: 7

4. EP ID: 402 DEVICE NAME: KILN NO. 2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: WET KILN

Location: STACK-MAIN

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|--------------|-----------|-------------------------|-----------------|--------|
| 4D 2378 | 402C1R1 | ND 5.98e-2 ng/dscm 7%O2 | 1.58e-8 lbs/hr | CE7%O2 |
| 4D 2378 | 402C1R2 | ND 6.81e-2 ng/dscm 7%O2 | 1.67e-8 lbs/hr | CE7%O2 |
| 4D 2378 | 402C1R3 | ND 1.71e-1 ng/dscm 7%O2 | 4.05e-8 lbs/hr | CE7%O2 |
| 4D 2378 | 402C1R4 | 3.56e-2 ng/dscm 7%O2 | 8.75e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 402C3R1 | 2 1.43e-3 ng/dscm 7%O2 | 5.41e-10 lbs/hr | CE7%O2 |
| 4D 2378 | 402C3R2 | 2 1.14e-3 ng/dscm 7%O2 | 4.88e-10 lbs/hr | CE7%O2 |
| 4D 2378 | 402C3R3 | ND 3.97e-3 ng/dscm 7%O2 | 1.68e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 402C3R4 | ND 4.02e-3 ng/dscm 7%O2 | 1.68e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 402C4R2 | 4.25e-3 ng/dscm 7%O2 | 1.17e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 402C4R3 | ND 7.26e-3 ng/dscm 7%O2 | 1.99e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 402C4R4 | 7.76e-3 ng/dscm 7%O2 | 1.87e-9 lbs/hr | CE7%O2 |
| 4D Other | 402C1R1 | 8.18e+1 ng/dscm 7%O2 | 2.16e-5 lbs/hr | OCE |
| 4D Other | 402C1R2 | 3.39e+1 ng/dscm 7%O2 | 8.28e-6 lbs/hr | OCE |
| 4D Other | 402C1R3 | 3.77e+1 ng/dscm 7%O2 | 8.94e-6 lbs/hr | OCE |
| 4D Other | 402C1R4 | 1.61e+1 ng/dscm 7%O2 | 3.97e-6 lbs/hr | OCE |
| 4D Other | 402C3R1 | 1.27e-1 ng/dscm 7%O2 | 4.81e-8 lbs/hr | OCE |
| 4D Other | 402C3R2 | 8.23e-2 ng/dscm 7%O2 | 3.53e-8 lbs/hr | OCE |
| 4D Other | 402C3R3 | 6.35e-2 ng/dscm 7%O2 | 2.69e-8 lbs/hr | OCE |
| 4D Other | 402C3R4 | 8.03e-2 ng/dscm 7%O2 | 3.36e-8 lbs/hr | OCE |
| 4D Other | 402C4R2 | 3.49e-1 ng/dscm 7%O2 | 9.62e-8 lbs/hr | OCE |
| 4D Total | 402C1R1 | 8.19e+1 ng/dscm 7%O2 | 2.16e-5 lbs/hr | CE7%O2 |
| 4D Total | 402C1R2 | 3.40e+1 ng/dscm 7%O2 | 8.30e-6 lbs/hr | CE7%O2 |
| 4D Total | 402C1R3 | 3.79e+1 ng/dscm 7%O2 | 8.98e-6 lbs/hr | CE7%O2 |
| 4D Total | 402C1R4 | 1.62e+1 ng/dscm 7%O2 | 3.97e-6 lbs/hr | CE7%O2 |
| 4D Total | 402C3R1 | 1.29e-1 ng/dscm 7%O2 | 4.86e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C3R2 | 8.35e-2 ng/dscm 7%O2 | 3.58e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C3R3 | 6.75e-2 ng/dscm 7%O2 | 2.86e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C3R4 | 8.43e-2 ng/dscm 7%O2 | 3.52e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C4R2 | 3.53e-1 ng/dscm 7%O2 | 9.74e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C4R3 | 9.07e-2 ng/dscm 7%O2 | 2.49e-8 lbs/hr | CE7%O2 |
| 4D Total | 402C4R4 | 4.27e-1 ng/dscm 7%O2 | 1.03e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C1R1 | 2.69e+0 ng/dscm 7%O2 | 7.09e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C1R2 | 3.10e+0 ng/dscm 7%O2 | 7.58e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C1R3 | 1.94e+0 ng/dscm 7%O2 | 4.61e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C1R4 | 1.57e+0 ng/dscm 7%O2 | 3.85e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C3R1 | 1.81e-1 ng/dscm 7%O2 | 6.85e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 402C3R2 | 1.44e-1 ng/dscm 7%O2 | 6.19e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 402C3R3 | 1.27e-1 ng/dscm 7%O2 | 5.37e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 402C3R4 | 1.24e-1 ng/dscm 7%O2 | 5.20e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 402C4R2 | 5.95e-1 ng/dscm 7%O2 | 1.64e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C4R3 | 4.72e-1 ng/dscm 7%O2 | 1.30e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 402C4R4 | 8.53e-1 ng/dscm 7%O2 | 2.06e-7 lbs/hr | CE7%O2 |
| 4F Other | 402C1R1 | 8.58e+0 ng/dscm 7%O2 | 2.26e-6 lbs/hr | OCE |
| 4F Other | 402C1R2 | 1.42e+1 ng/dscm 7%O2 | 3.48e-6 lbs/hr | OCE |
| 4F Other | 402C1R3 | 5.29e+0 ng/dscm 7%O2 | 1.25e-6 lbs/hr | OCE |
| 4F Other | 402C1R4 | 6.06e+0 ng/dscm 7%O2 | 1.49e-6 lbs/hr | OCE |
| 4F Other | 402C3R1 | 9.62e-1 ng/dscm 7%O2 | 3.64e-7 lbs/hr | OCE |
| 4F Other | 402C3R2 | 7.67e-1 ng/dscm 7%O2 | 3.29e-7 lbs/hr | OCE |
| 4F Other | 402C3R3 | 7.47e-1 ng/dscm 7%O2 | 3.16e-7 lbs/hr | OCE |
| 4F Other | 402C3R4 | 6.38e-1 ng/dscm 7%O2 | 2.67e-7 lbs/hr | OCE |
| 4F Other | 402C4R2 | 3.15e+0 ng/dscm 7%O2 | 8.68e-7 lbs/hr | OCE |
| 4F Other | 402C4R3 | 2.29e+0 ng/dscm 7%O2 | 6.28e-7 lbs/hr | OCE |
| 4F Total | 402C1R1 | 1.13e+1 ng/dscm 7%O2 | 2.97e-6 lbs/hr | CE7%O2 |
| 4F Total | 402C1R2 | 1.73e+1 ng/dscm 7%O2 | 4.24e-6 lbs/hr | CE7%O2 |
| 4F Total | 402C1R3 | 7.23e+0 ng/dscm 7%O2 | 1.72e-6 lbs/hr | CE7%O2 |
| 4F Total | 402C1R4 | 7.63e+0 ng/dscm 7%O2 | 1.87e-6 lbs/hr | CE7%O2 |

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 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | |
|----------|---------|---------|--------------|--------------|---------|--------|--------|
| 4F Total | 402C3R1 | 1.14e+0 | ng/dscm 7%O2 | 4.32e-7 | lbs/hr | CE7%O2 | |
| 4F Total | 402C3R2 | 9.11e-1 | ng/dscm 7%O2 | 3.91e-7 | lbs/hr | CE7%O2 | |
| 4F Total | 402C3R3 | 8.74e-1 | ng/dscm 7%O2 | 3.69e-7 | lbs/hr | CE7%O2 | |
| 4F Total | 402C3R4 | 7.63e-1 | ng/dscm 7%O2 | 3.19e-7 | lbs/hr | CE7%O2 | |
| 4F Total | 402C4R2 | 3.74e+0 | ng/dscm 7%O2 | 1.03e-6 | lbs/hr | CE7%O2 | |
| 4F Total | 402C4R3 | 2.76e+0 | ng/dscm 7%O2 | 7.58e-7 | lbs/hr | CE7%O2 | |
| 4F Total | 402C4R4 | 4.97e+0 | ng/dscm 7%O2 | 1.20e-6 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C1R1 | 5.08e-1 | ng/dscm 7%O2 | 1.34e-7 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C1R2 | 1.74e-1 | ng/dscm 7%O2 | 4.25e-8 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C1R3 | 2.46e-1 | ng/dscm 7%O2 | 5.82e-8 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C1R4 | 1.85e-1 | ng/dscm 7%O2 | 4.55e-8 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C3R1 | 4.76e-3 | ng/dscm 7%O2 | 1.80e-9 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C3R2 | 3.79e-3 | ng/dscm 7%O2 | 1.63e-9 | lbs/hr | CE7%O2 | |
| 5D 12378 | 402C3R3 | ND | 7.94e-3 | ng/dscm 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 5D 12378 | 402C3R4 | ND | 1.20e-2 | ng/dscm 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 5D 12378 | 402C4R2 | 2 | 2.13e-2 | ng/dscm 7%O2 | 5.87e-9 | lbs/hr | CE7%O2 |
| 5D 12378 | 402C4R3 | 2 | 7.26e-3 | ng/dscm 7%O2 | 1.99e-9 | lbs/hr | CE7%O2 |
| 5D 12378 | 402C4R4 | | 1.94e-2 | ng/dscm 7%O2 | 4.68e-9 | lbs/hr | CE7%O2 |
| 5D Other | 402C1R1 | 1.34e+2 | ng/dscm 7%O2 | 3.53e-5 | lbs/hr | OCE | |
| 5D Other | 402C1R2 | 4.21e+1 | ng/dscm 7%O2 | 1.03e-5 | lbs/hr | OCE | |
| 5D Other | 402C1R3 | 3.76e+1 | ng/dscm 7%O2 | 8.92e-6 | lbs/hr | OCE | |
| 5D Other | 402C1R4 | 2.33e+1 | ng/dscm 7%O2 | 5.72e-6 | lbs/hr | OCE | |
| 5D Other | 402C3R1 | 6.19e-2 | ng/dscm 7%O2 | 2.34e-8 | lbs/hr | OCE | |
| 5D Other | 402C3R2 | 7.59e-2 | ng/dscm 7%O2 | 3.26e-8 | lbs/hr | OCE | |
| 5D Other | 402C3R3 | 2.38e-2 | ng/dscm 7%O2 | 1.01e-8 | lbs/hr | OCE | |
| 5D Other | 402C3R4 | 2.01e-2 | ng/dscm 7%O2 | 8.39e-9 | lbs/hr | OCE | |
| 5D Other | 402C4R2 | 4.47e-1 | ng/dscm 7%O2 | 1.23e-7 | lbs/hr | OCE | |
| 5D Other | 402C4R3 | 1.92e-1 | ng/dscm 7%O2 | 5.28e-8 | lbs/hr | OCE | |
| 5D Total | 402C1R1 | 1.34e+2 | ng/dscm 7%O2 | 3.54e-5 | lbs/hr | CE7%O2 | |
| 5D Total | 402C1R2 | 4.22e+1 | ng/dscm 7%O2 | 1.03e-5 | lbs/hr | CE7%O2 | |
| 5D Total | 402C1R3 | 3.79e+1 | ng/dscm 7%O2 | 8.98e-6 | lbs/hr | CE7%O2 | |
| 5D Total | 402C1R4 | 2.35e+1 | ng/dscm 7%O2 | 5.77e-6 | lbs/hr | CE7%O2 | |
| 5D Total | 402C3R1 | 6.67e-2 | ng/dscm 7%O2 | 2.52e-8 | lbs/hr | CE7%O2 | |
| 5D Total | 402C3R2 | 7.97e-2 | ng/dscm 7%O2 | 3.42e-8 | lbs/hr | CE7%O2 | |
| 5D Total | 402C3R3 | 3.18e-2 | ng/dscm 7%O2 | 1.34e-8 | lbs/hr | CE7%O2 | |
| 5D Total | 402C3R4 | 3.21e-2 | ng/dscm 7%O2 | 1.34e-8 | lbs/hr | CE7%O2 | |
| 5D Total | 402C4R2 | 4.68e-1 | ng/dscm 7%O2 | 1.29e-7 | lbs/hr | CE7%O2 | |
| 5D Total | 402C4R3 | 2.00e-1 | ng/dscm 7%O2 | 5.48e-8 | lbs/hr | CE7%O2 | |
| 5D Total | 402C4R4 | 5.82e-1 | ng/dscm 7%O2 | 1.40e-7 | lbs/hr | CE7%O2 | |
| 5F 12378 | 402C1R1 | 1.61e-1 | ng/dscm 7%O2 | 4.26e-8 | lbs/hr | CE7%O2 | |
| 5F 12378 | 402C1R2 | 1.67e-1 | ng/dscm 7%O2 | 4.08e-8 | lbs/hr | CE7%O2 | |
| 5F 12378 | 402C1R3 | 1.09e-1 | ng/dscm 7%O2 | 2.59e-8 | lbs/hr | CE7%O2 | |
| 5F 12378 | 402C1R4 | 9.27e-2 | ng/dscm 7%O2 | 2.28e-8 | lbs/hr | CE7%O2 | |
| 5F 12378 | 402C3R1 | 2 | 1.90e-2 | ng/dscm 7%O2 | 7.21e-9 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C3R2 | 2 | 1.52e-2 | ng/dscm 7%O2 | 6.51e-9 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C3R3 | 2 | 1.19e-2 | ng/dscm 7%O2 | 5.04e-9 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C3R4 | | 1.20e-2 | ng/dscm 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C4R2 | | 5.53e-2 | ng/dscm 7%O2 | 1.53e-8 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C4R3 | | 3.63e-2 | ng/dscm 7%O2 | 9.97e-9 | lbs/hr | CE7%O2 |
| 5F 12378 | 402C4R4 | | 6.59e-2 | ng/dscm 7%O2 | 1.59e-8 | lbs/hr | CE7%O2 |
| 5F 23478 | 402C1R1 | 5.68e-1 | ng/dscm 7%O2 | 1.50e-7 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C1R2 | 4.09e-1 | ng/dscm 7%O2 | 9.99e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C1R3 | 4.09e-1 | ng/dscm 7%O2 | 9.71e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C1R4 | 2.42e-1 | ng/dscm 7%O2 | 5.95e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C3R1 | 2.86e-2 | ng/dscm 7%O2 | 1.08e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C3R2 | 2.28e-2 | ng/dscm 7%O2 | 9.77e-9 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C3R3 | 1.99e-2 | ng/dscm 7%O2 | 8.40e-9 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C3R4 | 1.61e-2 | ng/dscm 7%O2 | 6.71e-9 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C4R2 | 9.78e-2 | ng/dscm 7%O2 | 2.70e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C4R3 | 5.80e-2 | ng/dscm 7%O2 | 1.60e-8 | lbs/hr | CE7%O2 | |
| 5F 23478 | 402C4R4 | 1.13e-1 | ng/dscm 7%O2 | 2.71e-8 | lbs/hr | CE7%O2 | |
| 5F Other | 402C1R1 | 2.17e+0 | ng/dscm 7%O2 | 5.72e-7 | lbs/hr | OCE | |

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SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | |
|-----------|---------|---------|--------------|--------------|---------|--------|--------|
| 5F Other | 402C1R2 | 2.29e+0 | ng/dscm 7%O2 | 5.59e-7 | lbs/hr | OCE | |
| 5F Other | 402C1R3 | 5.39e-1 | ng/dscm 7%O2 | 1.28e-7 | lbs/hr | OCE | |
| 5F Other | 402C1R4 | 1.64e-1 | ng/dscm 7%O2 | 4.03e-8 | lbs/hr | OCE | |
| 5F Other | 402C3R1 | 1.86e-1 | ng/dscm 7%O2 | 7.03e-8 | lbs/hr | OCE | |
| 5F Other | 402C3R2 | 1.48e-1 | ng/dscm 7%O2 | 6.35e-8 | lbs/hr | OCE | |
| 5F Other | 402C3R3 | 1.75e-1 | ng/dscm 7%O2 | 7.39e-8 | lbs/hr | OCE | |
| 5F Other | 402C3R4 | 7.63e-2 | ng/dscm 7%O2 | 3.19e-8 | lbs/hr | OCE | |
| 5F Other | 402C4R2 | 6.55e-1 | ng/dscm 7%O2 | 1.81e-7 | lbs/hr | OCE | |
| 5F Other | 402C4R3 | 5.22e-1 | ng/dscm 7%O2 | 1.44e-7 | lbs/hr | OCE | |
| 5F Total | 402C1R1 | 2.90e+0 | ng/dscm 7%O2 | 7.64e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C1R2 | 2.86e+0 | ng/dscm 7%O2 | 6.99e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C1R3 | 1.06e+0 | ng/dscm 7%O2 | 2.51e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C1R4 | 4.99e-1 | ng/dscm 7%O2 | 1.23e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C3R1 | 2.33e-1 | ng/dscm 7%O2 | 8.83e-8 | lbs/hr | CE7%O2 | |
| 5F Total | 402C3R2 | 1.86e-1 | ng/dscm 7%O2 | 7.98e-8 | lbs/hr | CE7%O2 | |
| 5F Total | 402C3R3 | 2.07e-1 | ng/dscm 7%O2 | 8.73e-8 | lbs/hr | CE7%O2 | |
| 5F Total | 402C3R4 | 1.04e-1 | ng/dscm 7%O2 | 4.36e-8 | lbs/hr | CE7%O2 | |
| 5F Total | 402C4R2 | 8.08e-1 | ng/dscm 7%O2 | 2.23e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C4R3 | 6.17e-1 | ng/dscm 7%O2 | 1.69e-7 | lbs/hr | CE7%O2 | |
| 5F Total | 402C4R4 | 1.28e+0 | ng/dscm 7%O2 | 3.09e-7 | lbs/hr | CE7%O2 | |
| 6D 123478 | 402C1R1 | 8.67e-1 | ng/dscm 7%O2 | 2.29e-7 | lbs/hr | CE7%O2 | |
| 6D 123478 | 402C1R2 | 6.13e-1 | ng/dscm 7%O2 | 1.50e-7 | lbs/hr | CE7%O2 | |
| 6D 123478 | 402C1R3 | 6.48e-1 | ng/dscm 7%O2 | 1.54e-7 | lbs/hr | CE7%O2 | |
| 6D 123478 | 402C1R4 | 4.63e-1 | ng/dscm 7%O2 | 1.14e-7 | lbs/hr | CE7%O2 | |
| 6D 123478 | 402C3R1 | ND | 4.76e-3 | ng/dscm 7%O2 | 1.80e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C3R2 | ND | 3.79e-3 | ng/dscm 7%O2 | 1.63e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C3R3 | ND | 7.94e-3 | ng/dscm 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C3R4 | ND | 1.20e-2 | ng/dscm 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C4R2 | ND | 1.28e-2 | ng/dscm 7%O2 | 3.52e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C4R3 | ND | 1.81e-2 | ng/dscm 7%O2 | 4.98e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 402C4R4 | ND | 1.16e-2 | ng/dscm 7%O2 | 2.81e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C1R1 | 1.31e+0 | ng/dscm 7%O2 | 3.47e-7 | lbs/hr | CE7%O2 | |
| 6D 123678 | 402C1R2 | 6.47e-1 | ng/dscm 7%O2 | 1.58e-7 | lbs/hr | CE7%O2 | |
| 6D 123678 | 402C1R3 | 8.87e-1 | ng/dscm 7%O2 | 2.10e-7 | lbs/hr | CE7%O2 | |
| 6D 123678 | 402C1R4 | 6.06e-1 | ng/dscm 7%O2 | 1.49e-7 | lbs/hr | CE7%O2 | |
| 6D 123678 | 402C3R1 | ND | 4.76e-3 | ng/dscm 7%O2 | 1.80e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C3R2 | ND | 3.79e-3 | ng/dscm 7%O2 | 1.63e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C3R3 | ND | 7.94e-3 | ng/dscm 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C3R4 | ND | 8.03e-3 | ng/dscm 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C4R2 | 2 | 2.55e-2 | ng/dscm 7%O2 | 7.04e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C4R3 | 2 | 7.26e-3 | ng/dscm 7%O2 | 1.99e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 402C4R4 | 2 | 1.55e-2 | ng/dscm 7%O2 | 3.74e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C1R1 | 1.31e+0 | ng/dscm 7%O2 | 3.47e-7 | lbs/hr | CE7%O2 | |
| 6D 123789 | 402C1R2 | 5.45e-1 | ng/dscm 7%O2 | 1.33e-7 | lbs/hr | CE7%O2 | |
| 6D 123789 | 402C1R3 | 8.87e-1 | ng/dscm 7%O2 | 2.10e-7 | lbs/hr | CE7%O2 | |
| 6D 123789 | 402C1R4 | 4.28e-1 | ng/dscm 7%O2 | 1.05e-7 | lbs/hr | CE7%O2 | |
| 6D 123789 | 402C3R1 | ND | 4.76e-3 | ng/dscm 7%O2 | 1.80e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C3R2 | ND | 3.79e-3 | ng/dscm 7%O2 | 1.63e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C3R3 | ND | 7.94e-3 | ng/dscm 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C3R4 | ND | 1.20e-2 | ng/dscm 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C4R2 | ND | 2.13e-2 | ng/dscm 7%O2 | 5.87e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C4R3 | ND | 1.45e-2 | ng/dscm 7%O2 | 3.99e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 402C4R4 | ND | 1.94e-2 | ng/dscm 7%O2 | 4.68e-9 | lbs/hr | CE7%O2 |
| 6D Other | 402C1R1 | 3.04e+2 | ng/dscm 7%O2 | 8.03e-5 | lbs/hr | OCE | |
| 6D Other | 402C1R2 | 1.21e+2 | ng/dscm 7%O2 | 2.96e-5 | lbs/hr | OCE | |
| 6D Other | 402C1R3 | 1.63e+2 | ng/dscm 7%O2 | 3.87e-5 | lbs/hr | OCE | |
| 6D Other | 402C1R4 | 9.65e+1 | ng/dscm 7%O2 | 2.37e-5 | lbs/hr | OCE | |
| 6D Other | 402C3R1 | 1.00e-1 | ng/dscm 7%O2 | 3.78e-8 | lbs/hr | OCE | |
| 6D Other | 402C3R2 | 4.55e-2 | ng/dscm 7%O2 | 1.95e-8 | lbs/hr | OCE | |
| 6D Other | 402C3R3 | 1.59e-2 | ng/dscm 7%O2 | 6.72e-9 | lbs/hr | OCE | |
| 6D Other | 402C3R4 | 1.20e-2 | ng/dscm 7%O2 | 5.03e-9 | lbs/hr | OCE | |
| 6D Other | 402C4R2 | 5.36e-1 | ng/dscm 7%O2 | 1.48e-7 | lbs/hr | OCE | |
| 6D Other | 402C4R3 | 1.81e-1 | ng/dscm 7%O2 | 4.98e-8 | lbs/hr | OCE | |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

| | | | | | | | | |
|-----------|---------|----|----------|---------|------|----------|--------|--------|
| 6D Total | 402C1R1 | | 3.08e+2 | ng/dscm | 7%O2 | 8.12e-5 | lbs/hr | CE7%O2 |
| 6D Total | 402C1R2 | | 1.23e+2 | ng/dscm | 7%O2 | 3.01e-5 | lbs/hr | CE7%O2 |
| 6D Total | 402C1R3 | | 1.66e+2 | ng/dscm | 7%O2 | 3.93e-5 | lbs/hr | CE7%O2 |
| 6D Total | 402C1R4 | | 9.80e+1 | ng/dscm | 7%O2 | 2.41e-5 | lbs/hr | CE7%O2 |
| 6D Total | 402C3R1 | | 1.14e-1 | ng/dscm | 7%O2 | 4.32e-8 | lbs/hr | CE7%O2 |
| 6D Total | 402C3R2 | | 5.69e-2 | ng/dscm | 7%O2 | 2.44e-8 | lbs/hr | CE7%O2 |
| 6D Total | 402C3R3 | | 3.97e-2 | ng/dscm | 7%O2 | 1.68e-8 | lbs/hr | CE7%O2 |
| 6D Total | 402C3R4 | | 4.42e-2 | ng/dscm | 7%O2 | 1.85e-8 | lbs/hr | CE7%O2 |
| 6D Total | 402C4R2 | | 5.95e-1 | ng/dscm | 7%O2 | 1.64e-7 | lbs/hr | CE7%O2 |
| 6D Total | 402C4R3 | | 2.21e-1 | ng/dscm | 7%O2 | 6.08e-8 | lbs/hr | CE7%O2 |
| 6D Total | 402C4R4 | | 4.66e-1 | ng/dscm | 7%O2 | 1.12e-7 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C1R1 | | 2.21e-1 | ng/dscm | 7%O2 | 5.83e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C1R2 | | 2.15e-1 | ng/dscm | 7%O2 | 5.25e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C1R3 | | 2.22e-1 | ng/dscm | 7%O2 | 5.26e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C1R4 | | 1.14e-1 | ng/dscm | 7%O2 | 2.80e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C3R1 | | 3.33e-2 | ng/dscm | 7%O2 | 1.26e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C3R2 | | 2.66e-2 | ng/dscm | 7%O2 | 1.14e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C3R3 | | 7.94e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C3R4 | | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C4R2 | | 5.95e-2 | ng/dscm | 7%O2 | 1.64e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C4R3 | | 6.17e-2 | ng/dscm | 7%O2 | 1.69e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 402C4R4 | | 7.37e-2 | ng/dscm | 7%O2 | 1.78e-8 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C1R1 | | 1.05e-1 | ng/dscm | 7%O2 | 2.76e-8 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C1R2 | | 8.17e-2 | ng/dscm | 7%O2 | 2.00e-8 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C1R3 | | 9.89e-2 | ng/dscm | 7%O2 | 2.35e-8 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C1R4 | ND | 3.56e-2 | ng/dscm | 7%O2 | 8.75e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C3R1 | | 1.43e-2 | ng/dscm | 7%O2 | 5.41e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C3R2 | | 1.14e-2 | ng/dscm | 7%O2 | 4.88e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C3R3 | | 3.97e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C3R4 | | 8.03e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C4R2 | | 2.98e-2 | ng/dscm | 7%O2 | 8.21e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C4R3 | 2 | 2.18e-2 | ng/dscm | 7%O2 | 5.98e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 402C4R4 | | 3.49e-2 | ng/dscm | 7%O2 | 8.42e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C1R1 | ND | 5.98e-2 | ng/dscm | 7%O2 | 1.58e-8 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C1R2 | ND | 1.70e-2 | ng/dscm | 7%O2 | 4.16e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C1R3 | ND | 2.05e-1 | ng/dscm | 7%O2 | 4.85e-8 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C1R4 | ND | 7.13e-2 | ng/dscm | 7%O2 | 1.75e-8 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C3R1 | | 4.29e-3 | ng/dscm | 7%O2 | 1.62e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C3R2 | | 3.42e-3 | ng/dscm | 7%O2 | 1.47e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C3R3 | ND | 3.97e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C3R4 | ND | 8.03e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C4R2 | ND | 8.51e-3 | ng/dscm | 7%O2 | 2.35e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C4R3 | ND | 1.09e-2 | ng/dscm | 7%O2 | 2.99e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 402C4R4 | 2 | 3.49e-3 | ng/dscm | 7%O2 | 8.42e-10 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C1R1 | | 1.67e-1 | ng/dscm | 7%O2 | 4.41e-8 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C1R2 | | 1.43e-1 | ng/dscm | 7%O2 | 3.50e-8 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C1R3 | | 1.88e-1 | ng/dscm | 7%O2 | 4.45e-8 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C1R4 | ND | 7.13e-2 | ng/dscm | 7%O2 | 1.75e-8 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C3R1 | | 1.43e-2 | ng/dscm | 7%O2 | 5.41e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C3R2 | | 1.14e-2 | ng/dscm | 7%O2 | 4.88e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C3R3 | ND | 3.97e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C3R4 | | 8.03e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C4R2 | | 3.40e-2 | ng/dscm | 7%O2 | 9.39e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C4R3 | | 3.27e-2 | ng/dscm | 7%O2 | 8.97e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 402C4R4 | | 3.88e-2 | ng/dscm | 7%O2 | 9.36e-9 | lbs/hr | CE7%O2 |
| 6F Other | 402C1R1 | | -7.47e-2 | ng/dscm | 7%O2 | -1.97e-8 | lbs/hr | OCE |
| 6F Other | 402C1R2 | | 4.29e-1 | ng/dscm | 7%O2 | 1.05e-7 | lbs/hr | OCE |
| 6F Other | 402C1R3 | | -5.08e-1 | ng/dscm | 7%O2 | -1.21e-7 | lbs/hr | OCE |
| 6F Other | 402C1R4 | | -3.92e-2 | ng/dscm | 7%O2 | -9.63e-9 | lbs/hr | OCE |
| 6F Other | 402C3R1 | | 5.24e-3 | ng/dscm | 7%O2 | 1.98e-9 | lbs/hr | OCE |
| 6F Other | 402C3R2 | | 4.17e-3 | ng/dscm | 7%O2 | 1.79e-9 | lbs/hr | OCE |
| 6F Other | 402C3R3 | | 3.97e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | OCE |
| 6F Other | 402C3R4 | | 4.02e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | OCE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|------------|---------|----|----------|---------|------|----------|--------|--------|
| 6F Other | 402C4R2 | | 8.93e-2 | ng/dscm | 7%O2 | 2.46e-8 | lbs/hr | OCE |
| 6F Other | 402C4R3 | | 7.62e-2 | ng/dscm | 7%O2 | 2.09e-8 | lbs/hr | OCE |
| 6F Total | 402C1R1 | | 4.78e-1 | ng/dscm | 7%O2 | 1.26e-7 | lbs/hr | CE7%O2 |
| 6F Total | 402C1R2 | | 8.86e-1 | ng/dscm | 7%O2 | 2.16e-7 | lbs/hr | CE7%O2 |
| 6F Total | 402C1R3 | | 2.05e-1 | ng/dscm | 7%O2 | 4.85e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C1R4 | | 2.53e-1 | ng/dscm | 7%O2 | 6.22e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C3R1 | | 7.14e-2 | ng/dscm | 7%O2 | 2.70e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C3R2 | | 5.69e-2 | ng/dscm | 7%O2 | 2.44e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C3R3 | | 2.38e-2 | ng/dscm | 7%O2 | 1.01e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C3R4 | | 4.02e-2 | ng/dscm | 7%O2 | 1.68e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C4R2 | | 2.21e-1 | ng/dscm | 7%O2 | 6.10e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C4R3 | | 2.03e-1 | ng/dscm | 7%O2 | 5.58e-8 | lbs/hr | CE7%O2 |
| 6F Total | 402C4R4 | | 3.26e-1 | ng/dscm | 7%O2 | 7.86e-8 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C1R1 | | 1.09e+1 | ng/dscm | 7%O2 | 2.88e-6 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C1R2 | | 5.93e+0 | ng/dscm | 7%O2 | 1.45e-6 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C1R3 | | 7.71e+0 | ng/dscm | 7%O2 | 1.83e-6 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C1R4 | | 4.74e+0 | ng/dscm | 7%O2 | 1.16e-6 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C3R1 | | 2.86e-2 | ng/dscm | 7%O2 | 1.08e-8 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C3R2 | | 2.28e-2 | ng/dscm | 7%O2 | 9.77e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C3R3 | | 1.19e-2 | ng/dscm | 7%O2 | 5.04e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C3R4 | | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C4R2 | 2 | 9.36e-2 | ng/dscm | 7%O2 | 2.58e-8 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C4R3 | | 5.08e-2 | ng/dscm | 7%O2 | 1.40e-8 | lbs/hr | CE7%O2 |
| 7D 1234678 | 402C4R4 | | 7.37e-2 | ng/dscm | 7%O2 | 1.78e-8 | lbs/hr | CE7%O2 |
| 7D Other | 402C1R1 | | 1.50e+1 | ng/dscm | 7%O2 | 3.96e-6 | lbs/hr | OCE |
| 7D Other | 402C1R2 | | 7.77e+0 | ng/dscm | 7%O2 | 1.90e-6 | lbs/hr | OCE |
| 7D Other | 402C1R3 | | 1.11e+1 | ng/dscm | 7%O2 | 2.63e-6 | lbs/hr | OCE |
| 7D Other | 402C1R4 | | 6.70e+0 | ng/dscm | 7%O2 | 1.65e-6 | lbs/hr | OCE |
| 7D Other | 402C3R1 | | 2.86e-2 | ng/dscm | 7%O2 | 1.08e-8 | lbs/hr | OCE |
| 7D Other | 402C3R2 | | -3.79e-3 | ng/dscm | 7%O2 | -1.63e-9 | lbs/hr | OCE |
| 7D Other | 402C3R3 | | 1.19e-2 | ng/dscm | 7%O2 | 5.04e-9 | lbs/hr | OCE |
| 7D Other | 402C3R4 | | 0.00e+0 | ng/dscm | 7%O2 | 0.00e+0 | lbs/hr | OCE |
| 7D Other | 402C4R2 | | 3.40e-2 | ng/dscm | 7%O2 | 9.39e-9 | lbs/hr | OCE |
| 7D Other | 402C4R3 | | 6.17e-2 | ng/dscm | 7%O2 | 1.69e-8 | lbs/hr | OCE |
| 7D Total | 402C1R1 | | 2.59e+1 | ng/dscm | 7%O2 | 6.84e-6 | lbs/hr | CE7%O2 |
| 7D Total | 402C1R2 | | 1.37e+1 | ng/dscm | 7%O2 | 3.35e-6 | lbs/hr | CE7%O2 |
| 7D Total | 402C1R3 | | 1.88e+1 | ng/dscm | 7%O2 | 4.46e-6 | lbs/hr | CE7%O2 |
| 7D Total | 402C1R4 | | 1.14e+1 | ng/dscm | 7%O2 | 2.81e-6 | lbs/hr | CE7%O2 |
| 7D Total | 402C3R1 | | 5.71e-2 | ng/dscm | 7%O2 | 2.16e-8 | lbs/hr | CE7%O2 |
| 7D Total | 402C3R2 | | 1.90e-2 | ng/dscm | 7%O2 | 8.14e-9 | lbs/hr | CE7%O2 |
| 7D Total | 402C3R3 | | 2.38e-2 | ng/dscm | 7%O2 | 1.01e-8 | lbs/hr | CE7%O2 |
| 7D Total | 402C3R4 | | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 7D Total | 402C4R2 | | 1.28e-1 | ng/dscm | 7%O2 | 3.52e-8 | lbs/hr | CE7%O2 |
| 7D Total | 402C4R3 | | 1.12e-1 | ng/dscm | 7%O2 | 3.09e-8 | lbs/hr | CE7%O2 |
| 7D Total | 402C4R4 | | 1.63e-1 | ng/dscm | 7%O2 | 3.93e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C1R1 | ND | 5.98e-2 | ng/dscm | 7%O2 | 1.58e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C1R2 | | 4.43e-2 | ng/dscm | 7%O2 | 1.08e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C1R3 | ND | 1.71e-1 | ng/dscm | 7%O2 | 4.05e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C1R4 | ND | 7.13e-2 | ng/dscm | 7%O2 | 1.75e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C3R1 | | 1.90e-2 | ng/dscm | 7%O2 | 7.21e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C3R2 | | 1.52e-2 | ng/dscm | 7%O2 | 6.51e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C3R3 | | 3.97e-3 | ng/dscm | 7%O2 | 1.68e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C3R4 | 2 | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C4R2 | | 5.10e-2 | ng/dscm | 7%O2 | 1.41e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C4R3 | | 6.17e-2 | ng/dscm | 7%O2 | 1.69e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 402C4R4 | ND | 4.66e-2 | ng/dscm | 7%O2 | 1.12e-8 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C1R1 | ND | 1.20e-1 | ng/dscm | 7%O2 | 3.15e-8 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C1R2 | ND | 2.38e-2 | ng/dscm | 7%O2 | 5.83e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C1R3 | ND | 3.07e-1 | ng/dscm | 7%O2 | 7.28e-8 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C1R4 | ND | 1.07e-1 | ng/dscm | 7%O2 | 2.63e-8 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C3R1 | ND | 4.76e-3 | ng/dscm | 7%O2 | 1.80e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C3R2 | ND | 3.79e-3 | ng/dscm | 7%O2 | 1.63e-9 | lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-----------------|---------|----|----------|---------|------|----------|--------|--------|
| 7F 1234789 | 402C3R3 | ND | 7.94e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C3R4 | ND | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C4R2 | | 8.51e-3 | ng/dscm | 7%O2 | 2.35e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C4R3 | 2 | 1.81e-2 | ng/dscm | 7%O2 | 4.98e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 402C4R4 | | 1.55e-2 | ng/dscm | 7%O2 | 3.74e-9 | lbs/hr | CE7%O2 |
| 7F Other | 402C1R1 | | -8.97e-2 | ng/dscm | 7%O2 | -2.36e-8 | lbs/hr | OCE |
| 7F Other | 402C1R2 | | -1.36e-2 | ng/dscm | 7%O2 | -3.33e-9 | lbs/hr | OCE |
| 7F Other | 402C1R3 | | -2.39e-1 | ng/dscm | 7%O2 | -5.66e-8 | lbs/hr | OCE |
| 7F Other | 402C1R4 | | -7.13e-2 | ng/dscm | 7%O2 | -1.75e-8 | lbs/hr | OCE |
| 7F Other | 402C3R1 | | 0.00e+0 | | | 8.08e-28 | lbs/hr | OCE |
| 7F Other | 402C3R2 | | 1.69e-21 | ng/dscm | 7%O2 | 4.04e-28 | lbs/hr | OCE |
| 7F Other | 402C3R3 | | -3.97e-3 | ng/dscm | 7%O2 | -1.68e-9 | lbs/hr | OCE |
| 7F Other | 402C3R4 | | -1.20e-2 | ng/dscm | 7%O2 | -5.03e-9 | lbs/hr | OCE |
| 7F Other | 402C4R2 | | 2.55e-2 | ng/dscm | 7%O2 | 7.04e-9 | lbs/hr | OCE |
| 7F Other | 402C4R3 | | 4.35e-2 | ng/dscm | 7%O2 | 1.20e-8 | lbs/hr | OCE |
| 7F Total | 402C1R1 | ND | 8.97e-2 | ng/dscm | 7%O2 | 2.36e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C1R2 | | 5.45e-2 | ng/dscm | 7%O2 | 1.33e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C1R3 | ND | 2.39e-1 | ng/dscm | 7%O2 | 5.66e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C1R4 | ND | 1.07e-1 | ng/dscm | 7%O2 | 2.63e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C3R1 | | 2.38e-2 | ng/dscm | 7%O2 | 9.01e-9 | lbs/hr | CE7%O2 |
| 7F Total | 402C3R2 | | 1.90e-2 | ng/dscm | 7%O2 | 8.14e-9 | lbs/hr | CE7%O2 |
| 7F Total | 402C3R3 | | 7.94e-3 | ng/dscm | 7%O2 | 3.36e-9 | lbs/hr | CE7%O2 |
| 7F Total | 402C3R4 | 2 | 1.20e-2 | ng/dscm | 7%O2 | 5.03e-9 | lbs/hr | CE7%O2 |
| 7F Total | 402C4R2 | | 8.51e-2 | ng/dscm | 7%O2 | 2.35e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C4R3 | | 1.23e-1 | ng/dscm | 7%O2 | 3.39e-8 | lbs/hr | CE7%O2 |
| 7F Total | 402C4R4 | | 8.92e-2 | ng/dscm | 7%O2 | 2.15e-8 | lbs/hr | CE7%O2 |
| 8D | 402C1R1 | | 1.67e+0 | ng/dscm | 7%O2 | 4.41e-7 | lbs/hr | CE7%O2 |
| 8D | 402C1R2 | | 9.88e-1 | ng/dscm | 7%O2 | 2.41e-7 | lbs/hr | CE7%O2 |
| 8D | 402C1R3 | | 1.16e+0 | ng/dscm | 7%O2 | 2.75e-7 | lbs/hr | CE7%O2 |
| 8D | 402C1R4 | | 8.55e-1 | ng/dscm | 7%O2 | 2.10e-7 | lbs/hr | CE7%O2 |
| 8D | 402C3R1 | | 6.19e-2 | ng/dscm | 7%O2 | 2.34e-8 | lbs/hr | CE7%O2 |
| 8D | 402C3R2 | 2 | 2.66e-2 | ng/dscm | 7%O2 | 1.14e-8 | lbs/hr | CE7%O2 |
| 8D | 402C3R3 | | 5.16e-2 | ng/dscm | 7%O2 | 2.18e-8 | lbs/hr | CE7%O2 |
| 8D | 402C3R4 | | 4.42e-2 | ng/dscm | 7%O2 | 1.85e-8 | lbs/hr | CE7%O2 |
| 8D | 402C4R2 | | 8.51e-2 | ng/dscm | 7%O2 | 2.35e-8 | lbs/hr | CE7%O2 |
| 8D | 402C4R3 | | 5.80e-2 | ng/dscm | 7%O2 | 1.60e-8 | lbs/hr | CE7%O2 |
| 8D | 402C4R4 | 2 | 7.76e-2 | ng/dscm | 7%O2 | 1.87e-8 | lbs/hr | CE7%O2 |
| 8F | 402C1R1 | ND | 2.39e-1 | ng/dscm | 7%O2 | 6.30e-8 | lbs/hr | CE7%O2 |
| 8F | 402C1R2 | ND | 3.41e-2 | ng/dscm | 7%O2 | 8.33e-9 | lbs/hr | CE7%O2 |
| 8F | 402C1R3 | ND | 4.44e-1 | ng/dscm | 7%O2 | 1.05e-7 | lbs/hr | CE7%O2 |
| 8F | 402C1R4 | ND | 2.85e-1 | ng/dscm | 7%O2 | 7.00e-8 | lbs/hr | CE7%O2 |
| 8F | 402C3R1 | | 2.86e-2 | ng/dscm | 7%O2 | 1.08e-8 | lbs/hr | CE7%O2 |
| 8F | 402C3R2 | | 2.28e-2 | ng/dscm | 7%O2 | 9.77e-9 | lbs/hr | CE7%O2 |
| 8F | 402C3R3 | | 2.38e-2 | ng/dscm | 7%O2 | 1.01e-8 | lbs/hr | CE7%O2 |
| 8F | 402C3R4 | | 2.81e-2 | ng/dscm | 7%O2 | 1.17e-8 | lbs/hr | CE7%O2 |
| 8F | 402C4R2 | | 4.68e-2 | ng/dscm | 7%O2 | 1.29e-8 | lbs/hr | CE7%O2 |
| 8F | 402C4R3 | | 6.17e-2 | ng/dscm | 7%O2 | 1.69e-8 | lbs/hr | CE7%O2 |
| 8F | 402C4R4 | 2 | 2.33e-2 | ng/dscm | 7%O2 | 5.62e-9 | lbs/hr | CE7%O2 |
| TEQ | 402C1R1 | | 1.39e+0 | ng/dscm | 7%O2 | 3.67e-7 | lbs/hr | COET |
| TEQ | 402C1R2 | | 9.65e-1 | ng/dscm | 7%O2 | 2.36e-7 | lbs/hr | COET |
| TEQ | 402C1R3 | | 1.10e+0 | ng/dscm | 7%O2 | 2.60e-7 | lbs/hr | COET |
| TEQ | 402C1R4 | | 6.40e-1 | ng/dscm | 7%O2 | 1.57e-7 | lbs/hr | COET |
| TEQ | 402C3R1 | | 4.58e-2 | ng/dscm | 7%O2 | 1.73e-8 | lbs/hr | COET |
| TEQ | 402C3R2 | | 3.65e-2 | ng/dscm | 7%O2 | 1.57e-8 | lbs/hr | COET |
| TEQ | 402C3R3 | | 3.59e-2 | ng/dscm | 7%O2 | 1.52e-8 | lbs/hr | COET |
| TEQ | 402C3R4 | | 3.84e-2 | ng/dscm | 7%O2 | 1.60e-8 | lbs/hr | COET |
| TEQ | 402C4R2 | | 1.47e-1 | ng/dscm | 7%O2 | 4.05e-8 | lbs/hr | COET |
| TEQ | 402C4R3 | | 1.07e-1 | ng/dscm | 7%O2 | 2.94e-8 | lbs/hr | COET |
| Total PCDD/PCDF | 402C1R1 | | 5.66e+2 | ng/dscm | 7%O2 | 1.49e-4 | lbs/hr | COET |
| Total PCDD/PCDF | 402C1R2 | | 2.35e+2 | ng/dscm | 7%O2 | 5.74e-5 | lbs/hr | COET |
| Total PCDD/PCDF | 402C1R3 | | 2.71e+2 | ng/dscm | 7%O2 | 6.42e-5 | lbs/hr | COET |
| Total PCDD/PCDF | 402C1R4 | | 1.59e+2 | ng/dscm | 7%O2 | 3.90e-5 | lbs/hr | COET |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | |
|-----------------|---------|---------|---------|------|---------|--------|--------|
| Total PCDD/PCDF | 402C3R1 | 1.93e+0 | ng/dscm | 7%O2 | 7.30e-7 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C3R2 | 1.46e+0 | ng/dscm | 7%O2 | 6.27e-7 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C3R3 | 1.35e+0 | ng/dscm | 7%O2 | 5.71e-7 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C3R4 | 1.16e+0 | ng/dscm | 7%O2 | 4.87e-7 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C4R2 | 6.53e+0 | ng/dscm | 7%O2 | 1.80e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C4R3 | 4.44e+0 | ng/dscm | 7%O2 | 1.22e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 402C4R4 | 8.40e+0 | ng/dscm | 7%O2 | 2.03e-6 | lbs/hr | CE7%O2 |

7. Category: Halogens

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc | |
|--------------|-----------|---------------|---------|------|-----------|----------------|--------|
| Chlorine | 402C1R1 | ND | 1.94e-1 | ppmv | 7%O2 | 1.50e-1 lbs/hr | CC7%O2 |
| Chlorine | 402C1R2 | | 1.81e-1 | ppmv | 7%O2 | 1.30e-1 lbs/hr | CC7%O2 |
| Chlorine | 402C1R3 | | 5.74e-1 | ppmv | 7%O2 | 4.00e-1 lbs/hr | CC7%O2 |
| Chlorine | 402C1R4 | | 2.36e-1 | ppmv | 7%O2 | 1.70e-1 lbs/hr | CC7%O2 |
| Chlorine | 402C4R1 | | 5.41e+0 | ppmv | 7%O2 | 4.69e+0 lbs/hr | CE7%O2 |
| Chlorine | 402C4R2 | | 8.13e+0 | ppmv | 7%O2 | 6.60e+0 lbs/hr | CE7%O2 |
| Chlorine | 402C4R3 | | 9.96e+0 | ppmv | 7%O2 | 8.05e+0 lbs/hr | CE7%O2 |
| Chlorine | 402C4R4 | | 3.96e-2 | ppmv | 7%O2 | 2.81e-2 lbs/hr | CE7%O2 |
| HCl | 402C1R1 | | 6.27e+0 | ppmv | 7%O2 | 2.50e+0 lbs/hr | CC7%O2 |
| HCl | 402C1R2 | | 1.22e+1 | ppmv | 7%O2 | 4.50e+0 lbs/hr | CC7%O2 |
| HCl | 402C1R3 | | 4.07e+1 | ppmv | 7%O2 | 1.46e+1 lbs/hr | CC7%O2 |
| HCl | 402C1R4 | | 2.48e+1 | ppmv | 7%O2 | 9.20e+0 lbs/hr | CC7%O2 |
| HCl | 402C4R1 | | 7.70e+0 | ppmv | 7%O2 | 3.43e+0 lbs/hr | CE7%O2 |
| HCl | 402C4R2 | | 7.25e+0 | ppmv | 7%O2 | 3.03e+0 lbs/hr | CE7%O2 |
| HCl | 402C4R3 | | 1.17e+1 | ppmv | 7%O2 | 4.88e+0 lbs/hr | CE7%O2 |
| HCl | 402C4R4 | | 1.42e+1 | ppmv | 7%O2 | 5.16e+0 lbs/hr | CE7%O2 |

7. Category: Metals

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc | |
|--------------|-----------|---------------|---------|---------|-----------|----------------|--------|
| Antimony | 402C1R1 | ND | 1.29e+2 | ug/dscm | 7%O2 | 3.40e-2 lbs/hr | CC7%O2 |
| Antimony | 402C1R2 | ND | 1.35e+2 | ug/dscm | 7%O2 | 3.30e-2 lbs/hr | CC7%O2 |
| Antimony | 402C1R3 | ND | 1.35e+2 | ug/dscm | 7%O2 | 3.20e-2 lbs/hr | CC7%O2 |
| Antimony | 402C1R4 | ND | 1.39e+2 | ug/dscm | 7%O2 | 3.40e-2 lbs/hr | CC7%O2 |
| Antimony | 402C4R1 | | 1.24e+0 | ug/dscm | 7%O2 | 3.65e-4 lbs/hr | CC7%O2 |
| Antimony | 402C4R2 | | 1.32e+0 | ug/dscm | 7%O2 | 3.65e-4 lbs/hr | CC7%O2 |
| Antimony | 402C4R3 | | 1.04e+0 | ug/dscm | 7%O2 | 2.85e-4 lbs/hr | CC7%O2 |
| Antimony | 402C4R4 | | 1.18e+0 | ug/dscm | 7%O2 | 2.84e-4 lbs/hr | CC7%O2 |
| Arsenic | 402C1R1 | ND | 1.06e+1 | ug/dscm | 7%O2 | 2.80e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C1R2 | ND | 1.11e+1 | ug/dscm | 7%O2 | 2.70e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C1R3 | ND | 1.14e+1 | ug/dscm | 7%O2 | 2.70e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C1R4 | ND | 1.14e+1 | ug/dscm | 7%O2 | 2.80e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C4R1 | | 1.74e+1 | ug/dscm | 7%O2 | 5.11e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C4R2 | | 2.65e+1 | ug/dscm | 7%O2 | 7.29e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C4R3 | | 1.35e+1 | ug/dscm | 7%O2 | 3.70e-3 lbs/hr | CC7%O2 |
| Arsenic | 402C4R4 | | 1.30e+1 | ug/dscm | 7%O2 | 3.13e-3 lbs/hr | CC7%O2 |
| Barium | 402C1R1 | | 1.14e+2 | ug/dscm | 7%O2 | 3.00e-2 lbs/hr | CC7%O2 |
| Barium | 402C1R2 | ND | 1.15e+2 | ug/dscm | 7%O2 | 2.80e-2 lbs/hr | CC7%O2 |
| Barium | 402C1R3 | | 1.77e+2 | ug/dscm | 7%O2 | 4.20e-2 lbs/hr | CC7%O2 |
| Barium | 402C1R4 | ND | 1.59e+2 | ug/dscm | 7%O2 | 3.90e-2 lbs/hr | CC7%O2 |
| Barium | 402C4R1 | | 2.80e+2 | ug/dscm | 7%O2 | 8.24e-2 lbs/hr | CC7%O2 |
| Barium | 402C4R2 | | 2.98e+2 | ug/dscm | 7%O2 | 8.21e-2 lbs/hr | CC7%O2 |
| Barium | 402C4R3 | | 2.60e+2 | ug/dscm | 7%O2 | 7.13e-2 lbs/hr | CC7%O2 |
| Barium | 402C4R4 | | 2.37e+2 | ug/dscm | 7%O2 | 5.71e-2 lbs/hr | CC7%O2 |
| Beryllium | 402C1R1 | ND | 4.18e+0 | ug/dscm | 7%O2 | 1.10e-3 lbs/hr | CC7%O2 |
| Beryllium | 402C1R2 | ND | 4.10e+0 | ug/dscm | 7%O2 | 1.00e-3 lbs/hr | CC7%O2 |
| Beryllium | 402C1R3 | ND | 4.22e+0 | ug/dscm | 7%O2 | 1.00e-3 lbs/hr | CC7%O2 |
| Beryllium | 402C1R4 | ND | 4.08e+0 | ug/dscm | 7%O2 | 1.00e-3 lbs/hr | CC7%O2 |
| Beryllium | 402C4R1 | | 4.96e-1 | ug/dscm | 7%O2 | 1.46e-4 lbs/hr | CC7%O2 |
| Beryllium | 402C4R2 | | 2.65e-1 | ug/dscm | 7%O2 | 7.29e-5 lbs/hr | CC7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

| | | | | | | | | |
|----------------|---------|----|---------|---------|------|---------|--------|--------|
| Beryllium | 402C4R3 | | 2.07e-1 | ug/dscm | 7%O2 | 5.69e-5 | lbs/hr | CC7%O2 |
| Beryllium | 402C4R4 | | 2.36e-1 | ug/dscm | 7%O2 | 5.69e-5 | lbs/hr | CC7%O2 |
| Cadmium | 402C1R1 | ND | 2.20e+1 | ug/dscm | 7%O2 | 5.80e-3 | lbs/hr | CC7%O2 |
| Cadmium | 402C1R2 | ND | 1.64e+1 | ug/dscm | 7%O2 | 4.00e-3 | lbs/hr | CC7%O2 |
| Cadmium | 402C1R3 | ND | 4.64e+1 | ug/dscm | 7%O2 | 1.10e-2 | lbs/hr | CC7%O2 |
| Cadmium | 402C1R4 | ND | 3.95e+1 | ug/dscm | 7%O2 | 9.70e-3 | lbs/hr | CC7%O2 |
| Cadmium | 402C4R1 | | 1.98e+2 | ug/dscm | 7%O2 | 5.84e-2 | lbs/hr | CC7%O2 |
| Cadmium | 402C4R2 | | 2.13e+2 | ug/dscm | 7%O2 | 5.87e-2 | lbs/hr | CC7%O2 |
| Cadmium | 402C4R3 | | 1.87e+2 | ug/dscm | 7%O2 | 5.12e-2 | lbs/hr | CC7%O2 |
| Cadmium | 402C4R4 | | 1.54e+2 | ug/dscm | 7%O2 | 3.71e-2 | lbs/hr | CC7%O2 |
| Chromium | 402C1R1 | ND | 1.10e+1 | ug/dscm | 7%O2 | 2.90e-3 | lbs/hr | CC7%O2 |
| Chromium | 402C1R2 | ND | 1.64e+1 | ug/dscm | 7%O2 | 4.00e-3 | lbs/hr | CC7%O2 |
| Chromium | 402C1R3 | ND | 1.35e+1 | ug/dscm | 7%O2 | 3.20e-3 | lbs/hr | CC7%O2 |
| Chromium | 402C1R4 | ND | 8.15e+0 | ug/dscm | 7%O2 | 2.00e-3 | lbs/hr | CC7%O2 |
| Chromium | 402C4R1 | | 3.67e+1 | ug/dscm | 7%O2 | 1.08e-2 | lbs/hr | CC7%O2 |
| Chromium | 402C4R2 | | 1.57e+1 | ug/dscm | 7%O2 | 4.32e-3 | lbs/hr | CC7%O2 |
| Chromium | 402C4R3 | | 4.41e+1 | ug/dscm | 7%O2 | 1.21e-2 | lbs/hr | CC7%O2 |
| Chromium | 402C4R4 | | 2.56e+1 | ug/dscm | 7%O2 | 6.16e-3 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C1R1 | | 2.92e+0 | ug/dscm | 7%O2 | 7.70e-4 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C1R2 | | 3.36e+0 | ug/dscm | 7%O2 | 8.20e-4 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C1R3 | | 5.07e+0 | ug/dscm | 7%O2 | 1.20e-3 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C1R4 | | 5.71e+0 | ug/dscm | 7%O2 | 1.40e-3 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C4R1 | | 4.08e-1 | ug/dscm | 7%O2 | 1.20e-4 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C4R2 | 2 | 3.63e+0 | ug/dscm | 7%O2 | 1.00e-3 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C4R3 | | 4.74e-1 | ug/dscm | 7%O2 | 1.30e-4 | lbs/hr | CC7%O2 |
| Chromium (Hex) | 402C4R4 | | 5.39e-1 | ug/dscm | 7%O2 | 1.30e-4 | lbs/hr | CC7%O2 |
| Lead | 402C1R1 | ND | 6.07e+2 | ug/dscm | 7%O2 | 1.60e-1 | lbs/hr | CC7%O2 |
| Lead | 402C1R2 | ND | 3.64e+2 | ug/dscm | 7%O2 | 8.90e-2 | lbs/hr | CC7%O2 |
| Lead | 402C1R3 | ND | 1.27e+3 | ug/dscm | 7%O2 | 3.00e-1 | lbs/hr | CC7%O2 |
| Lead | 402C1R4 | ND | 8.97e+2 | ug/dscm | 7%O2 | 2.20e-1 | lbs/hr | CC7%O2 |
| Lead | 402C4R1 | | 6.45e+3 | ug/dscm | 7%O2 | 1.90e+0 | lbs/hr | CC7%O2 |
| Lead | 402C4R2 | | 5.30e+3 | ug/dscm | 7%O2 | 1.46e+0 | lbs/hr | CC7%O2 |
| Lead | 402C4R3 | | 5.79e+3 | ug/dscm | 7%O2 | 1.59e+0 | lbs/hr | CC7%O2 |
| Lead | 402C4R4 | | 5.89e+3 | ug/dscm | 7%O2 | 1.42e+0 | lbs/hr | CC7%O2 |
| Mercury | 402C1R1 | ND | 3.80e+1 | ug/dscm | 7%O2 | 1.00e-2 | lbs/hr | CC7%O2 |
| Mercury | 402C1R2 | ND | 1.23e+1 | ug/dscm | 7%O2 | 3.00e-3 | lbs/hr | CC7%O2 |
| Mercury | 402C1R3 | ND | 8.44e+0 | ug/dscm | 7%O2 | 2.00e-3 | lbs/hr | CC7%O2 |
| Mercury | 402C1R4 | ND | 1.92e+1 | ug/dscm | 7%O2 | 4.70e-3 | lbs/hr | CC7%O2 |
| Mercury | 402C4R1 | | 3.87e+1 | ug/dscm | 7%O2 | 1.14e-2 | lbs/hr | CC7%O2 |
| Mercury | 402C4R2 | | 7.00e+1 | ug/dscm | 7%O2 | 1.93e-2 | lbs/hr | CC7%O2 |
| Mercury | 402C4R3 | | 5.68e+1 | ug/dscm | 7%O2 | 1.56e-2 | lbs/hr | CC7%O2 |
| Mercury | 402C4R4 | | 4.03e+1 | ug/dscm | 7%O2 | 9.71e-3 | lbs/hr | CC7%O2 |
| Silver | 402C1R1 | ND | 3.00e+0 | ug/dscm | 7%O2 | 7.90e-4 | lbs/hr | CC7%O2 |
| Silver | 402C1R2 | ND | 3.19e+0 | ug/dscm | 7%O2 | 7.80e-4 | lbs/hr | CC7%O2 |
| Silver | 402C1R3 | ND | 3.21e+0 | ug/dscm | 7%O2 | 7.60e-4 | lbs/hr | CC7%O2 |
| Silver | 402C1R4 | ND | 3.22e+0 | ug/dscm | 7%O2 | 7.90e-4 | lbs/hr | CC7%O2 |
| Silver | 402C4R1 | | 1.24e+0 | ug/dscm | 7%O2 | 3.65e-4 | lbs/hr | CC7%O2 |
| Silver | 402C4R2 | | 1.32e+0 | ug/dscm | 7%O2 | 3.65e-4 | lbs/hr | CC7%O2 |
| Silver | 402C4R3 | | 1.04e+0 | ug/dscm | 7%O2 | 2.85e-4 | lbs/hr | CC7%O2 |
| Silver | 402C4R4 | | 1.18e+0 | ug/dscm | 7%O2 | 2.84e-4 | lbs/hr | CC7%O2 |
| Thallium | 402C1R1 | ND | 1.14e+1 | ug/dscm | 7%O2 | 3.00e-3 | lbs/hr | CC7%O2 |
| Thallium | 402C1R2 | ND | 1.23e+1 | ug/dscm | 7%O2 | 3.00e-3 | lbs/hr | CC7%O2 |
| Thallium | 402C1R3 | ND | 1.22e+1 | ug/dscm | 7%O2 | 2.90e-3 | lbs/hr | CC7%O2 |
| Thallium | 402C1R4 | ND | 1.22e+1 | ug/dscm | 7%O2 | 3.00e-3 | lbs/hr | CC7%O2 |
| Thallium | 402C4R1 | | 2.48e+0 | ug/dscm | 7%O2 | 7.30e-4 | lbs/hr | CC7%O2 |
| Thallium | 402C4R2 | | 2.65e+0 | ug/dscm | 7%O2 | 7.29e-4 | lbs/hr | CC7%O2 |
| Thallium | 402C4R3 | | 2.07e+0 | ug/dscm | 7%O2 | 5.69e-4 | lbs/hr | CC7%O2 |
| Thallium | 402C4R4 | | 2.36e+0 | ug/dscm | 7%O2 | 5.69e-4 | lbs/hr | CC7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

7. Category: PAH

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|----------------------|-----------|-------------------------|----------------|--------|
| Acenaphthene | 402C3R1 | ND 1.14e+2 ng/dscm 7%O2 | 4.31e-5 lbs/hr | CE |
| Acenaphthene | 402C3R2 | ND 3.98e+2 ng/dscm 7%O2 | 1.71e-4 lbs/hr | CE |
| Acenaphthene | 402C3R3 | ND 5.52e+2 ng/dscm 7%O2 | 2.33e-4 lbs/hr | CE |
| Acenaphthene | 402C3R4 | ND 4.70e+2 ng/dscm 7%O2 | 1.96e-4 lbs/hr | CE |
| Acenaphthene | 402C4R2 | 2 5.69e+2 ng/dscm 7%O2 | 1.57e-4 lbs/hr | CE |
| Acenaphthene | 402C4R3 | ND 3.87e+2 ng/dscm 7%O2 | 1.06e-4 lbs/hr | CE |
| Acenaphthene | 402C4R4 | 2 3.25e+2 ng/dscm 7%O2 | 7.84e-5 lbs/hr | CE |
| Acenaphthylene | 402C2R1 | 1.06e+4 ng/dscm 7%O2 | 2.63e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 402C2R2 | 1.38e+4 ng/dscm 7%O2 | 3.53e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 402C2R3 | 7.61e+3 ng/dscm 7%O2 | 1.94e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 402C2R4 | 8.32e+3 ng/dscm 7%O2 | 1.53e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 402C3R1 | 3.71e+4 ng/dscm 7%O2 | 1.40e-2 lbs/hr | CE |
| Acenaphthylene | 402C3R2 | ND 2.14e+2 ng/dscm 7%O2 | 9.18e-5 lbs/hr | CE |
| Acenaphthylene | 402C3R3 | 2 7.26e+3 ng/dscm 7%O2 | 3.07e-3 lbs/hr | CE |
| Acenaphthylene | 402C3R4 | 2 1.02e+4 ng/dscm 7%O2 | 4.26e-3 lbs/hr | CE |
| Acenaphthylene | 402C4R2 | 2 3.97e+3 ng/dscm 7%O2 | 1.10e-3 lbs/hr | CE |
| Acenaphthylene | 402C4R3 | 2 3.31e+3 ng/dscm 7%O2 | 9.10e-4 lbs/hr | CE |
| Acenaphthylene | 402C4R4 | 2 3.39e+3 ng/dscm 7%O2 | 8.18e-4 lbs/hr | CE |
| Anthracene | 402C3R1 | ND 6.20e+1 ng/dscm 7%O2 | 2.35e-5 lbs/hr | CE |
| Anthracene | 402C3R2 | ND 1.60e+1 ng/dscm 7%O2 | 6.86e-6 lbs/hr | CE |
| Anthracene | 402C3R3 | ND 2.44e+2 ng/dscm 7%O2 | 1.03e-4 lbs/hr | CE |
| Anthracene | 402C3R4 | ND 2.27e+2 ng/dscm 7%O2 | 9.49e-5 lbs/hr | CE |
| Anthracene | 402C4R2 | ND 2.19e+2 ng/dscm 7%O2 | 6.04e-5 lbs/hr | CE |
| Anthracene | 402C4R3 | ND 1.77e+2 ng/dscm 7%O2 | 4.86e-5 lbs/hr | CE |
| Anthracene | 402C4R4 | ND 2.31e+2 ng/dscm 7%O2 | 5.57e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C3R1 | 2 6.25e+2 ng/dscm 7%O2 | 2.36e-4 lbs/hr | CE |
| Benzo(a)anthracene | 402C3R2 | ND 1.61e+2 ng/dscm 7%O2 | 6.91e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C3R3 | ND 1.96e+2 ng/dscm 7%O2 | 8.29e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C3R4 | ND 1.82e+2 ng/dscm 7%O2 | 7.61e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C4R2 | ND 2.06e+2 ng/dscm 7%O2 | 5.68e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C4R3 | ND 1.58e+2 ng/dscm 7%O2 | 4.34e-5 lbs/hr | CE |
| Benzo(a)anthracene | 402C4R4 | ND 1.76e+2 ng/dscm 7%O2 | 4.25e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C3R1 | ND 8.40e+1 ng/dscm 7%O2 | 3.18e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C3R2 | ND 1.53e+2 ng/dscm 7%O2 | 6.56e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C3R3 | ND 1.64e+2 ng/dscm 7%O2 | 6.94e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C3R4 | ND 1.70e+2 ng/dscm 7%O2 | 7.10e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C4R2 | 2 1.89e+2 ng/dscm 7%O2 | 5.21e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C4R3 | ND 1.43e+2 ng/dscm 7%O2 | 3.93e-5 lbs/hr | CE |
| Benzo(a)pyrene | 402C4R4 | ND 1.49e+2 ng/dscm 7%O2 | 3.59e-5 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C3R1 | 2 1.08e+3 ng/dscm 7%O2 | 4.09e-4 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C3R2 | ND 1.57e+2 ng/dscm 7%O2 | 6.74e-5 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C3R3 | ND 1.56e+2 ng/dscm 7%O2 | 6.60e-5 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C3R4 | ND 4.94e+2 ng/dscm 7%O2 | 2.06e-4 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C4R2 | ND 1.67e+2 ng/dscm 7%O2 | 4.61e-5 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C4R3 | 2 1.32e+2 ng/dscm 7%O2 | 3.63e-5 lbs/hr | CE |
| Benzo(b)fluoranthene | 402C4R4 | ND 1.41e+2 ng/dscm 7%O2 | 3.40e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C3R1 | ND 8.40e+1 ng/dscm 7%O2 | 3.18e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C3R2 | ND 1.26e+2 ng/dscm 7%O2 | 5.41e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C3R3 | ND 1.40e+2 ng/dscm 7%O2 | 5.92e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C3R4 | ND 1.46e+2 ng/dscm 7%O2 | 6.10e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C4R2 | ND 1.50e+2 ng/dscm 7%O2 | 4.14e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C4R3 | ND 1.20e+2 ng/dscm 7%O2 | 3.30e-5 lbs/hr | CE |
| Benzo(g,h,i)perylene | 402C4R4 | ND 1.29e+2 ng/dscm 7%O2 | 3.11e-5 lbs/hr | CE |
| Benzo(k)fluoranthene | 402C3R1 | ND 8.80e+1 ng/dscm 7%O2 | 3.33e-5 lbs/hr | CE |
| Benzo(k)fluoranthene | 402C3R2 | ND 1.57e+2 ng/dscm 7%O2 | 6.74e-5 lbs/hr | CE |
| Benzo(k)fluoranthene | 402C3R3 | ND 1.68e+2 ng/dscm 7%O2 | 7.11e-5 lbs/hr | CE |
| Benzo(k)fluoranthene | 402C3R4 | ND 1.74e+2 ng/dscm 7%O2 | 7.27e-5 lbs/hr | CE |
| Benzo(k)fluoranthene | 402C4R2 | ND 1.80e+2 ng/dscm 7%O2 | 4.97e-5 lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|------------------------|---------|----|---------|---------|------|---------|--------|--------|
| Benzo(k)fluoranthene | 402C4R3 | ND | 1.43e+2 | ng/dscm | 7%O2 | 3.93e-5 | lbs/hr | CE |
| Benzo(k)fluoranthene | 402C4R4 | ND | 1.53e+2 | ng/dscm | 7%O2 | 3.69e-5 | lbs/hr | CE |
| Chrysene | 402C3R1 | ND | 7.90e+1 | ng/dscm | 7%O2 | 2.99e-5 | lbs/hr | CE |
| Chrysene | 402C3R2 | 2 | 6.31e+2 | ng/dscm | 7%O2 | 2.71e-4 | lbs/hr | CE |
| Chrysene | 402C3R3 | 2 | 3.44e+2 | ng/dscm | 7%O2 | 1.45e-4 | lbs/hr | CE |
| Chrysene | 402C3R4 | 2 | 1.01e+3 | ng/dscm | 7%O2 | 4.22e-4 | lbs/hr | CE |
| Chrysene | 402C4R2 | 2 | 5.32e+2 | ng/dscm | 7%O2 | 1.47e-4 | lbs/hr | CE |
| Chrysene | 402C4R3 | 2 | 2.93e+2 | ng/dscm | 7%O2 | 8.05e-5 | lbs/hr | CE |
| Chrysene | 402C4R4 | 2 | 2.47e+2 | ng/dscm | 7%O2 | 5.96e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C3R1 | ND | 1.01e+2 | ng/dscm | 7%O2 | 3.82e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C3R2 | ND | 1.45e+2 | ng/dscm | 7%O2 | 6.22e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C3R3 | ND | 1.60e+2 | ng/dscm | 7%O2 | 6.77e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C3R4 | ND | 1.62e+2 | ng/dscm | 7%O2 | 6.77e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C4R2 | ND | 1.72e+2 | ng/dscm | 7%O2 | 4.74e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C4R3 | ND | 1.35e+2 | ng/dscm | 7%O2 | 3.71e-5 | lbs/hr | CE |
| Dibenz(a,h)anthracene | 402C4R4 | ND | 1.45e+2 | ng/dscm | 7%O2 | 3.50e-5 | lbs/hr | CE |
| Fluoranthene | 402C2R1 | | 5.92e+4 | ng/dscm | 7%O2 | 1.48e-2 | lbs/hr | CE7%O2 |
| Fluoranthene | 402C2R2 | | 6.85e+3 | ng/dscm | 7%O2 | 1.75e-3 | lbs/hr | CE7%O2 |
| Fluoranthene | 402C2R3 | | 4.54e+3 | ng/dscm | 7%O2 | 1.16e-3 | lbs/hr | CE7%O2 |
| Fluoranthene | 402C2R4 | | 5.25e+3 | ng/dscm | 7%O2 | 9.63e-4 | lbs/hr | CE7%O2 |
| Fluoranthene | 402C3R1 | | 2.34e+4 | ng/dscm | 7%O2 | 8.85e-3 | lbs/hr | CE |
| Fluoranthene | 402C3R2 | 2 | 4.32e+3 | ng/dscm | 7%O2 | 1.85e-3 | lbs/hr | CE |
| Fluoranthene | 402C3R3 | 2 | 4.36e+3 | ng/dscm | 7%O2 | 1.84e-3 | lbs/hr | CE |
| Fluoranthene | 402C3R4 | | 1.86e+4 | ng/dscm | 7%O2 | 7.77e-3 | lbs/hr | CE |
| Fluoranthene | 402C4R2 | 2 | 2.65e+3 | ng/dscm | 7%O2 | 7.31e-4 | lbs/hr | CE |
| Fluoranthene | 402C4R3 | 2 | 1.68e+3 | ng/dscm | 7%O2 | 4.62e-4 | lbs/hr | CE |
| Fluoranthene | 402C4R4 | 2 | 1.86e+3 | ng/dscm | 7%O2 | 4.49e-4 | lbs/hr | CE |
| Fluorene | 402C3R1 | | 4.43e+3 | ng/dscm | 7%O2 | 1.68e-3 | lbs/hr | CE |
| Fluorene | 402C3R2 | 2 | 2.39e+3 | ng/dscm | 7%O2 | 1.03e-3 | lbs/hr | CE |
| Fluorene | 402C3R3 | 2 | 1.76e+3 | ng/dscm | 7%O2 | 7.44e-4 | lbs/hr | CE |
| Fluorene | 402C3R4 | 2 | 2.87e+3 | ng/dscm | 7%O2 | 1.20e-3 | lbs/hr | CE |
| Fluorene | 402C4R2 | 2 | 2.32e+3 | ng/dscm | 7%O2 | 6.40e-4 | lbs/hr | CE |
| Fluorene | 402C4R3 | 2 | 2.12e+3 | ng/dscm | 7%O2 | 5.83e-4 | lbs/hr | CE |
| Fluorene | 402C4R4 | 2 | 2.09e+3 | ng/dscm | 7%O2 | 5.04e-4 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C3R1 | ND | 7.50e+1 | ng/dscm | 7%O2 | 2.84e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C3R2 | ND | 1.11e+2 | ng/dscm | 7%O2 | 4.76e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C3R3 | ND | 1.40e+2 | ng/dscm | 7%O2 | 5.92e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C3R4 | ND | 1.46e+2 | ng/dscm | 7%O2 | 6.10e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C4R2 | ND | 1.50e+2 | ng/dscm | 7%O2 | 4.14e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C4R3 | ND | 1.20e+2 | ng/dscm | 7%O2 | 3.30e-5 | lbs/hr | CE |
| Indeno(1,2,3-cd)pyrene | 402C4R4 | ND | 1.25e+2 | ng/dscm | 7%O2 | 3.02e-5 | lbs/hr | CE |
| Naphthalene | 402C2R1 | | 1.19e+5 | ng/dscm | 7%O2 | 2.98e-2 | lbs/hr | CE7%O2 |
| Naphthalene | 402C2R2 | | 1.44e+5 | ng/dscm | 7%O2 | 3.67e-2 | lbs/hr | CE7%O2 |
| Naphthalene | 402C2R3 | | 1.04e+5 | ng/dscm | 7%O2 | 2.65e-2 | lbs/hr | CE7%O2 |
| Naphthalene | 402C2R4 | | 1.20e+5 | ng/dscm | 7%O2 | 2.20e-2 | lbs/hr | CE7%O2 |
| Naphthalene | 402C3R1 | 2 | 2.30e+5 | ng/dscm | 7%O2 | 8.70e-2 | lbs/hr | CE |
| Naphthalene | 402C3R2 | 2 | 9.17e+4 | ng/dscm | 7%O2 | 3.93e-2 | lbs/hr | CE |
| Naphthalene | 402C3R3 | 2 | 4.35e+4 | ng/dscm | 7%O2 | 1.84e-2 | lbs/hr | CE |
| Naphthalene | 402C3R4 | 2 | 1.79e+5 | ng/dscm | 7%O2 | 7.48e-2 | lbs/hr | CE |
| Naphthalene | 402C4R2 | | 8.38e+4 | ng/dscm | 7%O2 | 2.31e-2 | lbs/hr | CE |
| Naphthalene | 402C4R3 | | 7.63e+5 | ng/dscm | 7%O2 | 2.10e-1 | lbs/hr | CE |
| Naphthalene | 402C4R4 | | 3.79e+4 | ng/dscm | 7%O2 | 9.14e-3 | lbs/hr | CE |
| Phenanthrene | 402C2R1 | | 2.05e+4 | ng/dscm | 7%O2 | 5.11e-3 | lbs/hr | CE7%O2 |
| Phenanthrene | 402C2R2 | | 2.41e+4 | ng/dscm | 7%O2 | 6.17e-3 | lbs/hr | CE7%O2 |
| Phenanthrene | 402C2R3 | | 1.79e+4 | ng/dscm | 7%O2 | 4.56e-3 | lbs/hr | CE7%O2 |
| Phenanthrene | 402C2R4 | | 2.08e+4 | ng/dscm | 7%O2 | 3.81e-3 | lbs/hr | CE7%O2 |
| Phenanthrene | 402C3R1 | | 3.72e+4 | ng/dscm | 7%O2 | 1.41e-2 | lbs/hr | CE |
| Phenanthrene | 402C3R2 | | 1.60e+4 | ng/dscm | 7%O2 | 6.86e-3 | lbs/hr | CE |
| Phenanthrene | 402C3R3 | | 1.39e+4 | ng/dscm | 7%O2 | 5.88e-3 | lbs/hr | CE |
| Phenanthrene | 402C3R4 | | 3.33e+4 | ng/dscm | 7%O2 | 1.39e-2 | lbs/hr | CE |
| Phenanthrene | 402C4R2 | | 1.49e+4 | ng/dscm | 7%O2 | 4.11e-3 | lbs/hr | CE |
| Phenanthrene | 402C4R3 | | 1.17e+4 | ng/dscm | 7%O2 | 3.22e-3 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | |
|--------------|---------|---|---------|--------------|---------|--------|--------|
| Phenanthrene | 402C4R4 | | 1.12e+4 | ng/dscm 7%O2 | 2.70e-3 | lbs/hr | CE |
| Pyrene | 402C2R1 | | 4.48e+3 | ng/dscm 7%O2 | 1.12e-3 | lbs/hr | CE7%O2 |
| Pyrene | 402C2R2 | | 6.56e+3 | ng/dscm 7%O2 | 1.68e-3 | lbs/hr | CE7%O2 |
| Pyrene | 402C2R3 | | 3.87e+3 | ng/dscm 7%O2 | 9.88e-4 | lbs/hr | CE7%O2 |
| Pyrene | 402C2R4 | | 3.70e+3 | ng/dscm 7%O2 | 6.78e-4 | lbs/hr | CE7%O2 |
| Pyrene | 402C3R1 | | 3.10e+4 | ng/dscm 7%O2 | 1.17e-2 | lbs/hr | CE |
| Pyrene | 402C3R2 | 2 | 4.91e+3 | ng/dscm 7%O2 | 2.11e-3 | lbs/hr | CE |
| Pyrene | 402C3R3 | 2 | 5.19e+3 | ng/dscm 7%O2 | 2.19e-3 | lbs/hr | CE |
| Pyrene | 402C3R4 | | 2.55e+4 | ng/dscm 7%O2 | 1.07e-2 | lbs/hr | CE |
| Pyrene | 402C4R2 | 2 | 2.34e+3 | ng/dscm 7%O2 | 6.46e-4 | lbs/hr | CE |
| Pyrene | 402C4R3 | 2 | 1.50e+3 | ng/dscm 7%O2 | 4.12e-4 | lbs/hr | CE |
| Pyrene | 402C4R4 | 2 | 1.18e+3 | ng/dscm 7%O2 | 2.85e-4 | lbs/hr | CE |

7. Category: Particulate

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|--------------|-----------|----------------------|----------------|------|
| Particulate | 402C1R1 | 2.66e-2 gr/dscf 7%O2 | 1.60e+1 lbs/hr | |
| Particulate | 402C1R2 | 2.19e-2 gr/dscf 7%O2 | 1.13e+1 lbs/hr | |
| Particulate | 402C1R3 | 4.94e-2 gr/dscf 7%O2 | 2.51e+1 lbs/hr | |
| Particulate | 402C1R4 | 3.23e-2 gr/dscf 7%O2 | 1.75e+1 lbs/hr | |
| Particulate | 402C5R1 | 1.19e-1 gr/dscf 7%O2 | 6.53e+1 lbs/hr | CE |
| Particulate | 402C5R2 | 6.42e-2 gr/dscf 7%O2 | 3.49e+1 lbs/hr | CE |
| Particulate | 402C5R3 | 7.95e-2 gr/dscf 7%O2 | 4.29e+1 lbs/hr | CE |
| Particulate | 402C5R4 | 7.56e-2 gr/dscf 7%O2 | 2.61e+1 lbs/hr | CE |

7. Category: SVOC

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|----------------------------|-----------|-------------------------|----------------|--------|
| 1,2,4,5-Tetrachlorobenzene | 402C3R1 | ND 0.00e+0 | 0.00e+0 | |
| 1,2,4,5-Tetrachlorobenzene | 402C3R2 | ND 8.42e+2 ng/dscm 7%O2 | 3.61e-4 lbs/hr | CE |
| 1,2,4,5-Tetrachlorobenzene | 402C3R3 | ND 1.19e+3 ng/dscm 7%O2 | 5.03e-4 lbs/hr | CE |
| 1,2,4,5-Tetrachlorobenzene | 402C3R4 | ND 1.01e+3 ng/dscm 7%O2 | 4.22e-4 lbs/hr | CE |
| 1,2,4,5-Tetrachlorobenzene | 402C4R2 | ND 1.07e+3 ng/dscm 7%O2 | 2.95e-4 lbs/hr | CE |
| 1,2,4,5-Tetrachlorobenzene | 402C4R3 | ND 8.31e+2 ng/dscm 7%O2 | 2.28e-4 lbs/hr | CE |
| 1,2,4,5-Tetrachlorobenzene | 402C4R4 | ND 1.07e+3 ng/dscm 7%O2 | 2.58e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C2R1 | ND 6.90e+2 ng/dscm 7%O2 | 1.72e-4 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 402C2R2 | ND 6.73e+2 ng/dscm 7%O2 | 1.72e-4 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 402C2R3 | ND 6.74e+2 ng/dscm 7%O2 | 1.72e-4 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 402C2R4 | ND 1.08e+3 ng/dscm 7%O2 | 1.98e-4 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 402C3R1 | 2 6.51e+2 ng/dscm 7%O2 | 2.46e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C3R2 | ND 6.89e+2 ng/dscm 7%O2 | 2.96e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C3R3 | ND 9.41e+2 ng/dscm 7%O2 | 3.98e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C3R4 | ND 8.46e+2 ng/dscm 7%O2 | 3.54e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C4R2 | 9.27e+2 ng/dscm 7%O2 | 2.56e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C4R3 | 8.12e+2 ng/dscm 7%O2 | 2.23e-4 lbs/hr | CE |
| 1,2,4-Trichlorobenzene | 402C4R4 | 8.27e+2 ng/dscm 7%O2 | 2.00e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C3R1 | ND 3.39e+2 ng/dscm 7%O2 | 1.28e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C3R2 | ND 6.08e+2 ng/dscm 7%O2 | 2.61e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C3R3 | ND 7.73e+2 ng/dscm 7%O2 | 3.27e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C3R4 | ND 7.25e+2 ng/dscm 7%O2 | 3.03e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C4R2 | 7.98e+2 ng/dscm 7%O2 | 2.20e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C4R3 | 1.50e+3 ng/dscm 7%O2 | 4.12e-4 lbs/hr | CE |
| 1,2-Dichlorobenzene | 402C4R4 | 6.82e+2 ng/dscm 7%O2 | 1.65e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C3R1 | 2 2.20e+2 ng/dscm 7%O2 | 8.32e-5 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C3R2 | ND 5.74e+2 ng/dscm 7%O2 | 2.46e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C3R3 | ND 7.41e+2 ng/dscm 7%O2 | 3.13e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C3R4 | ND 6.92e+2 ng/dscm 7%O2 | 2.89e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C4R2 | 7.64e+2 ng/dscm 7%O2 | 2.11e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C4R3 | 6.65e+2 ng/dscm 7%O2 | 1.83e-4 lbs/hr | CE |
| 1,3-Dichlorobenzene | 402C4R4 | 6.50e+2 ng/dscm 7%O2 | 1.57e-4 lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C3R1 | ND 4.93e+2 ng/dscm 7%O2 | 1.87e-4 lbs/hr | CE |

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-----------------------------|---------|----|---------|---------|------|---------|--------|----|
| 1,4-Dichlorobenzene | 402C3R2 | ND | 5.59e+2 | ng/dscm | 7%O2 | 2.40e-4 | lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C3R3 | ND | 7.01e+2 | ng/dscm | 7%O2 | 2.96e-4 | lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C3R4 | ND | 6.60e+2 | ng/dscm | 7%O2 | 2.76e-4 | lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C4R2 | | 7.25e+2 | ng/dscm | 7%O2 | 2.00e-4 | lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C4R3 | | 3.19e+2 | ng/dscm | 7%O2 | 8.77e-5 | lbs/hr | CE |
| 1,4-Dichlorobenzene | 402C4R4 | | 6.19e+2 | ng/dscm | 7%O2 | 1.49e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C3R1 | ND | 1.33e+3 | ng/dscm | 7%O2 | 5.03e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C3R2 | ND | 1.48e+3 | ng/dscm | 7%O2 | 6.35e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C3R3 | ND | 2.10e+3 | ng/dscm | 7%O2 | 8.88e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C3R4 | ND | 1.89e+3 | ng/dscm | 7%O2 | 7.90e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C4R2 | ND | 2.07e+3 | ng/dscm | 7%O2 | 5.71e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C4R3 | ND | 1.82e+3 | ng/dscm | 7%O2 | 5.00e-4 | lbs/hr | CE |
| 1,4-Phenylenediamine | 402C4R4 | ND | 1.85e+3 | ng/dscm | 7%O2 | 4.46e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C3R1 | | 5.02e+2 | ng/dscm | 7%O2 | 1.90e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C3R2 | ND | 1.01e+3 | ng/dscm | 7%O2 | 4.33e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C3R3 | ND | 1.38e+3 | ng/dscm | 7%O2 | 5.84e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C3R4 | ND | 1.29e+3 | ng/dscm | 7%O2 | 5.39e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C4R2 | | 1.42e+3 | ng/dscm | 7%O2 | 3.92e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C4R3 | | 1.24e+3 | ng/dscm | 7%O2 | 3.41e-4 | lbs/hr | CE |
| 2,2-Oxybis(1-chloropropane) | 402C4R4 | | 1.22e+3 | ng/dscm | 7%O2 | 2.94e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C3R1 | ND | 3.24e+3 | ng/dscm | 7%O2 | 1.23e-3 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C3R2 | ND | 1.56e+3 | ng/dscm | 7%O2 | 6.69e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C3R3 | ND | 2.23e+3 | ng/dscm | 7%O2 | 9.43e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C3R4 | ND | 1.89e+3 | ng/dscm | 7%O2 | 7.90e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C4R2 | ND | 2.01e+3 | ng/dscm | 7%O2 | 5.54e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C4R3 | ND | 1.56e+3 | ng/dscm | 7%O2 | 4.29e-4 | lbs/hr | CE |
| 2,3,4,6-Tetrachlorophenol | 402C4R4 | ND | 2.01e+3 | ng/dscm | 7%O2 | 4.85e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C3R1 | ND | 3.17e+2 | ng/dscm | 7%O2 | 1.20e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C3R2 | ND | 9.72e+2 | ng/dscm | 7%O2 | 4.17e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C3R3 | ND | 1.43e+3 | ng/dscm | 7%O2 | 6.05e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C3R4 | ND | 1.21e+3 | ng/dscm | 7%O2 | 5.06e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C4R2 | | 1.29e+3 | ng/dscm | 7%O2 | 3.56e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C4R3 | | 1.00e+3 | ng/dscm | 7%O2 | 2.75e-4 | lbs/hr | CE |
| 2,4,5-Trichlorophenol | 402C4R4 | | 1.29e+3 | ng/dscm | 7%O2 | 3.11e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C3R1 | ND | 3.26e+2 | ng/dscm | 7%O2 | 1.23e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C3R2 | ND | 9.98e+2 | ng/dscm | 7%O2 | 4.28e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C3R3 | ND | 1.55e+3 | ng/dscm | 7%O2 | 6.56e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C3R4 | ND | 1.32e+3 | ng/dscm | 7%O2 | 5.52e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C4R2 | | 1.39e+3 | ng/dscm | 7%O2 | 3.83e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C4R3 | | 1.09e+3 | ng/dscm | 7%O2 | 3.00e-4 | lbs/hr | CE |
| 2,4,6-Trichlorophenol | 402C4R4 | | 1.40e+3 | ng/dscm | 7%O2 | 3.38e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C3R1 | ND | 1.45e+2 | ng/dscm | 7%O2 | 5.49e-5 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C3R2 | ND | 3.90e+2 | ng/dscm | 7%O2 | 1.67e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C3R3 | ND | 5.32e+2 | ng/dscm | 7%O2 | 2.25e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C3R4 | ND | 4.78e+2 | ng/dscm | 7%O2 | 2.00e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C4R2 | | 8.11e+2 | ng/dscm | 7%O2 | 2.24e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C4R3 | | 8.46e+2 | ng/dscm | 7%O2 | 2.32e-4 | lbs/hr | CE |
| 2,4-Dichlorophenol | 402C4R4 | | 4.70e+2 | ng/dscm | 7%O2 | 1.13e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C3R1 | ND | 1.58e+2 | ng/dscm | 7%O2 | 5.98e-5 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C3R2 | ND | 9.03e+2 | ng/dscm | 7%O2 | 3.87e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C3R3 | ND | 1.18e+3 | ng/dscm | 7%O2 | 4.99e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C3R4 | ND | 1.06e+3 | ng/dscm | 7%O2 | 4.43e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C4R2 | | 1.16e+3 | ng/dscm | 7%O2 | 3.20e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C4R3 | | 1.02e+3 | ng/dscm | 7%O2 | 2.80e-4 | lbs/hr | CE |
| 2,4-Dimethylphenol | 402C4R4 | | 1.03e+3 | ng/dscm | 7%O2 | 2.48e-4 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C3R1 | ND | 9.24e+2 | ng/dscm | 7%O2 | 3.50e-4 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C3R2 | ND | 3.16e+3 | ng/dscm | 7%O2 | 1.36e-3 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C3R3 | ND | 5.90e+3 | ng/dscm | 7%O2 | 2.50e-3 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C3R4 | ND | 5.01e+3 | ng/dscm | 7%O2 | 2.09e-3 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C4R2 | ND | 5.32e+3 | ng/dscm | 7%O2 | 1.47e-3 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C4R3 | ND | 4.12e+3 | ng/dscm | 7%O2 | 1.13e-3 | lbs/hr | CE |
| 2,4-Dinitrophenol | 402C4R4 | ND | 5.34e+3 | ng/dscm | 7%O2 | 1.29e-3 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|---------------------------|---------|----|---------|---------|------|---------|--------|--------|
| 2,4-Dinitrotoluene | 402C3R1 | ND | 3.39e+2 | ng/dscm | 7%O2 | 1.28e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C3R2 | ND | 8.07e+2 | ng/dscm | 7%O2 | 3.46e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C3R3 | ND | 1.25e+3 | ng/dscm | 7%O2 | 5.29e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C3R4 | ND | 1.06e+3 | ng/dscm | 7%O2 | 4.43e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C4R2 | ND | 1.12e+3 | ng/dscm | 7%O2 | 3.09e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C4R3 | ND | 8.72e+2 | ng/dscm | 7%O2 | 2.40e-4 | lbs/hr | CE |
| 2,4-Dinitrotoluene | 402C4R4 | ND | 1.13e+3 | ng/dscm | 7%O2 | 2.73e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C3R1 | ND | 1.08e+3 | ng/dscm | 7%O2 | 4.09e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C3R2 | ND | 8.11e+2 | ng/dscm | 7%O2 | 3.48e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C3R3 | ND | 1.16e+3 | ng/dscm | 7%O2 | 4.91e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C3R4 | ND | 9.88e+2 | ng/dscm | 7%O2 | 4.13e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C4R2 | ND | 1.05e+3 | ng/dscm | 7%O2 | 2.90e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C4R3 | ND | 8.12e+2 | ng/dscm | 7%O2 | 2.23e-4 | lbs/hr | CE |
| 2,6-Dichlorophenol | 402C4R4 | ND | 1.05e+3 | ng/dscm | 7%O2 | 2.53e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C3R1 | ND | 4.17e+2 | ng/dscm | 7%O2 | 1.58e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C3R2 | ND | 1.30e+3 | ng/dscm | 7%O2 | 5.58e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C3R3 | ND | 1.87e+3 | ng/dscm | 7%O2 | 7.91e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C3R4 | ND | 1.59e+3 | ng/dscm | 7%O2 | 6.64e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C4R2 | ND | 1.69e+3 | ng/dscm | 7%O2 | 4.66e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C4R3 | ND | 1.31e+3 | ng/dscm | 7%O2 | 3.60e-4 | lbs/hr | CE |
| 2,6-Dinitrotoluene | 402C4R4 | ND | 1.69e+3 | ng/dscm | 7%O2 | 4.08e-4 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C3R1 | ND | 1.10e+2 | ng/dscm | 7%O2 | 4.16e-5 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C3R2 | ND | 3.50e+1 | ng/dscm | 7%O2 | 1.50e-5 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C3R3 | ND | 5.00e+2 | ng/dscm | 7%O2 | 2.11e-4 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C3R4 | 2 | 3.76e+2 | ng/dscm | 7%O2 | 1.57e-4 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C4R2 | 2 | 6.95e+2 | ng/dscm | 7%O2 | 1.92e-4 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C4R3 | 2 | 6.43e+2 | ng/dscm | 7%O2 | 1.77e-4 | lbs/hr | CE |
| 2-Chloronaphthalene | 402C4R4 | 2 | 4.55e+2 | ng/dscm | 7%O2 | 1.10e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C2R1 | | 6.56e+3 | ng/dscm | 7%O2 | 1.64e-3 | lbs/hr | CE7%O2 |
| 2-Chlorophenol | 402C2R2 | | 8.89e+3 | ng/dscm | 7%O2 | 2.27e-3 | lbs/hr | CE7%O2 |
| 2-Chlorophenol | 402C2R3 | | 4.99e+3 | ng/dscm | 7%O2 | 1.27e-3 | lbs/hr | CE7%O2 |
| 2-Chlorophenol | 402C2R4 | | 5.78e+3 | ng/dscm | 7%O2 | 1.06e-3 | lbs/hr | CE7%O2 |
| 2-Chlorophenol | 402C3R1 | 2 | 3.00e+3 | ng/dscm | 7%O2 | 1.14e-3 | lbs/hr | CE |
| 2-Chlorophenol | 402C3R2 | ND | 6.66e+2 | ng/dscm | 7%O2 | 2.86e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C3R3 | ND | 8.73e+2 | ng/dscm | 7%O2 | 3.69e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C3R4 | 2 | 1.62e+3 | ng/dscm | 7%O2 | 6.77e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C4R2 | | 9.01e+2 | ng/dscm | 7%O2 | 2.49e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C4R3 | | 2.22e+3 | ng/dscm | 7%O2 | 6.10e-4 | lbs/hr | CE |
| 2-Chlorophenol | 402C4R4 | | 1.90e+3 | ng/dscm | 7%O2 | 4.59e-4 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C2R1 | | 2.93e+4 | ng/dscm | 7%O2 | 7.30e-3 | lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 402C2R2 | | 3.48e+4 | ng/dscm | 7%O2 | 8.91e-3 | lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 402C2R3 | | 3.26e+4 | ng/dscm | 7%O2 | 8.34e-3 | lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 402C2R4 | | 3.61e+4 | ng/dscm | 7%O2 | 6.62e-3 | lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 402C3R1 | | 1.67e+4 | ng/dscm | 7%O2 | 6.32e-3 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C3R2 | | 2.33e+4 | ng/dscm | 7%O2 | 1.00e-2 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C3R3 | | 1.42e+4 | ng/dscm | 7%O2 | 6.01e-3 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C3R4 | | 2.15e+4 | ng/dscm | 7%O2 | 8.99e-3 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C4R2 | | 2.05e+4 | ng/dscm | 7%O2 | 5.66e-3 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C4R3 | | 2.19e+4 | ng/dscm | 7%O2 | 6.02e-3 | lbs/hr | CE |
| 2-Methylnaphthalene | 402C4R4 | | 1.28e+4 | ng/dscm | 7%O2 | 3.09e-3 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C2R1 | | 5.80e+3 | ng/dscm | 7%O2 | 1.45e-3 | lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 402C2R2 | | 6.86e+3 | ng/dscm | 7%O2 | 1.75e-3 | lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 402C2R3 | | 4.60e+3 | ng/dscm | 7%O2 | 1.18e-3 | lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 402C2R4 | | 4.38e+3 | ng/dscm | 7%O2 | 8.03e-4 | lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 402C3R1 | | 1.80e+4 | ng/dscm | 7%O2 | 6.81e-3 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C3R2 | ND | 9.53e+2 | ng/dscm | 7%O2 | 4.09e-4 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C3R3 | 2 | 1.49e+3 | ng/dscm | 7%O2 | 6.30e-4 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C3R4 | ND | 1.21e+3 | ng/dscm | 7%O2 | 5.06e-4 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C4R2 | | 1.30e+3 | ng/dscm | 7%O2 | 3.59e-4 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C4R3 | | 1.13e+3 | ng/dscm | 7%O2 | 3.11e-4 | lbs/hr | CE |
| 2-Methylphenol (o-Cresol) | 402C4R4 | | 2.12e+4 | ng/dscm | 7%O2 | 5.11e-3 | lbs/hr | CE |
| 2-Nitroaniline | 402C3R1 | ND | 6.07e+2 | ng/dscm | 7%O2 | 2.30e-4 | lbs/hr | CE |

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|------------------------|---------|----|---------|---------|------|---------|--------|----|
| 2-Nitroaniline | 402C3R2 | ND | 1.71e+3 | ng/dscm | 7%O2 | 7.34e-4 | lbs/hr | CE |
| 2-Nitroaniline | 402C3R3 | ND | 2.49e+3 | ng/dscm | 7%O2 | 1.05e-3 | lbs/hr | CE |
| 2-Nitroaniline | 402C3R4 | ND | 2.12e+3 | ng/dscm | 7%O2 | 8.86e-4 | lbs/hr | CE |
| 2-Nitroaniline | 402C4R2 | ND | 2.25e+3 | ng/dscm | 7%O2 | 6.21e-4 | lbs/hr | CE |
| 2-Nitroaniline | 402C4R3 | ND | 1.75e+3 | ng/dscm | 7%O2 | 4.81e-4 | lbs/hr | CE |
| 2-Nitroaniline | 402C4R4 | ND | 2.25e+3 | ng/dscm | 7%O2 | 5.43e-4 | lbs/hr | CE |
| 2-Nitrophenol | 402C3R1 | ND | 1.98e+2 | ng/dscm | 7%O2 | 7.49e-5 | lbs/hr | CE |
| 2-Nitrophenol | 402C3R2 | | 2.33e+4 | ng/dscm | 7%O2 | 1.00e-2 | lbs/hr | CE |
| 2-Nitrophenol | 402C3R3 | ND | 1.55e+3 | ng/dscm | 7%O2 | 6.56e-4 | lbs/hr | CE |
| 2-Nitrophenol | 402C3R4 | ND | 1.39e+3 | ng/dscm | 7%O2 | 5.81e-4 | lbs/hr | CE |
| 2-Nitrophenol | 402C4R2 | | 9.20e+3 | ng/dscm | 7%O2 | 2.54e-3 | lbs/hr | CE |
| 2-Nitrophenol | 402C4R3 | | 1.33e+3 | ng/dscm | 7%O2 | 3.66e-4 | lbs/hr | CE |
| 2-Nitrophenol | 402C4R4 | | 1.36e+3 | ng/dscm | 7%O2 | 3.28e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C3R1 | ND | 2.82e+2 | ng/dscm | 7%O2 | 1.07e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C3R2 | ND | 5.89e+2 | ng/dscm | 7%O2 | 2.53e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C3R3 | ND | 6.89e+2 | ng/dscm | 7%O2 | 2.91e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C3R4 | ND | 6.88e+2 | ng/dscm | 7%O2 | 2.88e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C4R2 | 2 | 7.30e+1 | ng/dscm | 7%O2 | 2.01e-5 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C4R3 | ND | 5.52e+2 | ng/dscm | 7%O2 | 1.52e-4 | lbs/hr | CE |
| 3,3-Dichlorobenzidine | 402C4R4 | ND | 6.11e+2 | ng/dscm | 7%O2 | 1.47e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C3R1 | ND | 1.07e+3 | ng/dscm | 7%O2 | 4.05e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C3R2 | ND | 1.21e+3 | ng/dscm | 7%O2 | 5.19e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C3R3 | ND | 1.57e+3 | ng/dscm | 7%O2 | 6.64e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C3R4 | ND | 1.56e+3 | ng/dscm | 7%O2 | 6.52e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C4R2 | ND | 1.64e+3 | ng/dscm | 7%O2 | 4.52e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C4R3 | ND | 1.26e+3 | ng/dscm | 7%O2 | 3.46e-4 | lbs/hr | CE |
| 3,3-Dimethoxybenzidine | 402C4R4 | ND | 1.40e+3 | ng/dscm | 7%O2 | 3.38e-4 | lbs/hr | CE |
| 3,4-Methylphenol | 402C3R1 | ND | 2.21e+4 | ng/dscm | 7%O2 | 8.36e-3 | lbs/hr | CE |
| 3,4-Methylphenol | 402C3R2 | 2 | 9.22e+2 | ng/dscm | 7%O2 | 3.96e-4 | lbs/hr | CE |
| 3,4-Methylphenol | 402C3R3 | 2 | 3.64e+3 | ng/dscm | 7%O2 | 1.54e-3 | lbs/hr | CE |
| 3,4-Methylphenol | 402C3R4 | 2 | 5.66e+3 | ng/dscm | 7%O2 | 2.37e-3 | lbs/hr | CE |
| 3,4-Methylphenol | 402C4R2 | | 1.31e+5 | ng/dscm | 7%O2 | 3.61e-2 | lbs/hr | CE |
| 3,4-Methylphenol | 402C4R3 | | 1.76e+4 | ng/dscm | 7%O2 | 4.84e-3 | lbs/hr | CE |
| 3,4-Methylphenol | 402C4R4 | | 2.32e+4 | ng/dscm | 7%O2 | 5.60e-3 | lbs/hr | CE |
| 3-Nitroaniline | 402C3R1 | ND | 4.44e+2 | ng/dscm | 7%O2 | 1.68e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C3R2 | ND | 1.19e+3 | ng/dscm | 7%O2 | 5.11e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C3R3 | ND | 1.75e+3 | ng/dscm | 7%O2 | 7.40e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C3R4 | ND | 1.48e+3 | ng/dscm | 7%O2 | 6.19e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C4R2 | ND | 1.58e+3 | ng/dscm | 7%O2 | 4.36e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C4R3 | ND | 1.23e+3 | ng/dscm | 7%O2 | 3.38e-4 | lbs/hr | CE |
| 3-Nitroaniline | 402C4R4 | ND | 1.58e+3 | ng/dscm | 7%O2 | 3.81e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C3R1 | ND | 1.20e+3 | ng/dscm | 7%O2 | 4.54e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C3R2 | ND | 8.57e+2 | ng/dscm | 7%O2 | 3.68e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C3R3 | ND | 1.27e+3 | ng/dscm | 7%O2 | 5.37e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C3R4 | ND | 1.26e+3 | ng/dscm | 7%O2 | 5.27e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C4R2 | ND | 1.32e+3 | ng/dscm | 7%O2 | 3.64e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C4R3 | ND | 1.02e+3 | ng/dscm | 7%O2 | 2.80e-4 | lbs/hr | CE |
| 4,4-Methylenedianiline | 402C4R4 | ND | 1.13e+3 | ng/dscm | 7%O2 | 2.73e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C3R1 | ND | 4.22e+2 | ng/dscm | 7%O2 | 1.60e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C3R2 | ND | 1.39e+3 | ng/dscm | 7%O2 | 5.96e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C3R3 | ND | 2.12e+3 | ng/dscm | 7%O2 | 8.97e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C3R4 | ND | 1.94e+3 | ng/dscm | 7%O2 | 8.11e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C4R2 | ND | 1.87e+3 | ng/dscm | 7%O2 | 5.16e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C4R3 | ND | 1.54e+3 | ng/dscm | 7%O2 | 4.23e-4 | lbs/hr | CE |
| 4,6-Dinitro-o-Cresol | 402C4R4 | ND | 2.00e+3 | ng/dscm | 7%O2 | 4.82e-4 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C3R1 | ND | 3.65e+2 | ng/dscm | 7%O2 | 1.38e-4 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C3R2 | ND | 2.41e+2 | ng/dscm | 7%O2 | 1.03e-4 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C3R3 | ND | 3.52e+2 | ng/dscm | 7%O2 | 1.49e-4 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C3R4 | ND | 3.20e+2 | ng/dscm | 7%O2 | 1.34e-4 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C4R2 | ND | 3.09e+2 | ng/dscm | 7%O2 | 8.52e-5 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C4R3 | ND | 2.56e+2 | ng/dscm | 7%O2 | 7.04e-5 | lbs/hr | CE |
| 4-Aminobiphenyl | 402C4R4 | ND | 3.33e+2 | ng/dscm | 7%O2 | 8.03e-5 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|----------------------------|---------|----|---------|---------|------|---------|--------|--------|
| 4-Bromophenyl-phenylether | 402C3R1 | ND | 2.46e+2 | ng/dscm | 7%O2 | 9.31e-5 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C3R2 | ND | 1.00e+3 | ng/dscm | 7%O2 | 4.29e-4 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C3R3 | ND | 1.46e+3 | ng/dscm | 7%O2 | 6.17e-4 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C3R4 | ND | 1.34e+3 | ng/dscm | 7%O2 | 5.60e-4 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C4R2 | ND | 1.29e+3 | ng/dscm | 7%O2 | 3.56e-4 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C4R3 | ND | 1.06e+3 | ng/dscm | 7%O2 | 2.91e-4 | lbs/hr | CE |
| 4-Bromophenyl-phenylether | 402C4R4 | ND | 1.38e+3 | ng/dscm | 7%O2 | 3.33e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C3R1 | ND | 1.94e+2 | ng/dscm | 7%O2 | 7.34e-5 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C3R2 | ND | 1.05e+3 | ng/dscm | 7%O2 | 4.51e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C3R3 | ND | 1.37e+3 | ng/dscm | 7%O2 | 5.79e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C3R4 | ND | 1.23e+3 | ng/dscm | 7%O2 | 5.14e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C4R2 | ND | 1.35e+3 | ng/dscm | 7%O2 | 3.72e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C4R3 | ND | 1.18e+3 | ng/dscm | 7%O2 | 3.24e-4 | lbs/hr | CE |
| 4-Chloro-3-methylphenol | 402C4R4 | ND | 1.20e+3 | ng/dscm | 7%O2 | 2.89e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C3R1 | ND | 1.10e+2 | ng/dscm | 7%O2 | 4.16e-5 | lbs/hr | CE |
| 4-Chloroaniline | 402C3R2 | ND | 6.66e+2 | ng/dscm | 7%O2 | 2.86e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C3R3 | ND | 9.13e+2 | ng/dscm | 7%O2 | 3.86e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C3R4 | ND | 8.22e+2 | ng/dscm | 7%O2 | 3.44e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C4R2 | ND | 9.01e+2 | ng/dscm | 7%O2 | 2.49e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C4R3 | ND | 7.89e+2 | ng/dscm | 7%O2 | 2.17e-4 | lbs/hr | CE |
| 4-Chloroaniline | 402C4R4 | ND | 8.03e+2 | ng/dscm | 7%O2 | 1.94e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C3R1 | ND | 1.80e+2 | ng/dscm | 7%O2 | 6.81e-5 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C3R2 | ND | 6.39e+2 | ng/dscm | 7%O2 | 2.74e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C3R3 | ND | 9.69e+2 | ng/dscm | 7%O2 | 4.10e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C3R4 | ND | 8.26e+2 | ng/dscm | 7%O2 | 3.45e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C4R2 | ND | 8.75e+2 | ng/dscm | 7%O2 | 2.41e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C4R3 | ND | 6.80e+2 | ng/dscm | 7%O2 | 1.87e-4 | lbs/hr | CE |
| 4-Chlorophenyl-phenylether | 402C4R4 | ND | 8.78e+2 | ng/dscm | 7%O2 | 2.12e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C3R1 | ND | 1.09e+3 | ng/dscm | 7%O2 | 4.12e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C3R2 | ND | 1.92e+3 | ng/dscm | 7%O2 | 8.24e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C3R3 | ND | 1.68e+3 | ng/dscm | 7%O2 | 7.11e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C3R4 | ND | 1.30e+3 | ng/dscm | 7%O2 | 5.43e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C4R1 | ND | 7.66e+2 | ng/dscm | 7%O2 | 2.26e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C4R2 | ND | 7.87e+2 | ng/dscm | 7%O2 | 2.17e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C4R3 | ND | 8.20e+2 | ng/dscm | 7%O2 | 2.25e-4 | lbs/hr | CE |
| 4-Methyl-2-pentanone | 402C4R4 | ND | 9.24e+2 | ng/dscm | 7%O2 | 2.23e-4 | lbs/hr | CE |
| 4-Methylphenol (p-Cresol) | 402C2R1 | | 1.05e+4 | ng/dscm | 7%O2 | 2.61e-3 | lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 402C2R2 | | 1.24e+4 | ng/dscm | 7%O2 | 3.17e-3 | lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 402C2R3 | | 8.97e+3 | ng/dscm | 7%O2 | 2.29e-3 | lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 402C2R4 | | 9.69e+3 | ng/dscm | 7%O2 | 1.78e-3 | lbs/hr | CE7%O2 |
| 4-Nitroaniline | 402C3R1 | ND | 4.18e+2 | ng/dscm | 7%O2 | 1.58e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C3R2 | ND | 9.68e+2 | ng/dscm | 7%O2 | 4.15e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C3R3 | ND | 1.30e+3 | ng/dscm | 7%O2 | 5.50e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C3R4 | ND | 1.11e+3 | ng/dscm | 7%O2 | 4.64e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C4R2 | ND | 1.17e+3 | ng/dscm | 7%O2 | 3.23e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C4R3 | ND | 9.13e+2 | ng/dscm | 7%O2 | 2.51e-4 | lbs/hr | CE |
| 4-Nitroaniline | 402C4R4 | ND | 1.18e+3 | ng/dscm | 7%O2 | 2.85e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C3R1 | ND | 7.70e+2 | ng/dscm | 7%O2 | 2.91e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C3R2 | ND | 4.90e+2 | ng/dscm | 7%O2 | 2.10e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C3R3 | ND | 7.37e+2 | ng/dscm | 7%O2 | 3.12e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C3R4 | ND | 6.76e+2 | ng/dscm | 7%O2 | 2.83e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C4R2 | ND | 6.52e+2 | ng/dscm | 7%O2 | 1.80e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C4R3 | ND | 5.34e+2 | ng/dscm | 7%O2 | 1.47e-4 | lbs/hr | CE |
| 4-Nitrobiphenyl | 402C4R4 | ND | 6.97e+2 | ng/dscm | 7%O2 | 1.68e-4 | lbs/hr | CE |
| 4-Nitrophenol | 402C3R1 | ND | 9.46e+2 | ng/dscm | 7%O2 | 3.58e-4 | lbs/hr | CE |
| 4-Nitrophenol | 402C3R2 | ND | 3.12e+4 | ng/dscm | 7%O2 | 1.34e-2 | lbs/hr | CE |
| 4-Nitrophenol | 402C3R3 | ND | 2.80e+3 | ng/dscm | 7%O2 | 1.18e-3 | lbs/hr | CE |
| 4-Nitrophenol | 402C3R4 | ND | 2.38e+3 | ng/dscm | 7%O2 | 9.95e-4 | lbs/hr | CE |
| 4-Nitrophenol | 402C4R2 | 2 | 1.56e+4 | ng/dscm | 7%O2 | 4.30e-3 | lbs/hr | CE |
| 4-Nitrophenol | 402C4R3 | ND | 1.97e+3 | ng/dscm | 7%O2 | 5.41e-4 | lbs/hr | CE |
| 4-Nitrophenol | 402C4R4 | ND | 2.54e+3 | ng/dscm | 7%O2 | 6.13e-4 | lbs/hr | CE |
| Aniline | 402C3R1 | ND | 8.23e+2 | ng/dscm | 7%O2 | 3.11e-4 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY

2. STATE: KS

3. CITY: CHANUTE

EPA KSD031203318

REGION: 7

4. EP ID: 402 DEVICE NAME: KILN NO. 2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

| | | | | | | | | |
|-----------------------------|---------|----|---------|---------|------|---------|--------|--------|
| Aniline | 402C3R2 | ND | 8.38e+2 | ng/dscm | 7%O2 | 3.60e-4 | lbs/hr | CE |
| Aniline | 402C3R3 | ND | 1.13e+3 | ng/dscm | 7%O2 | 4.78e-4 | lbs/hr | CE |
| Aniline | 402C3R4 | ND | 1.06e+3 | ng/dscm | 7%O2 | 4.43e-4 | lbs/hr | CE |
| Aniline | 402C4R2 | ND | 1.17e+3 | ng/dscm | 7%O2 | 3.23e-4 | lbs/hr | CE |
| Aniline | 402C4R3 | ND | 1.02e+3 | ng/dscm | 7%O2 | 2.80e-4 | lbs/hr | CE |
| Aniline | 402C4R4 | ND | 9.99e+2 | ng/dscm | 7%O2 | 2.41e-4 | lbs/hr | CE |
| Benzidine | 402C3R1 | ND | 5.15e+2 | ng/dscm | 7%O2 | 1.95e-4 | lbs/hr | CE |
| Benzidine | 402C3R2 | ND | 3.86e+2 | ng/dscm | 7%O2 | 1.66e-4 | lbs/hr | CE |
| Benzidine | 402C3R3 | ND | 5.04e+2 | ng/dscm | 7%O2 | 2.13e-4 | lbs/hr | CE |
| Benzidine | 402C3R4 | ND | 5.02e+2 | ng/dscm | 7%O2 | 2.10e-4 | lbs/hr | CE |
| Benzidine | 402C4R2 | ND | 5.23e+2 | ng/dscm | 7%O2 | 1.44e-4 | lbs/hr | CE |
| Benzidine | 402C4R3 | ND | 4.06e+2 | ng/dscm | 7%O2 | 1.12e-4 | lbs/hr | CE |
| Benzidine | 402C4R4 | ND | 4.47e+2 | ng/dscm | 7%O2 | 1.08e-4 | lbs/hr | CE |
| Benzoic acid | 402C2R1 | | 2.23e+5 | ng/dscm | 7%O2 | 5.56e-2 | lbs/hr | CE7%O2 |
| Benzoic acid | 402C2R2 | | 1.80e+5 | ng/dscm | 7%O2 | 4.60e-2 | lbs/hr | CE7%O2 |
| Benzoic acid | 402C2R3 | | 2.05e+5 | ng/dscm | 7%O2 | 5.24e-2 | lbs/hr | CE7%O2 |
| Benzoic acid | 402C2R4 | | 1.79e+5 | ng/dscm | 7%O2 | 3.28e-2 | lbs/hr | CE7%O2 |
| Benzyl alcohol | 402C3R1 | | 6.84e+4 | ng/dscm | 7%O2 | 2.59e-2 | lbs/hr | CE |
| Benzyl alcohol | 402C3R2 | 2 | 2.82e+3 | ng/dscm | 7%O2 | 1.21e-3 | lbs/hr | CE |
| Benzyl alcohol | 402C3R3 | 2 | 5.60e+3 | ng/dscm | 7%O2 | 2.37e-3 | lbs/hr | CE |
| Benzyl alcohol | 402C3R4 | ND | 7.32e+3 | ng/dscm | 7%O2 | 3.06e-3 | lbs/hr | CE |
| Benzyl alcohol | 402C4R2 | | 2.21e+5 | ng/dscm | 7%O2 | 6.10e-2 | lbs/hr | CE |
| Benzyl alcohol | 402C4R3 | | 1.69e+5 | ng/dscm | 7%O2 | 4.64e-2 | lbs/hr | CE |
| Benzyl alcohol | 402C4R4 | | 6.50e+4 | ng/dscm | 7%O2 | 1.57e-2 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C3R1 | ND | 1.50e+2 | ng/dscm | 7%O2 | 5.68e-5 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C3R2 | ND | 9.07e+2 | ng/dscm | 7%O2 | 3.89e-4 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C3R3 | ND | 1.28e+3 | ng/dscm | 7%O2 | 5.41e-4 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C3R4 | ND | 1.15e+3 | ng/dscm | 7%O2 | 4.81e-4 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C4R2 | | 1.26e+3 | ng/dscm | 7%O2 | 3.48e-4 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C4R3 | | 1.11e+3 | ng/dscm | 7%O2 | 3.05e-4 | lbs/hr | CE |
| bis(2-chloroethoxy) Methane | 402C4R4 | | 1.13e+3 | ng/dscm | 7%O2 | 2.73e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C3R1 | 2 | 5.37e+2 | ng/dscm | 7%O2 | 2.03e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C3R2 | ND | 1.07e+3 | ng/dscm | 7%O2 | 4.59e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C3R3 | ND | 1.45e+3 | ng/dscm | 7%O2 | 6.13e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C3R4 | ND | 1.36e+3 | ng/dscm | 7%O2 | 5.68e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C4R2 | | 1.50e+3 | ng/dscm | 7%O2 | 4.14e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C4R3 | | 1.30e+3 | ng/dscm | 7%O2 | 3.57e-4 | lbs/hr | CE |
| bis(2-chloroethyl) Ether | 402C4R4 | | 1.28e+3 | ng/dscm | 7%O2 | 3.09e-4 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C2R1 | | 6.12e+3 | ng/dscm | 7%O2 | 1.53e-3 | lbs/hr | CE7%O2 |
| bis(2-ethylexyl) Phthalate | 402C2R2 | | 4.66e+3 | ng/dscm | 7%O2 | 1.19e-3 | lbs/hr | CE7%O2 |
| bis(2-ethylexyl) Phthalate | 402C2R3 | | 2.25e+3 | ng/dscm | 7%O2 | 5.74e-4 | lbs/hr | CE7%O2 |
| bis(2-ethylexyl) Phthalate | 402C2R4 | | 4.48e+3 | ng/dscm | 7%O2 | 8.21e-4 | lbs/hr | CE7%O2 |
| bis(2-ethylexyl) Phthalate | 402C3R1 | 2 | 1.76e+4 | ng/dscm | 7%O2 | 6.66e-3 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C3R2 | | 7.75e+3 | ng/dscm | 7%O2 | 3.33e-3 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C3R3 | 2 | 4.24e+3 | ng/dscm | 7%O2 | 1.79e-3 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C3R4 | 2 | 7.18e+3 | ng/dscm | 7%O2 | 3.00e-3 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C4R2 | | 3.59e+3 | ng/dscm | 7%O2 | 9.90e-4 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C4R3 | 2 | 1.82e+3 | ng/dscm | 7%O2 | 5.00e-4 | lbs/hr | CE |
| bis(2-ethylexyl) Phthalate | 402C4R4 | 2 | 2.48e+3 | ng/dscm | 7%O2 | 5.98e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C3R1 | 2 | 6.47e+2 | ng/dscm | 7%O2 | 2.45e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C3R2 | 2 | 6.50e+2 | ng/dscm | 7%O2 | 2.79e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C3R3 | ND | 3.12e+2 | ng/dscm | 7%O2 | 1.32e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C3R4 | 2 | 1.79e+3 | ng/dscm | 7%O2 | 7.48e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C4R2 | 2 | 8.11e+2 | ng/dscm | 7%O2 | 2.24e-4 | lbs/hr | CE |
| Butylbenzylphthalate | 402C4R3 | ND | 2.52e+2 | ng/dscm | 7%O2 | 6.93e-5 | lbs/hr | CE |
| Butylbenzylphthalate | 402C4R4 | 2 | 4.04e+2 | ng/dscm | 7%O2 | 9.75e-5 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C2R1 | | 1.23e+4 | ng/dscm | 7%O2 | 3.07e-3 | lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 402C2R2 | | 6.22e+3 | ng/dscm | 7%O2 | 1.59e-3 | lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 402C2R3 | | 1.98e+3 | ng/dscm | 7%O2 | 5.05e-4 | lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 402C2R4 | | 1.45e+4 | ng/dscm | 7%O2 | 2.66e-3 | lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 402C3R1 | 2 | 2.03e+3 | ng/dscm | 7%O2 | 7.68e-4 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C3R2 | 2 | 1.27e+3 | ng/dscm | 7%O2 | 5.45e-4 | lbs/hr | CE |

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|---------------------------|---------|----|---------|---------|------|---------|--------|--------|
| di-n-Butyl Phthalate | 402C3R3 | 2 | 7.97e+3 | ng/dscm | 7%O2 | 3.37e-3 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C3R4 | ND | 9.39e+2 | ng/dscm | 7%O2 | 3.92e-4 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C4R2 | 2 | 8.15e+3 | ng/dscm | 7%O2 | 2.25e-3 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C4R3 | 2 | 1.08e+4 | ng/dscm | 7%O2 | 2.97e-3 | lbs/hr | CE |
| di-n-Butyl Phthalate | 402C4R4 | 2 | 9.80e+2 | ng/dscm | 7%O2 | 2.36e-4 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C3R1 | ND | 8.40e+1 | ng/dscm | 7%O2 | 3.18e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C3R2 | ND | 1.22e+2 | ng/dscm | 7%O2 | 5.23e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C3R3 | ND | 1.32e+2 | ng/dscm | 7%O2 | 5.58e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C3R4 | ND | 2.27e+2 | ng/dscm | 7%O2 | 9.49e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C4R2 | ND | 1.42e+2 | ng/dscm | 7%O2 | 3.92e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C4R3 | ND | 1.17e+2 | ng/dscm | 7%O2 | 3.22e-5 | lbs/hr | CE |
| di-n-Octyl Phthalate | 402C4R4 | ND | 1.21e+2 | ng/dscm | 7%O2 | 2.92e-5 | lbs/hr | CE |
| Dibenzofuran | 402C2R1 | | 3.59e+4 | ng/dscm | 7%O2 | 8.96e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 402C2R2 | | 3.89e+4 | ng/dscm | 7%O2 | 9.95e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 402C2R3 | | 2.96e+4 | ng/dscm | 7%O2 | 7.58e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 402C2R4 | | 3.59e+4 | ng/dscm | 7%O2 | 6.58e-3 | lbs/hr | CE7%O2 |
| Diethylphthalate | 402C3R1 | ND | 9.70e+1 | ng/dscm | 7%O2 | 3.67e-5 | lbs/hr | CE |
| Diethylphthalate | 402C3R2 | 2 | 6.31e+2 | ng/dscm | 7%O2 | 2.71e-4 | lbs/hr | CE |
| Diethylphthalate | 402C3R3 | ND | 3.76e+2 | ng/dscm | 7%O2 | 1.59e-4 | lbs/hr | CE |
| Diethylphthalate | 402C3R4 | ND | 7.21e+2 | ng/dscm | 7%O2 | 3.01e-4 | lbs/hr | CE |
| Diethylphthalate | 402C4R2 | 2 | 7.68e+2 | ng/dscm | 7%O2 | 2.12e-4 | lbs/hr | CE |
| Diethylphthalate | 402C4R3 | ND | 2.63e+2 | ng/dscm | 7%O2 | 7.23e-5 | lbs/hr | CE |
| Diethylphthalate | 402C4R4 | ND | 3.41e+2 | ng/dscm | 7%O2 | 8.23e-5 | lbs/hr | CE |
| Dimethylphthalate | 402C3R1 | 2 | 3.17e+2 | ng/dscm | 7%O2 | 1.20e-4 | lbs/hr | CE |
| Dimethylphthalate | 402C3R2 | ND | 2.95e+2 | ng/dscm | 7%O2 | 1.27e-4 | lbs/hr | CE |
| Dimethylphthalate | 402C3R3 | ND | 4.44e+2 | ng/dscm | 7%O2 | 1.88e-4 | lbs/hr | CE |
| Dimethylphthalate | 402C3R4 | ND | 3.76e+2 | ng/dscm | 7%O2 | 1.57e-4 | lbs/hr | CE |
| Dimethylphthalate | 402C4R2 | ND | 3.99e+2 | ng/dscm | 7%O2 | 1.10e-4 | lbs/hr | CE |
| Dimethylphthalate | 402C4R3 | ND | 3.12e+2 | ng/dscm | 7%O2 | 8.57e-5 | lbs/hr | CE |
| Dimethylphthalate | 402C4R4 | ND | 4.00e+2 | ng/dscm | 7%O2 | 9.65e-5 | lbs/hr | CE |
| Ethylbenzene | 402C2R2 | | 3.12e+4 | ng/dscm | 7%O2 | 7.99e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 402C2R3 | | 1.20e+5 | ng/dscm | 7%O2 | 3.08e-2 | lbs/hr | CE7%O2 |
| Ethylbenzene | 402C2R4 | | 2.87e+4 | ng/dscm | 7%O2 | 5.26e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 402C3R1 | 5 | 1.01e+4 | ng/dscm | 7%O2 | 3.82e-3 | lbs/hr | CE |
| Ethylbenzene | 402C3R2 | 5 | 9.76e+3 | ng/dscm | 7%O2 | 4.19e-3 | lbs/hr | CE |
| Ethylbenzene | 402C3R3 | 5 | 1.02e+4 | ng/dscm | 7%O2 | 4.31e-3 | lbs/hr | CE |
| Ethylbenzene | 402C3R4 | 3 | 1.27e+4 | ng/dscm | 7%O2 | 5.31e-3 | lbs/hr | CE |
| Ethylbenzene | 402C4R1 | 4 | 1.17e+4 | ng/dscm | 7%O2 | 3.45e-3 | lbs/hr | CE |
| Ethylbenzene | 402C4R2 | 5 | 1.36e+4 | ng/dscm | 7%O2 | 3.75e-3 | lbs/hr | CE |
| Ethylbenzene | 402C4R3 | 4 | 1.26e+4 | ng/dscm | 7%O2 | 3.46e-3 | lbs/hr | CE |
| Ethylbenzene | 402C4R4 | 5 | 1.49e+4 | ng/dscm | 7%O2 | 3.59e-3 | lbs/hr | CE |
| Hexachlorobenzene | 402C3R1 | ND | 1.85e+2 | ng/dscm | 7%O2 | 7.00e-5 | lbs/hr | CE |
| Hexachlorobenzene | 402C3R2 | ND | 6.39e+2 | ng/dscm | 7%O2 | 2.74e-4 | lbs/hr | CE |
| Hexachlorobenzene | 402C3R3 | ND | 9.49e+2 | ng/dscm | 7%O2 | 4.01e-4 | lbs/hr | CE |
| Hexachlorobenzene | 402C3R4 | ND | 8.70e+2 | ng/dscm | 7%O2 | 3.64e-4 | lbs/hr | CE |
| Hexachlorobenzene | 402C4R2 | ND | 8.41e+2 | ng/dscm | 7%O2 | 2.32e-4 | lbs/hr | CE |
| Hexachlorobenzene | 402C4R3 | ND | 6.88e+2 | ng/dscm | 7%O2 | 1.89e-4 | lbs/hr | CE |
| Hexachlorobenzene | 402C4R4 | ND | 8.97e+2 | ng/dscm | 7%O2 | 2.16e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C3R1 | ND | 1.98e+2 | ng/dscm | 7%O2 | 7.49e-5 | lbs/hr | CE |
| Hexachlorobutadiene | 402C3R2 | ND | 1.09e+3 | ng/dscm | 7%O2 | 4.68e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C3R3 | ND | 1.48e+3 | ng/dscm | 7%O2 | 6.26e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C3R4 | ND | 1.34e+3 | ng/dscm | 7%O2 | 5.60e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C4R2 | | 1.46e+3 | ng/dscm | 7%O2 | 4.03e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C4R3 | | 1.28e+3 | ng/dscm | 7%O2 | 3.52e-4 | lbs/hr | CE |
| Hexachlorobutadiene | 402C4R4 | | 1.31e+3 | ng/dscm | 7%O2 | 3.16e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C3R1 | ND | 3.30e+2 | ng/dscm | 7%O2 | 1.25e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C3R2 | ND | 1.15e+3 | ng/dscm | 7%O2 | 4.93e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C3R3 | ND | 1.87e+3 | ng/dscm | 7%O2 | 7.91e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C3R4 | ND | 1.59e+3 | ng/dscm | 7%O2 | 6.64e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C4R2 | | 1.69e+3 | ng/dscm | 7%O2 | 4.66e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C4R3 | | 1.31e+3 | ng/dscm | 7%O2 | 3.60e-4 | lbs/hr | CE |
| Hexachlorocyclopentadiene | 402C4R4 | | 1.69e+3 | ng/dscm | 7%O2 | 4.08e-4 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|----------------------------|---------|----|---------|---------|------|---------|--------|----|
| Hexachloroethane | 402C3R1 | ND | 6.91e+2 | ng/dscm | 7%O2 | 2.61e-4 | lbs/hr | CE |
| Hexachloroethane | 402C3R2 | ND | 1.35e+3 | ng/dscm | 7%O2 | 5.79e-4 | lbs/hr | CE |
| Hexachloroethane | 402C3R3 | ND | 1.69e+3 | ng/dscm | 7%O2 | 7.15e-4 | lbs/hr | CE |
| Hexachloroethane | 402C3R4 | ND | 1.59e+3 | ng/dscm | 7%O2 | 6.64e-4 | lbs/hr | CE |
| Hexachloroethane | 402C4R2 | ND | 1.74e+3 | ng/dscm | 7%O2 | 4.80e-4 | lbs/hr | CE |
| Hexachloroethane | 402C4R3 | ND | 1.52e+3 | ng/dscm | 7%O2 | 4.18e-4 | lbs/hr | CE |
| Hexachloroethane | 402C4R4 | ND | 1.49e+3 | ng/dscm | 7%O2 | 3.59e-4 | lbs/hr | CE |
| Hydroquinone | 402C3R1 | ND | 1.73e+3 | ng/dscm | 7%O2 | 6.55e-4 | lbs/hr | CE |
| Hydroquinone | 402C3R2 | ND | 1.83e+3 | ng/dscm | 7%O2 | 7.85e-4 | lbs/hr | CE |
| Hydroquinone | 402C3R3 | ND | 2.22e+3 | ng/dscm | 7%O2 | 9.39e-4 | lbs/hr | CE |
| Hydroquinone | 402C3R4 | ND | 2.00e+3 | ng/dscm | 7%O2 | 8.36e-4 | lbs/hr | CE |
| Hydroquinone | 402C4R2 | ND | 2.19e+3 | ng/dscm | 7%O2 | 6.04e-4 | lbs/hr | CE |
| Hydroquinone | 402C4R3 | ND | 1.92e+3 | ng/dscm | 7%O2 | 5.28e-4 | lbs/hr | CE |
| Hydroquinone | 402C4R4 | ND | 1.96e+3 | ng/dscm | 7%O2 | 4.73e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C3R1 | ND | 2.07e+3 | ng/dscm | 7%O2 | 7.83e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C3R2 | ND | 3.51e+3 | ng/dscm | 7%O2 | 1.51e-3 | lbs/hr | CE |
| Methyl Methacrylate | 402C3R3 | ND | 2.85e+3 | ng/dscm | 7%O2 | 1.21e-3 | lbs/hr | CE |
| Methyl Methacrylate | 402C3R4 | ND | 1.88e+3 | ng/dscm | 7%O2 | 7.86e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C4R1 | ND | 1.92e+3 | ng/dscm | 7%O2 | 5.66e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C4R2 | ND | 2.05e+3 | ng/dscm | 7%O2 | 5.66e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C4R3 | ND | 2.13e+3 | ng/dscm | 7%O2 | 5.85e-4 | lbs/hr | CE |
| Methyl Methacrylate | 402C4R4 | ND | 2.45e+3 | ng/dscm | 7%O2 | 5.91e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C3R1 | ND | 9.07e+2 | ng/dscm | 7%O2 | 3.43e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C3R2 | ND | 1.63e+3 | ng/dscm | 7%O2 | 6.99e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C3R3 | ND | 2.26e+3 | ng/dscm | 7%O2 | 9.56e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C3R4 | ND | 2.12e+3 | ng/dscm | 7%O2 | 8.86e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C4R2 | ND | 2.33e+3 | ng/dscm | 7%O2 | 6.43e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C4R3 | ND | 2.03e+3 | ng/dscm | 7%O2 | 5.58e-4 | lbs/hr | CE |
| N-Nitroso-di-n-propylamine | 402C4R4 | ND | 1.99e+3 | ng/dscm | 7%O2 | 4.80e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C3R1 | ND | 1.32e+2 | ng/dscm | 7%O2 | 4.99e-5 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C3R2 | ND | 3.98e+2 | ng/dscm | 7%O2 | 1.71e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C3R3 | ND | 5.89e+2 | ng/dscm | 7%O2 | 2.49e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C3R4 | ND | 5.38e+2 | ng/dscm | 7%O2 | 2.25e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C4R2 | ND | 5.19e+2 | ng/dscm | 7%O2 | 1.43e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C4R3 | ND | 4.28e+2 | ng/dscm | 7%O2 | 1.18e-4 | lbs/hr | CE |
| N-Nitrosodiphenylamine | 402C4R4 | ND | 5.56e+2 | ng/dscm | 7%O2 | 1.34e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C3R1 | ND | 2.35e+3 | ng/dscm | 7%O2 | 8.89e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C3R2 | ND | 1.67e+3 | ng/dscm | 7%O2 | 7.17e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C3R3 | ND | 2.20e+3 | ng/dscm | 7%O2 | 9.30e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C3R4 | ND | 2.06e+3 | ng/dscm | 7%O2 | 8.61e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C4R2 | ND | 2.27e+3 | ng/dscm | 7%O2 | 6.26e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C4R3 | ND | 1.98e+3 | ng/dscm | 7%O2 | 5.44e-4 | lbs/hr | CE |
| n-Nitrosomorpholine | 402C4R4 | ND | 1.94e+3 | ng/dscm | 7%O2 | 4.68e-4 | lbs/hr | CE |
| Nitrobenzene | 402C3R1 | ND | 1.85e+2 | ng/dscm | 7%O2 | 7.00e-5 | lbs/hr | CE |
| Nitrobenzene | 402C3R2 | ND | 9.37e+2 | ng/dscm | 7%O2 | 4.02e-4 | lbs/hr | CE |
| Nitrobenzene | 402C3R3 | ND | 1.30e+3 | ng/dscm | 7%O2 | 5.50e-4 | lbs/hr | CE |
| Nitrobenzene | 402C3R4 | ND | 1.17e+3 | ng/dscm | 7%O2 | 4.89e-4 | lbs/hr | CE |
| Nitrobenzene | 402C4R2 | ND | 6.93e+3 | ng/dscm | 7%O2 | 1.91e-3 | lbs/hr | CE |
| Nitrobenzene | 402C4R3 | ND | 1.12e+3 | ng/dscm | 7%O2 | 3.08e-4 | lbs/hr | CE |
| Nitrobenzene | 402C4R4 | ND | 1.14e+3 | ng/dscm | 7%O2 | 2.75e-4 | lbs/hr | CE |
| o-Anisidine | 402C3R1 | ND | 1.53e+3 | ng/dscm | 7%O2 | 5.79e-4 | lbs/hr | CE |
| o-Anisidine | 402C3R2 | ND | 1.30e+3 | ng/dscm | 7%O2 | 5.58e-4 | lbs/hr | CE |
| o-Anisidine | 402C3R3 | ND | 1.79e+3 | ng/dscm | 7%O2 | 7.57e-4 | lbs/hr | CE |
| o-Anisidine | 402C3R4 | ND | 1.62e+3 | ng/dscm | 7%O2 | 6.77e-4 | lbs/hr | CE |
| o-Anisidine | 402C4R2 | ND | 1.77e+3 | ng/dscm | 7%O2 | 4.88e-4 | lbs/hr | CE |
| o-Anisidine | 402C4R3 | ND | 1.55e+3 | ng/dscm | 7%O2 | 4.26e-4 | lbs/hr | CE |
| o-Anisidine | 402C4R4 | ND | 1.58e+3 | ng/dscm | 7%O2 | 3.81e-4 | lbs/hr | CE |
| o-Toluidine | 402C3R1 | ND | 8.80e+2 | ng/dscm | 7%O2 | 3.33e-4 | lbs/hr | CE |
| o-Toluidine | 402C3R2 | ND | 8.03e+2 | ng/dscm | 7%O2 | 3.45e-4 | lbs/hr | CE |
| o-Toluidine | 402C3R3 | ND | 1.03e+3 | ng/dscm | 7%O2 | 4.36e-4 | lbs/hr | CE |
| o-Toluidine | 402C3R4 | ND | 9.72e+2 | ng/dscm | 7%O2 | 4.06e-4 | lbs/hr | CE |
| o-Toluidine | 402C4R2 | ND | 1.07e+3 | ng/dscm | 7%O2 | 2.95e-4 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

| | | | | | | | | |
|-------------------------|---------|----|---------|---------|------|---------|--------|--------|
| o-Toluidine | 402C4R3 | ND | 9.28e+2 | ng/dscm | 7%O2 | 2.55e-4 | lbs/hr | CE |
| o-Toluidine | 402C4R4 | ND | 9.13e+2 | ng/dscm | 7%O2 | 2.20e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C3R1 | ND | 1.18e+3 | ng/dscm | 7%O2 | 4.46e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C3R2 | ND | 7.54e+2 | ng/dscm | 7%O2 | 3.24e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C3R3 | ND | 1.05e+3 | ng/dscm | 7%O2 | 4.44e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C3R4 | ND | 9.39e+2 | ng/dscm | 7%O2 | 3.92e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C4R2 | ND | 1.03e+3 | ng/dscm | 7%O2 | 2.84e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C4R3 | ND | 9.06e+2 | ng/dscm | 7%O2 | 2.49e-4 | lbs/hr | CE |
| Pentachlorobenzene | 402C4R4 | ND | 9.21e+2 | ng/dscm | 7%O2 | 2.22e-4 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C3R1 | ND | 3.68e+3 | ng/dscm | 7%O2 | 1.39e-3 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C3R2 | ND | 1.98e+3 | ng/dscm | 7%O2 | 8.50e-4 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C3R3 | ND | 2.71e+3 | ng/dscm | 7%O2 | 1.15e-3 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C3R4 | ND | 2.48e+3 | ng/dscm | 7%O2 | 1.04e-3 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C4R2 | ND | 2.39e+3 | ng/dscm | 7%O2 | 6.59e-4 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C4R3 | ND | 1.96e+3 | ng/dscm | 7%O2 | 5.39e-4 | lbs/hr | CE |
| Pentachloronitrobenzene | 402C4R4 | ND | 2.56e+3 | ng/dscm | 7%O2 | 6.18e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C3R1 | ND | 4.05e+2 | ng/dscm | 7%O2 | 1.53e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C3R2 | ND | 1.26e+3 | ng/dscm | 7%O2 | 5.41e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C3R3 | ND | 1.99e+3 | ng/dscm | 7%O2 | 8.42e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C3R4 | ND | 1.82e+3 | ng/dscm | 7%O2 | 7.61e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C4R2 | ND | 1.76e+3 | ng/dscm | 7%O2 | 4.86e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C4R3 | ND | 1.44e+3 | ng/dscm | 7%O2 | 3.96e-4 | lbs/hr | CE |
| Pentachlorophenol | 402C4R4 | ND | 1.88e+3 | ng/dscm | 7%O2 | 4.54e-4 | lbs/hr | CE |
| Phenol | 402C2R1 | | 8.72e+4 | ng/dscm | 7%O2 | 2.18e-2 | lbs/hr | CE7%O2 |
| Phenol | 402C2R2 | | 1.19e+5 | ng/dscm | 7%O2 | 3.04e-2 | lbs/hr | CE7%O2 |
| Phenol | 402C2R3 | | 6.97e+4 | ng/dscm | 7%O2 | 1.78e-2 | lbs/hr | CE7%O2 |
| Phenol | 402C2R4 | | 1.05e+5 | ng/dscm | 7%O2 | 1.92e-2 | lbs/hr | CE7%O2 |
| Phenol | 402C3R1 | ND | 7.46e+4 | ng/dscm | 7%O2 | 2.82e-2 | lbs/hr | CE |
| Phenol | 402C3R2 | | 1.99e+4 | ng/dscm | 7%O2 | 8.54e-3 | lbs/hr | CE |
| Phenol | 402C3R3 | | 1.72e+4 | ng/dscm | 7%O2 | 7.27e-3 | lbs/hr | CE |
| Phenol | 402C3R4 | | 5.13e+4 | ng/dscm | 7%O2 | 2.14e-2 | lbs/hr | CE |
| Phenol | 402C4R2 | | 3.49e+4 | ng/dscm | 7%O2 | 9.63e-3 | lbs/hr | CE |
| Phenol | 402C4R3 | | 5.03e+4 | ng/dscm | 7%O2 | 1.38e-2 | lbs/hr | CE |
| Phenol | 402C4R4 | | 3.01e+4 | ng/dscm | 7%O2 | 7.26e-3 | lbs/hr | CE |
| Pyridine | 402C3R1 | 2 | 4.82e+3 | ng/dscm | 7%O2 | 1.82e-3 | lbs/hr | CE |
| Pyridine | 402C3R2 | | 1.41e+4 | ng/dscm | 7%O2 | 6.05e-3 | lbs/hr | CE |
| Pyridine | 402C3R3 | 2 | 3.37e+3 | ng/dscm | 7%O2 | 1.43e-3 | lbs/hr | CE |
| Pyridine | 402C3R4 | 2 | 1.96e+3 | ng/dscm | 7%O2 | 8.19e-4 | lbs/hr | CE |
| Pyridine | 402C4R2 | | 1.25e+3 | ng/dscm | 7%O2 | 3.45e-4 | lbs/hr | CE |
| Pyridine | 402C4R3 | | 1.33e+3 | ng/dscm | 7%O2 | 3.66e-4 | lbs/hr | CE |
| Pyridine | 402C4R4 | | 1.39e+3 | ng/dscm | 7%O2 | 3.35e-4 | lbs/hr | CE |

7. Category: THC & CO

Analysis:

| 8. Substance | 9. Run ID | Concentration | | Mass Rate | Calc |
|--------------|-----------|---------------|-----------|----------------|--------|
| CO | 402C1R1 | 7.95e+2 | ppmv 7%O2 | 2.43e+2 lbs/hr | CE7%O2 |
| CO | 402C1R2 | 5.73e+2 | ppmv 7%O2 | 1.63e+2 lbs/hr | CE7%O2 |
| CO | 402C1R3 | 1.06e+3 | ppmv 7%O2 | 2.92e+2 lbs/hr | CE7%O2 |
| CO | 402C1R4 | 1.10e+3 | ppmv 7%O2 | 3.13e+2 lbs/hr | CE7%O2 |
| CO | 402C2R1 | 7.08e+2 | ppmv 7%O2 | 2.05e+2 lbs/hr | CE7%O2 |
| CO | 402C2R2 | 6.66e+2 | ppmv 7%O2 | 1.98e+2 lbs/hr | CE7%O2 |
| CO | 402C2R3 | 1.24e+3 | ppmv 7%O2 | 3.67e+2 lbs/hr | CE7%O2 |
| CO | 402C2R4 | 1.17e+3 | ppmv 7%O2 | 2.50e+2 lbs/hr | CE7%O2 |
| CO | 402C3R1 | 4.22e+2 | ppmv 7%O2 | 1.85e+2 lbs/hr | CE |
| CO | 402C3R2 | 8.13e+2 | ppmv 7%O2 | 4.05e+2 lbs/hr | CE |
| CO | 402C3R3 | 4.54e+2 | ppmv 7%O2 | 2.23e+2 lbs/hr | CE |
| CO | 402C3R4 | 9.77e+2 | ppmv 7%O2 | 4.74e+2 lbs/hr | CE |
| CO | 402C4R1 | 5.32e+2 | ppmv 7%O2 | 1.82e+2 lbs/hr | CE |
| CO | 402C4R2 | 6.03e+2 | ppmv 7%O2 | 1.93e+2 lbs/hr | CE |
| CO | 402C4R3 | 7.02e+2 | ppmv 7%O2 | 2.24e+2 lbs/hr | CE |
| CO | 402C4R4 | 1.05e+3 | ppmv 7%O2 | 2.95e+2 lbs/hr | CE |

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | |
|-----------|---------|---------|-----------|---------|--------|--------|
| CO(MHRA) | 402C1R1 | 1.34e+3 | ppmv 7%O2 | 4.09e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C1R2 | 1.35e+3 | ppmv 7%O2 | 3.83e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C1R3 | 3.02e+3 | ppmv 7%O2 | 8.31e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C1R4 | 1.93e+3 | ppmv 7%O2 | 5.52e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C2R1 | 1.37e+3 | ppmv 7%O2 | 3.97e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C2R2 | 1.39e+3 | ppmv 7%O2 | 4.14e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C2R3 | 1.89e+3 | ppmv 7%O2 | 5.62e+2 | lbs/hr | CE7%O2 |
| CO(MHRA) | 402C2R4 | 1.67e+3 | ppmv 7%O2 | 3.55e+2 | lbs/hr | CE7%O2 |
| THC | 402C1R1 | 2.90e+1 | ppmv 7%O2 | 1.40e+1 | lbs/hr | CE7%O2 |
| THC | 402C1R2 | 3.55e+1 | ppmv 7%O2 | 1.59e+1 | lbs/hr | CE7%O2 |
| THC | 402C1R3 | 3.33e+1 | ppmv 7%O2 | 1.44e+1 | lbs/hr | CE7%O2 |
| THC | 402C1R4 | 2.96e+1 | ppmv 7%O2 | 1.33e+1 | lbs/hr | CE7%O2 |
| THC | 402C2R1 | 2.26e+1 | ppmv 7%O2 | 1.03e+1 | lbs/hr | CE7%O2 |
| THC | 402C2R2 | 2.52e+1 | ppmv 7%O2 | 1.18e+1 | lbs/hr | CE7%O2 |
| THC | 402C2R3 | 2.83e+1 | ppmv 7%O2 | 1.32e+1 | lbs/hr | CE7%O2 |
| THC | 402C2R4 | 2.97e+1 | ppmv 7%O2 | 9.92e+0 | lbs/hr | CE7%O2 |
| THC | 402C3R1 | 2.09e+1 | ppmv 7%O2 | 1.44e+1 | lbs/hr | CE |
| THC | 402C3R2 | 1.34e+1 | ppmv 7%O2 | 1.05e+1 | lbs/hr | CE |
| THC | 402C3R3 | 1.04e+1 | ppmv 7%O2 | 8.03e+0 | lbs/hr | CE |
| THC | 402C3R4 | 2.24e+1 | ppmv 7%O2 | 1.71e+1 | lbs/hr | CE |
| THC | 402C4R1 | 1.08e+1 | ppmv 7%O2 | 5.81e+0 | lbs/hr | CE |
| THC | 402C4R2 | 1.30e+1 | ppmv 7%O2 | 6.55e+0 | lbs/hr | CE7%O2 |
| THC | 402C4R3 | 1.04e+1 | ppmv 7%O2 | 5.22e+0 | lbs/hr | CE |
| THC | 402C4R4 | 1.10e+1 | ppmv 7%O2 | 4.84e+0 | lbs/hr | CE |
| THC(MHRA) | 402C1R1 | 3.41e+1 | ppmv 7%O2 | 1.64e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C1R2 | 4.87e+1 | ppmv 7%O2 | 2.17e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C1R3 | 6.12e+1 | ppmv 7%O2 | 2.65e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C1R4 | 3.18e+1 | ppmv 7%O2 | 1.43e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C2R1 | 2.91e+1 | ppmv 7%O2 | 1.32e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C2R2 | 3.55e+1 | ppmv 7%O2 | 1.66e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C2R3 | 3.73e+1 | ppmv 7%O2 | 1.74e+1 | lbs/hr | CE7%O2 |
| THC(MHRA) | 402C2R4 | 4.65e+1 | ppmv 7%O2 | 1.55e+1 | lbs/hr | CE7%O2 |

7. Category: VOC

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|---------------------------|-----------|-------------------------|----------------|--------|
| 1,1,1-Trichloroethane | 402C2R2 | ND 3.47e+2 ng/dscm 7%O2 | 8.86e-5 lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 402C2R3 | ND 3.73e+2 ng/dscm 7%O2 | 9.53e-5 lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 402C2R4 | ND 4.12e+2 ng/dscm 7%O2 | 7.54e-5 lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 402C3R1 | 3 1.10e+3 ng/dscm 7%O2 | 4.17e-4 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C3R2 | ND 8.76e+2 ng/dscm 7%O2 | 3.76e-4 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C3R3 | 5 3.51e+5 ng/dscm 7%O2 | 1.48e-1 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C3R4 | 3 3.06e+3 ng/dscm 7%O2 | 1.28e-3 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C4R1 | ND 3.46e+2 ng/dscm 7%O2 | 1.02e-4 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C4R2 | ND 3.74e+2 ng/dscm 7%O2 | 1.03e-4 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C4R3 | ND 3.86e+2 ng/dscm 7%O2 | 1.06e-4 lbs/hr | CE |
| 1,1,1-Trichloroethane | 402C4R4 | ND 4.41e+2 ng/dscm 7%O2 | 1.06e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C3R1 | ND 7.59e+2 ng/dscm 7%O2 | 2.87e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C3R2 | ND 1.44e+3 ng/dscm 7%O2 | 6.18e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C3R3 | ND 1.28e+3 ng/dscm 7%O2 | 5.41e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C3R4 | ND 7.63e+2 ng/dscm 7%O2 | 3.19e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C4R1 | ND 6.54e+2 ng/dscm 7%O2 | 1.93e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C4R2 | ND 6.83e+2 ng/dscm 7%O2 | 1.88e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C4R3 | ND 7.24e+2 ng/dscm 7%O2 | 1.99e-4 lbs/hr | CE |
| 1,1,2,2-Tetrachloroethane | 402C4R4 | ND 8.12e+2 ng/dscm 7%O2 | 1.96e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C3R1 | ND 1.22e+3 ng/dscm 7%O2 | 4.62e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C3R2 | ND 2.26e+3 ng/dscm 7%O2 | 9.70e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C3R3 | ND 1.79e+3 ng/dscm 7%O2 | 7.57e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C3R4 | ND 1.12e+3 ng/dscm 7%O2 | 4.68e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C4R1 | ND 9.72e+2 ng/dscm 7%O2 | 2.87e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C4R2 | ND 1.05e+3 ng/dscm 7%O2 | 2.90e-4 lbs/hr | CE |
| 1,1,2-Trichloroethane | 402C4R3 | ND 1.09e+3 ng/dscm 7%O2 | 3.00e-4 lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-----------------------|---------|----|---------|---------|------|---------|--------|--------|
| 1,1,2-Trichloroethane | 402C4R4 | ND | 1.26e+3 | ng/dscm | 7%O2 | 3.04e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C3R1 | ND | 4.84e+2 | ng/dscm | 7%O2 | 1.83e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C3R2 | ND | 8.19e+2 | ng/dscm | 7%O2 | 3.51e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C3R3 | ND | 7.17e+2 | ng/dscm | 7%O2 | 3.03e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C3R4 | ND | 3.99e+2 | ng/dscm | 7%O2 | 1.67e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C4R1 | ND | 4.92e+2 | ng/dscm | 7%O2 | 1.45e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C4R2 | ND | 5.52e+2 | ng/dscm | 7%O2 | 1.52e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C4R3 | ND | 5.55e+2 | ng/dscm | 7%O2 | 1.53e-4 | lbs/hr | CE |
| 1,1-Dichloroethane | 402C4R4 | ND | 6.44e+2 | ng/dscm | 7%O2 | 1.55e-4 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C3R1 | ND | 1.04e+3 | ng/dscm | 7%O2 | 3.94e-4 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C3R2 | 5 | 1.03e+4 | ng/dscm | 7%O2 | 4.42e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C3R3 | 4 | 1.12e+4 | ng/dscm | 7%O2 | 4.74e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C3R4 | 5 | 7.02e+3 | ng/dscm | 7%O2 | 2.93e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C4R1 | 4 | 1.04e+4 | ng/dscm | 7%O2 | 3.07e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C4R2 | 4 | 2.29e+4 | ng/dscm | 7%O2 | 6.32e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C4R3 | 5 | 4.13e+3 | ng/dscm | 7%O2 | 1.13e-3 | lbs/hr | CE |
| 1,1-Dichloroethene | 402C4R4 | 4 | 8.40e+3 | ng/dscm | 7%O2 | 2.03e-3 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C3R1 | ND | 8.04e+2 | ng/dscm | 7%O2 | 3.04e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C3R2 | ND | 1.54e+3 | ng/dscm | 7%O2 | 6.61e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C3R3 | ND | 1.28e+3 | ng/dscm | 7%O2 | 5.41e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C3R4 | ND | 6.34e+2 | ng/dscm | 7%O2 | 2.65e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C4R1 | ND | 8.32e+2 | ng/dscm | 7%O2 | 2.45e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C4R2 | ND | 9.44e+2 | ng/dscm | 7%O2 | 2.60e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C4R3 | ND | 9.41e+2 | ng/dscm | 7%O2 | 2.59e-4 | lbs/hr | CE |
| 1,2-Dichloroethane | 402C4R4 | ND | 1.10e+3 | ng/dscm | 7%O2 | 2.65e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C3R1 | ND | 8.17e+2 | ng/dscm | 7%O2 | 3.09e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C3R2 | ND | 1.35e+3 | ng/dscm | 7%O2 | 5.79e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C3R3 | ND | 1.10e+3 | ng/dscm | 7%O2 | 4.65e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C3R4 | ND | 6.54e+2 | ng/dscm | 7%O2 | 2.73e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C4R1 | ND | 7.82e+2 | ng/dscm | 7%O2 | 2.31e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C4R2 | ND | 8.43e+2 | ng/dscm | 7%O2 | 2.33e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C4R3 | ND | 8.75e+2 | ng/dscm | 7%O2 | 2.40e-4 | lbs/hr | CE |
| 1,2-Dichloropropane | 402C4R4 | ND | 1.01e+3 | ng/dscm | 7%O2 | 2.44e-4 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C3R1 | ND | 3.28e+3 | ng/dscm | 7%O2 | 1.24e-3 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C3R2 | ND | 9.01e+3 | ng/dscm | 7%O2 | 3.87e-3 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C3R3 | ND | 6.52e+3 | ng/dscm | 7%O2 | 2.76e-3 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C3R4 | ND | 3.31e+3 | ng/dscm | 7%O2 | 1.38e-3 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C4R1 | ND | 2.43e+3 | ng/dscm | 7%O2 | 7.16e-4 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C4R2 | ND | 2.74e+3 | ng/dscm | 7%O2 | 7.56e-4 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C4R3 | ND | 2.56e+3 | ng/dscm | 7%O2 | 7.04e-4 | lbs/hr | CE |
| 1,4-Dichloro-2-butene | 402C4R4 | ND | 3.14e+3 | ng/dscm | 7%O2 | 7.58e-4 | lbs/hr | CE |
| 2-Hexanone | 402C3R1 | ND | 1.64e+3 | ng/dscm | 7%O2 | 6.21e-4 | lbs/hr | CE |
| 2-Hexanone | 402C3R2 | ND | 3.44e+3 | ng/dscm | 7%O2 | 1.48e-3 | lbs/hr | CE |
| 2-Hexanone | 402C3R3 | ND | 2.94e+3 | ng/dscm | 7%O2 | 1.24e-3 | lbs/hr | CE |
| 2-Hexanone | 402C3R4 | ND | 2.45e+3 | ng/dscm | 7%O2 | 1.02e-3 | lbs/hr | CE |
| 2-Hexanone | 402C4R1 | ND | 1.31e+3 | ng/dscm | 7%O2 | 3.86e-4 | lbs/hr | CE |
| 2-Hexanone | 402C4R2 | ND | 1.41e+3 | ng/dscm | 7%O2 | 3.89e-4 | lbs/hr | CE |
| 2-Hexanone | 402C4R3 | ND | 1.46e+3 | ng/dscm | 7%O2 | 4.01e-4 | lbs/hr | CE |
| 2-Hexanone | 402C4R4 | ND | 1.65e+3 | ng/dscm | 7%O2 | 3.98e-4 | lbs/hr | CE |
| Acetone | 402C2R2 | | 3.23e+5 | ng/dscm | 7%O2 | 8.25e-2 | lbs/hr | CE7%O2 |
| Acetone | 402C2R3 | | 1.73e+5 | ng/dscm | 7%O2 | 4.43e-2 | lbs/hr | CE7%O2 |
| Acetone | 402C2R4 | | 8.57e+4 | ng/dscm | 7%O2 | 1.57e-2 | lbs/hr | CE7%O2 |
| Acetone | 402C3R1 | 6 | 1.67e+5 | ng/dscm | 7%O2 | 6.32e-2 | lbs/hr | CE |
| Acetone | 402C3R2 | 5 | 9.77e+4 | ng/dscm | 7%O2 | 4.19e-2 | lbs/hr | CE |
| Acetone | 402C3R3 | 5 | 1.11e+5 | ng/dscm | 7%O2 | 4.69e-2 | lbs/hr | CE |
| Acetone | 402C3R4 | | 6.24e+4 | ng/dscm | 7%O2 | 2.61e-2 | lbs/hr | CE |
| Acetone | 402C4R1 | 4 | 3.43e+4 | ng/dscm | 7%O2 | 1.01e-2 | lbs/hr | CE |
| Acetone | 402C4R2 | 6 | 4.42e+4 | ng/dscm | 7%O2 | 1.22e-2 | lbs/hr | CE |
| Acetone | 402C4R3 | 6 | 7.64e+4 | ng/dscm | 7%O2 | 2.10e-2 | lbs/hr | CE |
| Acetone | 402C4R4 | | 7.90e+4 | ng/dscm | 7%O2 | 1.91e-2 | lbs/hr | CE |
| Acetonitrile | 402C3R1 | 4 | 4.35e+4 | ng/dscm | 7%O2 | 1.65e-2 | lbs/hr | CE |
| Acetonitrile | 402C3R2 | 5 | 8.00e+4 | ng/dscm | 7%O2 | 3.43e-2 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|----------------------|---------|----|---------|---------|------|---------|--------|--------|
| Acetonitrile | 402C3R3 | 5 | 6.08e+4 | ng/dscm | 7%O2 | 2.57e-2 | lbs/hr | CE |
| Acetonitrile | 402C3R4 | 4 | 5.73e+4 | ng/dscm | 7%O2 | 2.39e-2 | lbs/hr | CE |
| Acetonitrile | 402C4R1 | 4 | 2.20e+4 | ng/dscm | 7%O2 | 6.49e-3 | lbs/hr | CE |
| Acetonitrile | 402C4R2 | 4 | 1.16e+4 | ng/dscm | 7%O2 | 3.20e-3 | lbs/hr | CE |
| Acetonitrile | 402C4R3 | 4 | 1.48e+4 | ng/dscm | 7%O2 | 4.07e-3 | lbs/hr | CE |
| Acetonitrile | 402C4R4 | 4 | 1.86e+4 | ng/dscm | 7%O2 | 4.49e-3 | lbs/hr | CE |
| Allyl chloride | 402C3R1 | 5 | 3.19e+4 | ng/dscm | 7%O2 | 1.21e-2 | lbs/hr | CE |
| Allyl chloride | 402C3R2 | 5 | 2.68e+4 | ng/dscm | 7%O2 | 1.15e-2 | lbs/hr | CE |
| Allyl chloride | 402C3R3 | 5 | 1.87e+4 | ng/dscm | 7%O2 | 7.91e-3 | lbs/hr | CE |
| Allyl chloride | 402C3R4 | 4 | 1.41e+4 | ng/dscm | 7%O2 | 5.89e-3 | lbs/hr | CE |
| Allyl chloride | 402C4R1 | 5 | 3.99e+4 | ng/dscm | 7%O2 | 1.18e-2 | lbs/hr | CE |
| Allyl chloride | 402C4R2 | 5 | 1.45e+4 | ng/dscm | 7%O2 | 4.00e-3 | lbs/hr | CE |
| Allyl chloride | 402C4R3 | 4 | 1.35e+4 | ng/dscm | 7%O2 | 3.71e-3 | lbs/hr | CE |
| Allyl chloride | 402C4R4 | 4 | 1.58e+4 | ng/dscm | 7%O2 | 3.81e-3 | lbs/hr | CE |
| Benzene | 402C2R2 | | 1.04e+6 | ng/dscm | 7%O2 | 2.67e-1 | lbs/hr | CE7%O2 |
| Benzene | 402C2R3 | | 1.71e+6 | ng/dscm | 7%O2 | 4.36e-1 | lbs/hr | CE7%O2 |
| Benzene | 402C2R4 | | 2.87e+5 | ng/dscm | 7%O2 | 5.26e-2 | lbs/hr | CE7%O2 |
| Benzene | 402C3R1 | 3 | 6.81e+5 | ng/dscm | 7%O2 | 2.58e-1 | lbs/hr | CE |
| Benzene | 402C3R2 | 3 | 1.50e+6 | ng/dscm | 7%O2 | 6.44e-1 | lbs/hr | CE |
| Benzene | 402C3R3 | 3 | 6.26e+5 | ng/dscm | 7%O2 | 2.65e-1 | lbs/hr | CE |
| Benzene | 402C3R4 | 3 | 1.92e+6 | ng/dscm | 7%O2 | 8.02e-1 | lbs/hr | CE |
| Benzene | 402C4R1 | 3 | 1.83e+5 | ng/dscm | 7%O2 | 5.39e-2 | lbs/hr | CE |
| Benzene | 402C4R2 | 3 | 2.15e+5 | ng/dscm | 7%O2 | 5.93e-2 | lbs/hr | CE |
| Benzene | 402C4R3 | 3 | 1.83e+5 | ng/dscm | 7%O2 | 5.03e-2 | lbs/hr | CE |
| Benzene | 402C4R4 | 3 | 2.20e+5 | ng/dscm | 7%O2 | 5.31e-2 | lbs/hr | CE |
| Bromodichloromethane | 402C2R3 | | 8.19e+3 | ng/dscm | 7%O2 | 2.09e-3 | lbs/hr | CE7%O2 |
| Bromodichloromethane | 402C3R1 | ND | 4.68e+2 | ng/dscm | 7%O2 | 1.77e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C3R2 | ND | 9.11e+2 | ng/dscm | 7%O2 | 3.91e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C3R3 | 3 | 2.06e+3 | ng/dscm | 7%O2 | 8.71e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C3R4 | 3 | 1.42e+3 | ng/dscm | 7%O2 | 5.93e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C4R1 | 3 | 2.19e+3 | ng/dscm | 7%O2 | 6.46e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C4R2 | 3 | 1.79e+3 | ng/dscm | 7%O2 | 4.94e-4 | lbs/hr | CE |
| Bromodichloromethane | 402C4R3 | ND | 1.50e+2 | ng/dscm | 7%O2 | 4.12e-5 | lbs/hr | CE |
| Bromodichloromethane | 402C4R4 | 3 | 8.33e+2 | ng/dscm | 7%O2 | 2.01e-4 | lbs/hr | CE |
| Bromoethane | 402C2R2 | | 5.11e+4 | ng/dscm | 7%O2 | 1.31e-2 | lbs/hr | CE7%O2 |
| Bromoethane | 402C2R3 | | 2.58e+4 | ng/dscm | 7%O2 | 6.59e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 402C2R4 | | 1.44e+4 | ng/dscm | 7%O2 | 2.63e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 402C3R1 | ND | 9.29e+2 | ng/dscm | 7%O2 | 3.52e-4 | lbs/hr | CE |
| Bromoethane | 402C3R2 | ND | 2.12e+3 | ng/dscm | 7%O2 | 9.10e-4 | lbs/hr | CE |
| Bromoethane | 402C3R3 | ND | 1.47e+3 | ng/dscm | 7%O2 | 6.22e-4 | lbs/hr | CE |
| Bromoethane | 402C3R4 | ND | 8.21e+2 | ng/dscm | 7%O2 | 3.43e-4 | lbs/hr | CE |
| Bromoethane | 402C4R1 | ND | 7.49e+2 | ng/dscm | 7%O2 | 2.21e-4 | lbs/hr | CE |
| Bromoethane | 402C4R2 | ND | 8.43e+2 | ng/dscm | 7%O2 | 2.33e-4 | lbs/hr | CE |
| Bromoethane | 402C4R3 | ND | 8.44e+2 | ng/dscm | 7%O2 | 2.32e-4 | lbs/hr | CE |
| Bromoethane | 402C4R4 | ND | 1.43e+3 | ng/dscm | 7%O2 | 3.45e-4 | lbs/hr | CE |
| Bromoform | 402C3R1 | ND | 1.52e+3 | ng/dscm | 7%O2 | 5.75e-4 | lbs/hr | CE |
| Bromoform | 402C3R2 | ND | 3.41e+3 | ng/dscm | 7%O2 | 1.46e-3 | lbs/hr | CE |
| Bromoform | 402C3R3 | 4 | 3.27e+3 | ng/dscm | 7%O2 | 1.38e-3 | lbs/hr | CE |
| Bromoform | 402C3R4 | ND | 1.45e+3 | ng/dscm | 7%O2 | 6.06e-4 | lbs/hr | CE |
| Bromoform | 402C4R1 | 3 | 1.49e+3 | ng/dscm | 7%O2 | 4.39e-4 | lbs/hr | CE |
| Bromoform | 402C4R2 | ND | 1.21e+3 | ng/dscm | 7%O2 | 3.34e-4 | lbs/hr | CE |
| Bromoform | 402C4R3 | ND | 1.12e+3 | ng/dscm | 7%O2 | 3.08e-4 | lbs/hr | CE |
| Bromoform | 402C4R4 | ND | 1.37e+3 | ng/dscm | 7%O2 | 3.31e-4 | lbs/hr | CE |
| Bromomethane | 402C3R1 | 3 | 7.59e+3 | ng/dscm | 7%O2 | 2.87e-3 | lbs/hr | CE |
| Bromomethane | 402C3R2 | 5 | 1.88e+4 | ng/dscm | 7%O2 | 8.07e-3 | lbs/hr | CE |
| Bromomethane | 402C3R3 | 3 | 4.87e+3 | ng/dscm | 7%O2 | 2.06e-3 | lbs/hr | CE |
| Bromomethane | 402C3R4 | 3 | 4.82e+4 | ng/dscm | 7%O2 | 2.01e-2 | lbs/hr | CE |
| Bromomethane | 402C4R1 | 5 | 4.31e+3 | ng/dscm | 7%O2 | 1.27e-3 | lbs/hr | CE |
| Bromomethane | 402C4R2 | 3 | 5.68e+3 | ng/dscm | 7%O2 | 1.57e-3 | lbs/hr | CE |
| Bromomethane | 402C4R3 | 3 | 2.07e+3 | ng/dscm | 7%O2 | 5.69e-4 | lbs/hr | CE |
| Bromomethane | 402C4R4 | 3 | 5.63e+3 | ng/dscm | 7%O2 | 1.36e-3 | lbs/hr | CE |
| Carbon disulfide | 402C2R2 | | 1.62e+5 | ng/dscm | 7%O2 | 4.14e-2 | lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|------------------------|---------|----|---------|---------|------|---------|--------|--------|
| Carbon disulfide | 402C2R3 | | 3.00e+5 | ng/dscm | 7%O2 | 7.66e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 402C2R4 | | 9.32e+4 | ng/dscm | 7%O2 | 1.71e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 402C3R1 | 3 | 3.34e+5 | ng/dscm | 7%O2 | 1.26e-1 | lbs/hr | CE |
| Carbon disulfide | 402C3R2 | 3 | 1.07e+6 | ng/dscm | 7%O2 | 4.59e-1 | lbs/hr | CE |
| Carbon disulfide | 402C3R3 | 3 | 4.90e+5 | ng/dscm | 7%O2 | 2.07e-1 | lbs/hr | CE |
| Carbon disulfide | 402C3R4 | 3 | 3.78e+5 | ng/dscm | 7%O2 | 1.58e-1 | lbs/hr | CE |
| Carbon disulfide | 402C4R1 | 5 | 7.55e+4 | ng/dscm | 7%O2 | 2.23e-2 | lbs/hr | CE |
| Carbon disulfide | 402C4R2 | 3 | 9.91e+4 | ng/dscm | 7%O2 | 2.73e-2 | lbs/hr | CE |
| Carbon disulfide | 402C4R3 | 4 | 6.96e+4 | ng/dscm | 7%O2 | 1.91e-2 | lbs/hr | CE |
| Carbon disulfide | 402C4R4 | 5 | 1.04e+5 | ng/dscm | 7%O2 | 2.51e-2 | lbs/hr | CE |
| Carbon Tetrachloride | 402C3R1 | ND | 5.12e+2 | ng/dscm | 7%O2 | 1.94e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C3R2 | ND | 1.00e+3 | ng/dscm | 7%O2 | 4.29e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C3R3 | 3 | 1.22e+3 | ng/dscm | 7%O2 | 5.16e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C3R4 | 3 | 7.63e+2 | ng/dscm | 7%O2 | 3.19e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C4R1 | ND | 4.19e+2 | ng/dscm | 7%O2 | 1.24e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C4R2 | ND | 4.57e+2 | ng/dscm | 7%O2 | 1.26e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C4R3 | ND | 4.70e+2 | ng/dscm | 7%O2 | 1.29e-4 | lbs/hr | CE |
| Carbon Tetrachloride | 402C4R4 | 3 | 5.74e+2 | ng/dscm | 7%O2 | 1.38e-4 | lbs/hr | CE |
| Chlorobenzene | 402C2R2 | | 3.41e+4 | ng/dscm | 7%O2 | 8.72e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 402C2R3 | | 1.06e+5 | ng/dscm | 7%O2 | 2.71e-2 | lbs/hr | CE7%O2 |
| Chlorobenzene | 402C2R4 | | 2.85e+4 | ng/dscm | 7%O2 | 5.22e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 402C3R1 | 4 | 1.38e+4 | ng/dscm | 7%O2 | 5.22e-3 | lbs/hr | CE |
| Chlorobenzene | 402C3R2 | 4 | 1.03e+4 | ng/dscm | 7%O2 | 4.42e-3 | lbs/hr | CE |
| Chlorobenzene | 402C3R3 | 5 | 1.15e+4 | ng/dscm | 7%O2 | 4.86e-3 | lbs/hr | CE |
| Chlorobenzene | 402C3R4 | 5 | 1.35e+4 | ng/dscm | 7%O2 | 5.64e-3 | lbs/hr | CE |
| Chlorobenzene | 402C4R1 | 4 | 1.39e+4 | ng/dscm | 7%O2 | 4.10e-3 | lbs/hr | CE |
| Chlorobenzene | 402C4R2 | 4 | 1.79e+4 | ng/dscm | 7%O2 | 4.94e-3 | lbs/hr | CE |
| Chlorobenzene | 402C4R3 | 4 | 1.55e+4 | ng/dscm | 7%O2 | 4.26e-3 | lbs/hr | CE |
| Chlorobenzene | 402C4R4 | 4 | 1.97e+4 | ng/dscm | 7%O2 | 4.75e-3 | lbs/hr | CE |
| Chloroethane | 402C3R1 | ND | 1.74e+3 | ng/dscm | 7%O2 | 6.58e-4 | lbs/hr | CE |
| Chloroethane | 402C3R2 | ND | 3.09e+3 | ng/dscm | 7%O2 | 1.33e-3 | lbs/hr | CE |
| Chloroethane | 402C3R3 | ND | 2.88e+3 | ng/dscm | 7%O2 | 1.22e-3 | lbs/hr | CE |
| Chloroethane | 402C3R4 | 3 | 2.24e+3 | ng/dscm | 7%O2 | 9.36e-4 | lbs/hr | CE |
| Chloroethane | 402C4R1 | 3 | 1.90e+3 | ng/dscm | 7%O2 | 5.60e-4 | lbs/hr | CE |
| Chloroethane | 402C4R2 | 3 | 3.16e+3 | ng/dscm | 7%O2 | 8.72e-4 | lbs/hr | CE |
| Chloroethane | 402C4R3 | 3 | 2.90e+3 | ng/dscm | 7%O2 | 7.97e-4 | lbs/hr | CE |
| Chloroethane | 402C4R4 | 3 | 3.63e+3 | ng/dscm | 7%O2 | 8.76e-4 | lbs/hr | CE |
| Chloroform | 402C2R3 | | 8.94e+4 | ng/dscm | 7%O2 | 2.28e-2 | lbs/hr | CE7%O2 |
| Chloroform | 402C2R4 | | 1.47e+4 | ng/dscm | 7%O2 | 2.69e-3 | lbs/hr | CE7%O2 |
| Chloroform | 402C3R1 | 5 | 1.29e+3 | ng/dscm | 7%O2 | 4.88e-4 | lbs/hr | CE |
| Chloroform | 402C3R2 | 3 | 3.81e+3 | ng/dscm | 7%O2 | 1.63e-3 | lbs/hr | CE |
| Chloroform | 402C3R3 | 5 | 4.74e+3 | ng/dscm | 7%O2 | 2.00e-3 | lbs/hr | CE |
| Chloroform | 402C3R4 | 2 | 2.87e+3 | ng/dscm | 7%O2 | 1.20e-3 | lbs/hr | CE |
| Chloroform | 402C4R1 | 2 | 6.78e+3 | ng/dscm | 7%O2 | 2.00e-3 | lbs/hr | CE |
| Chloroform | 402C4R2 | 2 | 6.50e+3 | ng/dscm | 7%O2 | 1.79e-3 | lbs/hr | CE |
| Chloroform | 402C4R3 | 2 | 4.46e+3 | ng/dscm | 7%O2 | 1.23e-3 | lbs/hr | CE |
| Chloroform | 402C4R4 | 2 | 5.15e+3 | ng/dscm | 7%O2 | 1.24e-3 | lbs/hr | CE |
| Chloromethane | 402C2R2 | | 2.45e+5 | ng/dscm | 7%O2 | 6.27e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 402C2R3 | | 3.81e+5 | ng/dscm | 7%O2 | 9.73e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 402C2R4 | | 3.18e+5 | ng/dscm | 7%O2 | 5.83e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 402C3R1 | ND | 1.76e+3 | ng/dscm | 7%O2 | 6.66e-4 | lbs/hr | CE |
| Chloromethane | 402C3R2 | ND | 3.39e+3 | ng/dscm | 7%O2 | 1.45e-3 | lbs/hr | CE |
| Chloromethane | 402C3R3 | ND | 2.81e+3 | ng/dscm | 7%O2 | 1.19e-3 | lbs/hr | CE |
| Chloromethane | 402C3R4 | 3 | 1.29e+5 | ng/dscm | 7%O2 | 5.39e-2 | lbs/hr | CE |
| Chloromethane | 402C4R1 | 3 | 1.79e+5 | ng/dscm | 7%O2 | 5.28e-2 | lbs/hr | CE |
| Chloromethane | 402C4R2 | 3 | 1.26e+5 | ng/dscm | 7%O2 | 3.48e-2 | lbs/hr | CE |
| Chloromethane | 402C4R3 | 3 | 1.64e+5 | ng/dscm | 7%O2 | 4.51e-2 | lbs/hr | CE |
| Chloromethane | 402C4R4 | 3 | 1.53e+5 | ng/dscm | 7%O2 | 3.69e-2 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C3R1 | ND | 8.49e+2 | ng/dscm | 7%O2 | 3.21e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C3R2 | ND | 1.61e+3 | ng/dscm | 7%O2 | 6.91e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C3R3 | ND | 1.32e+3 | ng/dscm | 7%O2 | 5.58e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C3R4 | ND | 7.49e+2 | ng/dscm | 7%O2 | 3.13e-4 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-------------------------|---------|----|---------|---------|------|---------|--------|--------|
| cis-1,2-Dichloroethene | 402C4R1 | ND | 7.32e+2 | ng/dscm | 7%O2 | 2.16e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C4R2 | ND | 8.31e+2 | ng/dscm | 7%O2 | 2.29e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C4R3 | ND | 8.26e+2 | ng/dscm | 7%O2 | 2.27e-4 | lbs/hr | CE |
| cis-1,2-Dichloroethene | 402C4R4 | ND | 9.66e+2 | ng/dscm | 7%O2 | 2.33e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C3R1 | 3 | 5.48e+2 | ng/dscm | 7%O2 | 2.07e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C3R2 | ND | 8.71e+2 | ng/dscm | 7%O2 | 3.74e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C3R3 | 3 | 7.17e+2 | ng/dscm | 7%O2 | 3.03e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C3R4 | ND | 4.94e+2 | ng/dscm | 7%O2 | 2.06e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C4R1 | 3 | 4.53e+2 | ng/dscm | 7%O2 | 1.34e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C4R2 | 3 | 4.72e+2 | ng/dscm | 7%O2 | 1.30e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C4R3 | ND | 4.40e+2 | ng/dscm | 7%O2 | 1.21e-4 | lbs/hr | CE |
| cis-1,3-Dichloropropene | 402C4R4 | 3 | 5.74e+2 | ng/dscm | 7%O2 | 1.38e-4 | lbs/hr | CE |
| Cumene | 402C3R1 | 3 | 1.38e+3 | ng/dscm | 7%O2 | 5.22e-4 | lbs/hr | CE |
| Cumene | 402C3R2 | 3 | 1.45e+3 | ng/dscm | 7%O2 | 6.22e-4 | lbs/hr | CE |
| Cumene | 402C3R3 | 3 | 1.20e+3 | ng/dscm | 7%O2 | 5.08e-4 | lbs/hr | CE |
| Cumene | 402C3R4 | 3 | 1.26e+3 | ng/dscm | 7%O2 | 5.27e-4 | lbs/hr | CE |
| Cumene | 402C4R1 | 3 | 1.51e+3 | ng/dscm | 7%O2 | 4.45e-4 | lbs/hr | CE |
| Cumene | 402C4R2 | 3 | 1.79e+3 | ng/dscm | 7%O2 | 4.94e-4 | lbs/hr | CE |
| Cumene | 402C4R3 | 3 | 1.68e+3 | ng/dscm | 7%O2 | 4.62e-4 | lbs/hr | CE |
| Cumene | 402C4R4 | 3 | 1.89e+3 | ng/dscm | 7%O2 | 4.56e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C2R3 | | 4.81e+3 | ng/dscm | 7%O2 | 1.23e-3 | lbs/hr | CE7%O2 |
| Dibromochloromethane | 402C3R1 | ND | 8.13e+2 | ng/dscm | 7%O2 | 3.08e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C3R2 | ND | 1.65e+3 | ng/dscm | 7%O2 | 7.08e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C3R3 | 4 | 2.12e+3 | ng/dscm | 7%O2 | 8.97e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C3R4 | ND | 7.63e+2 | ng/dscm | 7%O2 | 3.19e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C4R1 | 3 | 1.73e+3 | ng/dscm | 7%O2 | 5.10e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C4R2 | 3 | 1.12e+3 | ng/dscm | 7%O2 | 3.09e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C4R3 | ND | 7.18e+2 | ng/dscm | 7%O2 | 1.97e-4 | lbs/hr | CE |
| Dibromochloromethane | 402C4R4 | ND | 8.26e+2 | ng/dscm | 7%O2 | 1.99e-4 | lbs/hr | CE |
| Dibromomethane | 402C3R1 | ND | 1.32e+3 | ng/dscm | 7%O2 | 4.99e-4 | lbs/hr | CE |
| Dibromomethane | 402C3R2 | ND | 2.52e+3 | ng/dscm | 7%O2 | 1.08e-3 | lbs/hr | CE |
| Dibromomethane | 402C3R3 | ND | 2.00e+3 | ng/dscm | 7%O2 | 8.46e-4 | lbs/hr | CE |
| Dibromomethane | 402C3R4 | ND | 1.23e+3 | ng/dscm | 7%O2 | 5.14e-4 | lbs/hr | CE |
| Dibromomethane | 402C4R1 | ND | 1.01e+3 | ng/dscm | 7%O2 | 2.98e-4 | lbs/hr | CE |
| Dibromomethane | 402C4R2 | ND | 1.09e+3 | ng/dscm | 7%O2 | 3.01e-4 | lbs/hr | CE |
| Dibromomethane | 402C4R3 | ND | 1.13e+3 | ng/dscm | 7%O2 | 3.11e-4 | lbs/hr | CE |
| Dibromomethane | 402C4R4 | ND | 1.30e+3 | ng/dscm | 7%O2 | 3.14e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C3R1 | ND | 1.33e+3 | ng/dscm | 7%O2 | 5.03e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C3R2 | ND | 2.14e+3 | ng/dscm | 7%O2 | 9.18e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C3R3 | ND | 1.76e+3 | ng/dscm | 7%O2 | 7.44e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C3R4 | ND | 1.19e+3 | ng/dscm | 7%O2 | 4.97e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C4R1 | ND | 1.36e+3 | ng/dscm | 7%O2 | 4.01e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C4R2 | ND | 1.47e+3 | ng/dscm | 7%O2 | 4.06e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C4R3 | ND | 1.52e+3 | ng/dscm | 7%O2 | 4.18e-4 | lbs/hr | CE |
| Ethyl Acrylate | 402C4R4 | ND | 1.76e+3 | ng/dscm | 7%O2 | 4.25e-4 | lbs/hr | CE |
| Iodomethane | 402C3R1 | 5 | 6.71e+3 | ng/dscm | 7%O2 | 2.54e-3 | lbs/hr | CE |
| Iodomethane | 402C3R2 | ND | 1.72e+3 | ng/dscm | 7%O2 | 7.38e-4 | lbs/hr | CE |
| Iodomethane | 402C3R3 | 4 | 3.34e+3 | ng/dscm | 7%O2 | 1.41e-3 | lbs/hr | CE |
| Iodomethane | 402C3R4 | ND | 8.75e+2 | ng/dscm | 7%O2 | 3.66e-4 | lbs/hr | CE |
| Iodomethane | 402C4R1 | ND | 8.83e+2 | ng/dscm | 7%O2 | 2.60e-4 | lbs/hr | CE |
| Iodomethane | 402C4R2 | 3 | 1.01e+3 | ng/dscm | 7%O2 | 2.79e-4 | lbs/hr | CE |
| Iodomethane | 402C4R3 | ND | 1.00e+3 | ng/dscm | 7%O2 | 2.75e-4 | lbs/hr | CE |
| Iodomethane | 402C4R4 | ND | 5.67e+2 | ng/dscm | 7%O2 | 1.37e-4 | lbs/hr | CE |
| Isooctane | 402C3R1 | ND | 2.69e+2 | ng/dscm | 7%O2 | 1.02e-4 | lbs/hr | CE |
| Isooctane | 402C3R2 | ND | 3.05e+2 | ng/dscm | 7%O2 | 1.31e-4 | lbs/hr | CE |
| Isooctane | 402C3R3 | ND | 3.07e+5 | ng/dscm | 7%O2 | 1.30e-1 | lbs/hr | CE |
| Isooctane | 402C3R4 | ND | 2.24e+2 | ng/dscm | 7%O2 | 9.36e-5 | lbs/hr | CE |
| Isooctane | 402C4R1 | ND | 2.74e+2 | ng/dscm | 7%O2 | 8.08e-5 | lbs/hr | CE |
| Isooctane | 402C4R2 | ND | 3.03e+2 | ng/dscm | 7%O2 | 8.36e-5 | lbs/hr | CE |
| Isooctane | 402C4R3 | ND | 3.08e+2 | ng/dscm | 7%O2 | 8.46e-5 | lbs/hr | CE |
| Isooctane | 402C4R4 | ND | 3.57e+2 | ng/dscm | 7%O2 | 8.61e-5 | lbs/hr | CE |
| m,p-Xylene | 402C2R2 | | 1.00e+5 | ng/dscm | 7%O2 | 2.57e-2 | lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|---------------------|---------|---|---------|---------|------|---------|--------|--------|
| m,p-Xylene | 402C2R3 | | 3.82e+5 | ng/dscm | 7%O2 | 9.76e-2 | lbs/hr | CE7%O2 |
| m,p-Xylene | 402C2R4 | | 8.81e+4 | ng/dscm | 7%O2 | 1.61e-2 | lbs/hr | CE7%O2 |
| m,p-Xylene | 402C3R1 | 3 | 4.82e+4 | ng/dscm | 7%O2 | 1.82e-2 | lbs/hr | CE |
| m,p-Xylene | 402C3R2 | 3 | 1.09e+5 | ng/dscm | 7%O2 | 4.68e-2 | lbs/hr | CE |
| m,p-Xylene | 402C3R3 | 3 | 6.06e+4 | ng/dscm | 7%O2 | 2.56e-2 | lbs/hr | CE |
| m,p-Xylene | 402C3R4 | 3 | 1.40e+4 | ng/dscm | 7%O2 | 5.85e-3 | lbs/hr | CE |
| m,p-Xylene | 402C4R1 | 4 | 4.12e+4 | ng/dscm | 7%O2 | 1.21e-2 | lbs/hr | CE |
| m,p-Xylene | 402C4R2 | 3 | 5.01e+4 | ng/dscm | 7%O2 | 1.38e-2 | lbs/hr | CE |
| m,p-Xylene | 402C4R3 | 4 | 4.07e+4 | ng/dscm | 7%O2 | 1.12e-2 | lbs/hr | CE |
| m,p-Xylene | 402C4R4 | 5 | 5.72e+4 | ng/dscm | 7%O2 | 1.38e-2 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C2R2 | | 2.51e+4 | ng/dscm | 7%O2 | 6.43e-3 | lbs/hr | CE7%O2 |
| Methyl Ethyl Ketone | 402C2R3 | | 7.23e+4 | ng/dscm | 7%O2 | 1.85e-2 | lbs/hr | CE7%O2 |
| Methyl Ethyl Ketone | 402C2R4 | | 2.18e+4 | ng/dscm | 7%O2 | 3.99e-3 | lbs/hr | CE7%O2 |
| Methyl Ethyl Ketone | 402C3R1 | 4 | 3.21e+4 | ng/dscm | 7%O2 | 1.21e-2 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C3R2 | 4 | 3.40e+4 | ng/dscm | 7%O2 | 1.46e-2 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C3R3 | 4 | 3.09e+4 | ng/dscm | 7%O2 | 1.31e-2 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C3R4 | 5 | 2.46e+4 | ng/dscm | 7%O2 | 1.03e-2 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C4R1 | 4 | 2.93e+4 | ng/dscm | 7%O2 | 8.64e-3 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C4R2 | 5 | 2.59e+4 | ng/dscm | 7%O2 | 7.14e-3 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C4R3 | 5 | 2.70e+4 | ng/dscm | 7%O2 | 7.42e-3 | lbs/hr | CE |
| Methyl Ethyl Ketone | 402C4R4 | 5 | 2.81e+4 | ng/dscm | 7%O2 | 6.78e-3 | lbs/hr | CE |
| Methylene Chloride | 402C2R2 | | 1.46e+5 | ng/dscm | 7%O2 | 3.75e-2 | lbs/hr | CE7%O2 |
| Methylene Chloride | 402C2R3 | | 1.23e+5 | ng/dscm | 7%O2 | 3.14e-2 | lbs/hr | CE7%O2 |
| Methylene Chloride | 402C2R4 | | 1.34e+4 | ng/dscm | 7%O2 | 2.45e-3 | lbs/hr | CE7%O2 |
| Methylene Chloride | 402C3R1 | 6 | 1.39e+5 | ng/dscm | 7%O2 | 5.26e-2 | lbs/hr | CE |
| Methylene Chloride | 402C3R2 | 6 | 1.83e+5 | ng/dscm | 7%O2 | 7.85e-2 | lbs/hr | CE |
| Methylene Chloride | 402C3R3 | 6 | 6.24e+5 | ng/dscm | 7%O2 | 2.64e-1 | lbs/hr | CE |
| Methylene Chloride | 402C3R4 | 6 | 5.75e+4 | ng/dscm | 7%O2 | 2.40e-2 | lbs/hr | CE |
| Methylene Chloride | 402C4R1 | | 4.50e+4 | ng/dscm | 7%O2 | 1.33e-2 | lbs/hr | CE |
| Methylene Chloride | 402C4R2 | 6 | 1.77e+5 | ng/dscm | 7%O2 | 4.88e-2 | lbs/hr | CE |
| Methylene Chloride | 402C4R3 | | 6.17e+4 | ng/dscm | 7%O2 | 1.70e-2 | lbs/hr | CE |
| Methylene Chloride | 402C4R4 | | 7.88e+4 | ng/dscm | 7%O2 | 1.90e-2 | lbs/hr | CE |
| n-Hexane | 402C3R1 | 4 | 1.41e+4 | ng/dscm | 7%O2 | 5.34e-3 | lbs/hr | CE |
| n-Hexane | 402C3R2 | 6 | 2.50e+4 | ng/dscm | 7%O2 | 1.07e-2 | lbs/hr | CE |
| n-Hexane | 402C3R3 | 5 | 2.33e+4 | ng/dscm | 7%O2 | 9.85e-3 | lbs/hr | CE |
| n-Hexane | 402C3R4 | 3 | 2.98e+4 | ng/dscm | 7%O2 | 1.25e-2 | lbs/hr | CE |
| n-Hexane | 402C4R1 | 5 | 1.96e+4 | ng/dscm | 7%O2 | 5.78e-3 | lbs/hr | CE |
| n-Hexane | 402C4R2 | 5 | 2.23e+4 | ng/dscm | 7%O2 | 6.15e-3 | lbs/hr | CE |
| n-Hexane | 402C4R3 | 5 | 2.38e+4 | ng/dscm | 7%O2 | 6.54e-3 | lbs/hr | CE |
| n-Hexane | 402C4R4 | 3 | 2.58e+4 | ng/dscm | 7%O2 | 6.22e-3 | lbs/hr | CE |
| o-Xylene | 402C2R2 | | 4.20e+4 | ng/dscm | 7%O2 | 1.07e-2 | lbs/hr | CE7%O2 |
| o-Xylene | 402C2R3 | | 1.58e+5 | ng/dscm | 7%O2 | 4.05e-2 | lbs/hr | CE7%O2 |
| o-Xylene | 402C2R4 | | 3.75e+4 | ng/dscm | 7%O2 | 6.87e-3 | lbs/hr | CE7%O2 |
| o-Xylene | 402C3R1 | 5 | 1.50e+4 | ng/dscm | 7%O2 | 5.68e-3 | lbs/hr | CE |
| o-Xylene | 402C3R2 | 5 | 2.69e+4 | ng/dscm | 7%O2 | 1.15e-2 | lbs/hr | CE |
| o-Xylene | 402C3R3 | 5 | 1.91e+4 | ng/dscm | 7%O2 | 8.08e-3 | lbs/hr | CE |
| o-Xylene | 402C3R4 | 3 | 4.32e+4 | ng/dscm | 7%O2 | 1.81e-2 | lbs/hr | CE |
| o-Xylene | 402C4R1 | 4 | 1.64e+4 | ng/dscm | 7%O2 | 4.83e-3 | lbs/hr | CE |
| o-Xylene | 402C4R2 | 5 | 1.90e+4 | ng/dscm | 7%O2 | 5.24e-3 | lbs/hr | CE |
| o-Xylene | 402C4R3 | 4 | 1.62e+4 | ng/dscm | 7%O2 | 4.45e-3 | lbs/hr | CE |
| o-Xylene | 402C4R4 | 5 | 2.16e+4 | ng/dscm | 7%O2 | 5.21e-3 | lbs/hr | CE |
| Styrene | 402C2R2 | | 1.06e+5 | ng/dscm | 7%O2 | 2.70e-2 | lbs/hr | CE7%O2 |
| Styrene | 402C2R3 | | 3.30e+5 | ng/dscm | 7%O2 | 8.44e-2 | lbs/hr | CE7%O2 |
| Styrene | 402C2R4 | | 6.91e+4 | ng/dscm | 7%O2 | 1.27e-2 | lbs/hr | CE7%O2 |
| Styrene | 402C3R1 | 5 | 2.63e+4 | ng/dscm | 7%O2 | 9.95e-3 | lbs/hr | CE |
| Styrene | 402C3R2 | 5 | 4.17e+4 | ng/dscm | 7%O2 | 1.79e-2 | lbs/hr | CE |
| Styrene | 402C3R3 | 5 | 2.46e+4 | ng/dscm | 7%O2 | 1.04e-2 | lbs/hr | CE |
| Styrene | 402C3R4 | 3 | 7.85e+4 | ng/dscm | 7%O2 | 3.28e-2 | lbs/hr | CE |
| Styrene | 402C4R1 | 4 | 2.78e+4 | ng/dscm | 7%O2 | 8.20e-3 | lbs/hr | CE |
| Styrene | 402C4R2 | 3 | 2.65e+4 | ng/dscm | 7%O2 | 7.31e-3 | lbs/hr | CE |
| Styrene | 402C4R3 | 4 | 1.65e+4 | ng/dscm | 7%O2 | 4.53e-3 | lbs/hr | CE |
| Styrene | 402C4R4 | 5 | 3.14e+4 | ng/dscm | 7%O2 | 7.58e-3 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA ID: KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

| | | | | | | | | |
|---------------------------|---------|----|---------|---------|------|---------|--------|--------|
| Tetrachloroethene | 402C2R2 | ND | 4.66e+2 | ng/dscm | 7%O2 | 1.19e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 402C2R3 | ND | 4.77e+2 | ng/dscm | 7%O2 | 1.22e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 402C2R4 | ND | 5.21e+2 | ng/dscm | 7%O2 | 9.53e-5 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 402C3R1 | 3 | 8.49e+2 | ng/dscm | 7%O2 | 3.21e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C3R2 | ND | 1.01e+3 | ng/dscm | 7%O2 | 4.33e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C3R3 | 3 | 1.00e+3 | ng/dscm | 7%O2 | 4.23e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C3R4 | 3 | 7.40e+2 | ng/dscm | 7%O2 | 3.09e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C4R1 | 3 | 7.54e+2 | ng/dscm | 7%O2 | 2.22e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C4R2 | 3 | 7.16e+2 | ng/dscm | 7%O2 | 1.98e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C4R3 | 3 | 9.98e+2 | ng/dscm | 7%O2 | 2.74e-4 | lbs/hr | CE |
| Tetrachloroethene | 402C4R4 | 3 | 2.59e+3 | ng/dscm | 7%O2 | 6.25e-4 | lbs/hr | CE |
| Toluene | 402C2R2 | | 3.06e+5 | ng/dscm | 7%O2 | 7.82e-2 | lbs/hr | CE7%O2 |
| Toluene | 402C2R3 | | 9.84e+5 | ng/dscm | 7%O2 | 2.51e-1 | lbs/hr | CE7%O2 |
| Toluene | 402C2R4 | | 2.14e+5 | ng/dscm | 7%O2 | 3.93e-2 | lbs/hr | CE7%O2 |
| Toluene | 402C3R1 | 6 | 1.86e+5 | ng/dscm | 7%O2 | 7.04e-2 | lbs/hr | CE |
| Toluene | 402C3R2 | 6 | 5.06e+5 | ng/dscm | 7%O2 | 2.17e-1 | lbs/hr | CE |
| Toluene | 402C3R3 | 6 | 2.06e+5 | ng/dscm | 7%O2 | 8.71e-2 | lbs/hr | CE |
| Toluene | 402C3R4 | 6 | 4.15e+5 | ng/dscm | 7%O2 | 1.73e-1 | lbs/hr | CE |
| Toluene | 402C4R1 | 6 | 1.26e+5 | ng/dscm | 7%O2 | 3.71e-2 | lbs/hr | CE |
| Toluene | 402C4R2 | 6 | 1.57e+5 | ng/dscm | 7%O2 | 4.33e-2 | lbs/hr | CE |
| Toluene | 402C4R3 | 6 | 1.25e+5 | ng/dscm | 7%O2 | 3.44e-2 | lbs/hr | CE |
| Toluene | 402C4R4 | 6 | 1.72e+5 | ng/dscm | 7%O2 | 4.15e-2 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C3R1 | ND | 5.67e+2 | ng/dscm | 7%O2 | 2.15e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C3R2 | ND | 1.15e+3 | ng/dscm | 7%O2 | 4.93e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C3R3 | 3 | 9.48e+2 | ng/dscm | 7%O2 | 4.01e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C3R4 | ND | 5.65e+2 | ng/dscm | 7%O2 | 2.36e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C4R1 | ND | 4.75e+2 | ng/dscm | 7%O2 | 1.40e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C4R2 | ND | 5.11e+2 | ng/dscm | 7%O2 | 1.41e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C4R3 | ND | 5.31e+2 | ng/dscm | 7%O2 | 1.46e-4 | lbs/hr | CE |
| trans-1,3-Dichloropropene | 402C4R4 | ND | 6.09e+2 | ng/dscm | 7%O2 | 1.47e-4 | lbs/hr | CE |
| Trichloroethene | 402C2R3 | | 1.31e+3 | ng/dscm | 7%O2 | 3.36e-4 | lbs/hr | CE7%O2 |
| Trichloroethene | 402C3R1 | 3 | 9.22e+2 | ng/dscm | 7%O2 | 3.49e-4 | lbs/hr | CE |
| Trichloroethene | 402C3R2 | ND | 1.18e+3 | ng/dscm | 7%O2 | 5.06e-4 | lbs/hr | CE |
| Trichloroethene | 402C3R3 | 3 | 2.76e+3 | ng/dscm | 7%O2 | 1.17e-3 | lbs/hr | CE |
| Trichloroethene | 402C3R4 | 3 | 6.71e+2 | ng/dscm | 7%O2 | 2.80e-4 | lbs/hr | CE |
| Trichloroethene | 402C4R1 | 3 | 6.32e+2 | ng/dscm | 7%O2 | 1.86e-4 | lbs/hr | CE |
| Trichloroethene | 402C4R2 | 2 | 4.27e+2 | ng/dscm | 7%O2 | 1.18e-4 | lbs/hr | CE |
| Trichloroethene | 402C4R3 | 3 | 7.06e+2 | ng/dscm | 7%O2 | 1.94e-4 | lbs/hr | CE |
| Trichloroethene | 402C4R4 | 3 | 8.47e+2 | ng/dscm | 7%O2 | 2.04e-4 | lbs/hr | CE |
| Trichlorofluoromethane | 402C3R1 | 3 | 3.16e+3 | ng/dscm | 7%O2 | 1.20e-3 | lbs/hr | CE |
| Trichlorofluoromethane | 402C3R2 | 5 | 6.90e+3 | ng/dscm | 7%O2 | 2.96e-3 | lbs/hr | CE |
| Trichlorofluoromethane | 402C3R3 | 5 | 1.75e+4 | ng/dscm | 7%O2 | 7.40e-3 | lbs/hr | CE |
| Trichlorofluoromethane | 402C3R4 | 5 | 6.36e+3 | ng/dscm | 7%O2 | 2.66e-3 | lbs/hr | CE |
| Trichlorofluoromethane | 402C4R1 | 3 | 9.28e+2 | ng/dscm | 7%O2 | 2.74e-4 | lbs/hr | CE |
| Trichlorofluoromethane | 402C4R2 | 3 | 2.72e+3 | ng/dscm | 7%O2 | 7.50e-4 | lbs/hr | CE |
| Trichlorofluoromethane | 402C4R3 | 3 | 1.06e+3 | ng/dscm | 7%O2 | 2.91e-4 | lbs/hr | CE |
| Trichlorofluoromethane | 402C4R4 | 5 | 8.22e+3 | ng/dscm | 7%O2 | 1.98e-3 | lbs/hr | CE |
| Vinyl Acetate | 402C3R1 | ND | 5.41e+2 | ng/dscm | 7%O2 | 2.05e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C3R2 | ND | 8.89e+2 | ng/dscm | 7%O2 | 3.81e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C3R3 | ND | 7.50e+2 | ng/dscm | 7%O2 | 3.17e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C3R4 | ND | 6.94e+2 | ng/dscm | 7%O2 | 2.90e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C4R1 | ND | 4.14e+2 | ng/dscm | 7%O2 | 1.22e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C4R2 | ND | 4.45e+2 | ng/dscm | 7%O2 | 1.23e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C4R3 | ND | 4.64e+2 | ng/dscm | 7%O2 | 1.28e-4 | lbs/hr | CE |
| Vinyl Acetate | 402C4R4 | 3 | 5.32e+2 | ng/dscm | 7%O2 | 1.28e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C3R1 | ND | 1.27e+3 | ng/dscm | 7%O2 | 4.81e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C3R2 | ND | 2.32e+3 | ng/dscm | 7%O2 | 9.95e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C3R3 | ND | 2.30e+3 | ng/dscm | 7%O2 | 9.73e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C3R4 | ND | 1.12e+3 | ng/dscm | 7%O2 | 4.68e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C4R1 | ND | 9.64e+2 | ng/dscm | 7%O2 | 2.84e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C4R2 | ND | 1.09e+3 | ng/dscm | 7%O2 | 3.01e-4 | lbs/hr | CE |
| Vinyl Bromide | 402C4R3 | ND | 1.09e+3 | ng/dscm | 7%O2 | 3.00e-4 | lbs/hr | CE |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: KS
 3. CITY: CHANUTE
 4. EP ID: 402 DEVICE NAME: KILN NO. 2

EPA KSD031203318
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|----------------|---------|----|---------|---------|------|---------|--------|--------|
| Vinyl Bromide | 402C4R4 | ND | 5.60e+2 | ng/dscm | 7%O2 | 1.35e-4 | lbs/hr | CE |
| Vinyl Chloride | 402C2R2 | | 3.81e+4 | ng/dscm | 7%O2 | 9.75e-3 | lbs/hr | CE7%O2 |
| Vinyl Chloride | 402C2R3 | | 3.46e+4 | ng/dscm | 7%O2 | 8.85e-3 | lbs/hr | CE7%O2 |
| Vinyl Chloride | 402C2R4 | | 4.01e+4 | ng/dscm | 7%O2 | 7.35e-3 | lbs/hr | CE7%O2 |
| Vinyl Chloride | 402C3R1 | ND | 1.47e+3 | ng/dscm | 7%O2 | 5.56e-4 | lbs/hr | CE |
| Vinyl Chloride | 402C3R2 | ND | 2.89e+3 | ng/dscm | 7%O2 | 1.24e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C3R3 | ND | 2.39e+3 | ng/dscm | 7%O2 | 1.01e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C3R4 | 5 | 1.54e+4 | ng/dscm | 7%O2 | 6.44e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C4R1 | 5 | 1.01e+4 | ng/dscm | 7%O2 | 2.98e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C4R2 | 5 | 1.30e+4 | ng/dscm | 7%O2 | 3.59e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C4R3 | 5 | 7.62e+3 | ng/dscm | 7%O2 | 2.09e-3 | lbs/hr | CE |
| Vinyl Chloride | 402C4R4 | 3 | 7.74e+3 | ng/dscm | 7%O2 | 1.87e-3 | lbs/hr | CE |

6. Description: EMISSIONS Process Group: WET KILN Location: STACK-BYPASS Phase: GAS

7. Category: Particulate

Analysis:

| 8. Substance | 9. Run ID | Concentration | | Mass Rate | Calc |
|--------------|-----------|---------------|--------------|----------------|------|
| Particulate | 402C3R1 | 4.14e+1 | gr/dscf 7%O2 | 1.23e+3 lbs/hr | CE |
| Particulate | 402C3R2 | 3.23e+1 | gr/dscf 7%O2 | 1.11e+3 lbs/hr | CE |
| Particulate | 402C3R3 | 2.10e+1 | gr/dscf 7%O2 | 6.22e+2 lbs/hr | CE |
| Particulate | 402C4R1 | 1.20e+1 | gr/dscf 7%O2 | 5.40e+2 lbs/hr | CE |
| Particulate | 402C4R2 | 1.37e+1 | gr/dscf 7%O2 | 6.41e+2 lbs/hr | CE |
| Particulate | 402C4R3 | 1.30e+1 | gr/dscf 7%O2 | 6.38e+2 lbs/hr | CE |
| Particulate | 402C4R4 | 1.32e+1 | gr/dscf 7%O2 | 6.22e+2 lbs/hr | CE |

7. Category: THC & CO

Analysis:

| 8. Substance | 9. Run ID | Concentration | | Mass Rate | Calc |
|--------------|-----------|---------------|-----------|----------------|--------|
| CO | 402C3R1 | 4.42e+2 | ppmv 7%O2 | 6.67e+0 lbs/hr | CE7%O2 |
| CO | 402C3R2 | 3.65e+2 | ppmv 7%O2 | 6.38e+0 lbs/hr | CE7%O2 |
| CO | 402C3R3 | 4.75e+2 | ppmv 7%O2 | 7.13e+0 lbs/hr | CE7%O2 |
| CO | 402C4R1 | 4.87e+2 | ppmv 7%O2 | 1.11e+1 lbs/hr | CE7%O2 |
| CO | 402C4R2 | 7.18e+2 | ppmv 7%O2 | 1.71e+1 lbs/hr | CE7%O2 |
| THC | 402C3R2 | 5.85e+0 | ppmv 7%O2 | 1.61e-1 lbs/hr | CE7%O2 |
| THC | 402C3R3 | 9.55e+0 | ppmv 7%O2 | 2.25e-1 lbs/hr | CE7%O2 |
| THC | 402C4R1 | 7.50e+0 | ppmv 7%O2 | 2.69e-1 lbs/hr | CE7%O2 |
| THC | 402C4R2 | 4.37e+0 | ppmv 7%O2 | 1.63e-1 lbs/hr | CE7%O2 |
| THC | 402C4R3 | 2.27e+0 | ppmv 7%O2 | 8.89e-2 lbs/hr | CE7%O2 |
| THC | 402C4R4 | 8.40e-2 | ppmv 7%O2 | 3.17e-3 lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE EPA NED007260672 REGION: 7
 4. EP ID: 405 DEVICE NAME: KILN NO. 1 SYSTEM TYPE: CEMENT KILN APC SYSTEM: ESP

5. Type: CONTROLLED
 6. Description: EMISSIONS Process Group: DRY KILN (SEMI) Location: STACK-MAIN Phase: GAS
 7. Category: Dioxin & Furan

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc |
|--------------|-----------|---------------|---------|--------------|----------------|--------|
| 4D 2378 | 405C1R1 | ND | 5.31e-2 | ng/dscm 7%O2 | 1.01e-8 lbs/hr | CE7%O2 |
| 4D 2378 | 405C1R2 | | 1.41e-2 | ng/dscm 7%O2 | 2.91e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 405C1R3 | ND | 1.61e-2 | ng/dscm 7%O2 | 2.95e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 405C1R4 | ND | 2.36e-2 | ng/dscm 7%O2 | 4.45e-9 lbs/hr | CE7%O2 |
| 4D 2378 | 405C1R5 | | 3.28e-2 | ng/dscm 7%O2 | 5.90e-9 lbs/hr | CE7%O2 |
| 4D Other | 405C1R1 | | 2.07e+0 | ng/dscm 7%O2 | 3.92e-7 lbs/hr | OCE |
| 4D Other | 405C1R2 | | 3.81e-1 | ng/dscm 7%O2 | 7.87e-8 lbs/hr | OCE |
| 4D Other | 405C1R3 | | 1.19e+0 | ng/dscm 7%O2 | 2.18e-7 lbs/hr | OCE |
| 4D Other | 405C1R4 | | 4.25e-1 | ng/dscm 7%O2 | 8.01e-8 lbs/hr | OCE |
| 4D Other | 405C1R5 | | 1.61e+0 | ng/dscm 7%O2 | 2.89e-7 lbs/hr | OCE |
| 4D Total | 405C1R1 | | 2.12e+0 | ng/dscm 7%O2 | 4.03e-7 lbs/hr | CE7%O2 |
| 4D Total | 405C1R2 | | 3.95e-1 | ng/dscm 7%O2 | 8.16e-8 lbs/hr | CE7%O2 |
| 4D Total | 405C1R3 | | 1.20e+0 | ng/dscm 7%O2 | 2.21e-7 lbs/hr | CE7%O2 |
| 4D Total | 405C1R4 | | 4.48e-1 | ng/dscm 7%O2 | 8.45e-8 lbs/hr | CE7%O2 |
| 4D Total | 405C1R5 | | 1.64e+0 | ng/dscm 7%O2 | 2.95e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 405C1R1 | | 1.21e+0 | ng/dscm 7%O2 | 2.30e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 405C1R2 | | 4.66e-1 | ng/dscm 7%O2 | 9.62e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 405C1R3 | | 5.14e-1 | ng/dscm 7%O2 | 9.44e-8 lbs/hr | CE7%O2 |
| 4F 2378 | 405C1R4 | | 5.90e-1 | ng/dscm 7%O2 | 1.11e-7 lbs/hr | CE7%O2 |
| 4F 2378 | 405C1R5 | | 6.96e-1 | ng/dscm 7%O2 | 1.25e-7 lbs/hr | CE7%O2 |
| 4F Other | 405C1R1 | | 9.63e+0 | ng/dscm 7%O2 | 1.83e-6 lbs/hr | OCE |
| 4F Other | 405C1R2 | | 2.92e+0 | ng/dscm 7%O2 | 6.03e-7 lbs/hr | OCE |
| 4F Other | 405C1R3 | | 2.70e+0 | ng/dscm 7%O2 | 4.96e-7 lbs/hr | OCE |
| 4F Other | 405C1R4 | | 3.42e+0 | ng/dscm 7%O2 | 6.45e-7 lbs/hr | OCE |
| 4F Other | 405C1R5 | | 3.89e+0 | ng/dscm 7%O2 | 7.01e-7 lbs/hr | OCE |
| 4F Total | 405C1R1 | | 1.08e+1 | ng/dscm 7%O2 | 2.06e-6 lbs/hr | CE7%O2 |
| 4F Total | 405C1R2 | | 3.39e+0 | ng/dscm 7%O2 | 7.00e-7 lbs/hr | CE7%O2 |
| 4F Total | 405C1R3 | | 3.21e+0 | ng/dscm 7%O2 | 5.90e-7 lbs/hr | CE7%O2 |
| 4F Total | 405C1R4 | | 4.01e+0 | ng/dscm 7%O2 | 7.56e-7 lbs/hr | CE7%O2 |
| 4F Total | 405C1R5 | | 4.59e+0 | ng/dscm 7%O2 | 8.26e-7 lbs/hr | CE7%O2 |
| 5D 12378 | 405C1R1 | ND | 1.52e-2 | ng/dscm 7%O2 | 2.88e-9 lbs/hr | CE7%O2 |
| 5D 12378 | 405C1R2 | ND | 7.05e-3 | ng/dscm 7%O2 | 1.46e-9 lbs/hr | CE7%O2 |
| 5D 12378 | 405C1R3 | ND | 1.61e-2 | ng/dscm 7%O2 | 2.95e-9 lbs/hr | CE7%O2 |
| 5D 12378 | 405C1R4 | | 1.57e-2 | ng/dscm 7%O2 | 2.97e-9 lbs/hr | CE7%O2 |
| 5D 12378 | 405C1R5 | ND | 1.64e-2 | ng/dscm 7%O2 | 2.95e-9 lbs/hr | CE7%O2 |
| 5D Other | 405C1R1 | | 4.63e-1 | ng/dscm 7%O2 | 8.77e-8 lbs/hr | OCE |
| 5D Other | 405C1R2 | | 1.41e-2 | ng/dscm 7%O2 | 2.91e-9 lbs/hr | OCE |
| 5D Other | 405C1R3 | | 9.64e-2 | ng/dscm 7%O2 | 1.77e-8 lbs/hr | OCE |
| 5D Other | 405C1R4 | | 1.65e-1 | ng/dscm 7%O2 | 3.11e-8 lbs/hr | OCE |
| 5D Other | 405C1R5 | | 5.24e-1 | ng/dscm 7%O2 | 9.44e-8 lbs/hr | OCE |
| 5D Total | 405C1R1 | | 4.78e-1 | ng/dscm 7%O2 | 9.06e-8 lbs/hr | CE7%O2 |
| 5D Total | 405C1R2 | | 2.12e-2 | ng/dscm 7%O2 | 4.37e-9 lbs/hr | CE7%O2 |
| 5D Total | 405C1R3 | | 1.12e-1 | ng/dscm 7%O2 | 2.07e-8 lbs/hr | CE7%O2 |
| 5D Total | 405C1R4 | | 1.81e-1 | ng/dscm 7%O2 | 3.41e-8 lbs/hr | CE7%O2 |
| 5D Total | 405C1R5 | | 5.41e-1 | ng/dscm 7%O2 | 9.74e-8 lbs/hr | CE7%O2 |
| 5F 12378 | 405C1R1 | | 1.21e-1 | ng/dscm 7%O2 | 2.30e-8 lbs/hr | CE7%O2 |
| 5F 12378 | 405C1R2 | | 3.53e-2 | ng/dscm 7%O2 | 7.29e-9 lbs/hr | CE7%O2 |
| 5F 12378 | 405C1R3 | | 4.82e-2 | ng/dscm 7%O2 | 8.85e-9 lbs/hr | CE7%O2 |
| 5F 12378 | 405C1R4 | ND | 7.08e-2 | ng/dscm 7%O2 | 1.33e-8 lbs/hr | CE7%O2 |
| 5F 12378 | 405C1R5 | | 7.37e-2 | ng/dscm 7%O2 | 1.33e-8 lbs/hr | CE7%O2 |
| 5F 23478 | 405C1R1 | | 1.44e-1 | ng/dscm 7%O2 | 2.73e-8 lbs/hr | CE7%O2 |
| 5F 23478 | 405C1R2 | | 4.94e-2 | ng/dscm 7%O2 | 1.02e-8 lbs/hr | CE7%O2 |
| 5F 23478 | 405C1R3 | | 8.03e-2 | ng/dscm 7%O2 | 1.48e-8 lbs/hr | CE7%O2 |
| 5F 23478 | 405C1R4 | | 9.44e-2 | ng/dscm 7%O2 | 1.78e-8 lbs/hr | CE7%O2 |
| 5F 23478 | 405C1R5 | | 9.83e-2 | ng/dscm 7%O2 | 1.77e-8 lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-----------|---------|----|-----------|---------|------|-----------|--------|--------|
| 5F Other | 405C1R1 | | 1.71e+0 | ng/dscm | 7%O2 | 3.23e-7 | lbs/hr | OCE |
| 5F Other | 405C1R2 | | 4.09e-1 | ng/dscm | 7%O2 | 8.45e-8 | lbs/hr | OCE |
| 5F Other | 405C1R3 | | 4.02e-1 | ng/dscm | 7%O2 | 7.38e-8 | lbs/hr | OCE |
| 5F Other | 405C1R4 | | 7.79e-1 | ng/dscm | 7%O2 | 1.47e-7 | lbs/hr | OCE |
| 5F Other | 405C1R5 | | 8.93e-1 | ng/dscm | 7%O2 | 1.61e-7 | lbs/hr | OCE |
| 5F Total | 405C1R1 | | 1.97e+0 | ng/dscm | 7%O2 | 3.74e-7 | lbs/hr | CE7%O2 |
| 5F Total | 405C1R2 | | 4.94e-1 | ng/dscm | 7%O2 | 1.02e-7 | lbs/hr | CE7%O2 |
| 5F Total | 405C1R3 | | 5.30e-1 | ng/dscm | 7%O2 | 9.74e-8 | lbs/hr | CE7%O2 |
| 5F Total | 405C1R4 | | 9.44e-1 | ng/dscm | 7%O2 | 1.78e-7 | lbs/hr | CE7%O2 |
| 5F Total | 405C1R5 | | 1.07e+0 | ng/dscm | 7%O2 | 1.92e-7 | lbs/hr | CE7%O2 |
| 6D 123478 | 405C1R1 | ND | 2.27e-2 | ng/dscm | 7%O2 | 4.31e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 405C1R2 | ND | 7.05e-3 | ng/dscm | 7%O2 | 1.46e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 405C1R3 | ND | 8.03e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 6D 123478 | 405C1R4 | | 3.15e-3 | ng/dscm | 7%O2 | 5.93e-10 | lbs/hr | CE7%O2 |
| 6D 123478 | 405C1R5 | ND | 6.56e-3 | ng/dscm | 7%O2 | 1.18e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 405C1R1 | ND | 1.52e-2 | ng/dscm | 7%O2 | 2.88e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 405C1R2 | | 5.64e-3 | ng/dscm | 7%O2 | 1.17e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 405C1R3 | ND | 6.43e-3 | ng/dscm | 7%O2 | 1.18e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 405C1R4 | | 5.51e-3 | ng/dscm | 7%O2 | 1.04e-9 | lbs/hr | CE7%O2 |
| 6D 123678 | 405C1R5 | | 5.74e-3 | ng/dscm | 7%O2 | 1.03e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 405C1R1 | ND | 1.52e-2 | ng/dscm | 7%O2 | 2.88e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 405C1R2 | ND | 5.64e-3 | ng/dscm | 7%O2 | 1.17e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 405C1R3 | ND | 8.03e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 6D 123789 | 405C1R4 | ND | 3.93e-3 | ng/dscm | 7%O2 | 7.41e-10 | lbs/hr | CE7%O2 |
| 6D 123789 | 405C1R5 | | 1.64e-2 | ng/dscm | 7%O2 | 2.95e-9 | lbs/hr | CE7%O2 |
| 6D Other | 405C1R1 | | 8.34e-2 | ng/dscm | 7%O2 | 1.58e-8 | lbs/hr | OCE |
| 6D Other | 405C1R2 | | 5.22e-2 | ng/dscm | 7%O2 | 1.08e-8 | lbs/hr | OCE |
| 6D Other | 405C1R3 | | 9.00e-2 | ng/dscm | 7%O2 | 1.65e-8 | lbs/hr | OCE |
| 6D Other | 405C1R4 | | 7.40e-2 | ng/dscm | 7%O2 | 1.39e-8 | lbs/hr | OCE |
| 6D Other | 405C1R5 | | 1.19e-1 | ng/dscm | 7%O2 | 2.14e-8 | lbs/hr | OCE |
| 6D Total | 405C1R1 | | 1.36e-1 | ng/dscm | 7%O2 | 2.59e-8 | lbs/hr | CE7%O2 |
| 6D Total | 405C1R2 | | 7.05e-2 | ng/dscm | 7%O2 | 1.46e-8 | lbs/hr | CE7%O2 |
| 6D Total | 405C1R3 | | 1.12e-1 | ng/dscm | 7%O2 | 2.07e-8 | lbs/hr | CE7%O2 |
| 6D Total | 405C1R4 | | 8.65e-2 | ng/dscm | 7%O2 | 1.63e-8 | lbs/hr | CE7%O2 |
| 6D Total | 405C1R5 | | 1.47e-1 | ng/dscm | 7%O2 | 2.66e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 405C1R1 | | 5.31e-2 | ng/dscm | 7%O2 | 1.01e-8 | lbs/hr | CE7%O2 |
| 6F 123478 | 405C1R2 | | 2.12e-2 | ng/dscm | 7%O2 | 4.37e-9 | lbs/hr | CE7%O2 |
| 6F 123478 | 405C1R3 | | 3.21e-2 | ng/dscm | 7%O2 | 5.90e-9 | lbs/hr | CE7%O2 |
| 6F 123478 | 405C1R4 | | 3.15e-2 | ng/dscm | 7%O2 | 5.93e-9 | lbs/hr | CE7%O2 |
| 6F 123478 | 405C1R5 | | 3.28e-2 | ng/dscm | 7%O2 | 5.90e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 405C1R1 | | 3.03e-2 | ng/dscm | 7%O2 | 5.75e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 405C1R2 | ND | 1.41e-2 | ng/dscm | 7%O2 | 2.91e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 405C1R3 | | 1.61e-2 | ng/dscm | 7%O2 | 2.95e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 405C1R4 | | 1.57e-2 | ng/dscm | 7%O2 | 2.97e-9 | lbs/hr | CE7%O2 |
| 6F 123678 | 405C1R5 | | 1.64e-2 | ng/dscm | 7%O2 | 2.95e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 405C1R1 | ND | 1.52e-2 | ng/dscm | 7%O2 | 2.88e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 405C1R2 | ND | 3.53e-3 | ng/dscm | 7%O2 | 7.29e-10 | lbs/hr | CE7%O2 |
| 6F 123789 | 405C1R3 | ND | 6.43e-3 | ng/dscm | 7%O2 | 1.18e-9 | lbs/hr | CE7%O2 |
| 6F 123789 | 405C1R4 | ND | 3.93e-3 | ng/dscm | 7%O2 | 7.41e-10 | lbs/hr | CE7%O2 |
| 6F 123789 | 405C1R5 | ND | 6.56e-3 | ng/dscm | 7%O2 | 1.18e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 405C1R1 | | 3.79e-2 | ng/dscm | 7%O2 | 7.19e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 405C1R2 | | 1.41e-2 | ng/dscm | 7%O2 | 2.91e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 405C1R3 | | 2.41e-2 | ng/dscm | 7%O2 | 4.43e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 405C1R4 | | 2.36e-2 | ng/dscm | 7%O2 | 4.45e-9 | lbs/hr | CE7%O2 |
| 6F 234678 | 405C1R5 | ND | 2.46e-2 | ng/dscm | 7%O2 | 4.43e-9 | lbs/hr | CE7%O2 |
| 6F Other | 405C1R1 | | -6.78e-21 | ng/dscm | 7%O2 | -8.08e-28 | lbs/hr | OCE |
| 6F Other | 405C1R2 | | 3.17e-2 | ng/dscm | 7%O2 | 6.56e-9 | lbs/hr | OCE |
| 6F Other | 405C1R3 | | 4.18e-2 | ng/dscm | 7%O2 | 7.67e-9 | lbs/hr | OCE |
| 6F Other | 405C1R4 | | 8.26e-2 | ng/dscm | 7%O2 | 1.56e-8 | lbs/hr | OCE |
| 6F Other | 405C1R5 | | 5.90e-2 | ng/dscm | 7%O2 | 1.06e-8 | lbs/hr | OCE |
| 6F Total | 405C1R1 | | 1.36e-1 | ng/dscm | 7%O2 | 2.59e-8 | lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|-----------------|---------|----|----------|---------|------|-----------|--------|--------|
| 6F Total | 405C1R2 | | 8.46e-2 | ng/dscm | 7%O2 | 1.75e-8 | lbs/hr | CE7%O2 |
| 6F Total | 405C1R3 | | 1.20e-1 | ng/dscm | 7%O2 | 2.21e-8 | lbs/hr | CE7%O2 |
| 6F Total | 405C1R4 | | 1.57e-1 | ng/dscm | 7%O2 | 2.97e-8 | lbs/hr | CE7%O2 |
| 6F Total | 405C1R5 | | 1.39e-1 | ng/dscm | 7%O2 | 2.51e-8 | lbs/hr | CE7%O2 |
| 7D 1234678 | 405C1R1 | | 4.55e-2 | ng/dscm | 7%O2 | 8.63e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 405C1R2 | | 3.53e-2 | ng/dscm | 7%O2 | 7.29e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 405C1R3 | ND | 4.82e-2 | ng/dscm | 7%O2 | 8.85e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 405C1R4 | | 4.72e-2 | ng/dscm | 7%O2 | 8.90e-9 | lbs/hr | CE7%O2 |
| 7D 1234678 | 405C1R5 | | 4.10e-2 | ng/dscm | 7%O2 | 7.38e-9 | lbs/hr | CE7%O2 |
| 7D Other | 405C1R1 | | 0.00e+0 | | | 0.00e+0 | | OCE |
| 7D Other | 405C1R2 | | 2.82e-2 | ng/dscm | 7%O2 | 5.83e-9 | lbs/hr | OCE |
| 7D Other | 405C1R3 | | 4.02e-2 | ng/dscm | 7%O2 | 7.38e-9 | lbs/hr | OCE |
| 7D Other | 405C1R4 | | 3.15e-2 | ng/dscm | 7%O2 | 5.93e-9 | lbs/hr | OCE |
| 7D Other | 405C1R5 | | 4.10e-2 | ng/dscm | 7%O2 | 7.38e-9 | lbs/hr | OCE |
| 7D Total | 405C1R1 | | 4.55e-2 | ng/dscm | 7%O2 | 8.63e-9 | lbs/hr | CE7%O2 |
| 7D Total | 405C1R2 | | 6.35e-2 | ng/dscm | 7%O2 | 1.31e-8 | lbs/hr | CE7%O2 |
| 7D Total | 405C1R3 | ND | 8.83e-2 | ng/dscm | 7%O2 | 1.62e-8 | lbs/hr | CE7%O2 |
| 7D Total | 405C1R4 | | 7.87e-2 | ng/dscm | 7%O2 | 1.48e-8 | lbs/hr | CE7%O2 |
| 7D Total | 405C1R5 | | 8.19e-2 | ng/dscm | 7%O2 | 1.48e-8 | lbs/hr | CE7%O2 |
| 7F 1234678 | 405C1R1 | ND | 7.58e-3 | ng/dscm | 7%O2 | 1.44e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 405C1R2 | ND | 2.12e-3 | ng/dscm | 7%O2 | 4.37e-10 | lbs/hr | CE7%O2 |
| 7F 1234678 | 405C1R3 | ND | 7.23e-3 | ng/dscm | 7%O2 | 1.33e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 405C1R4 | | 7.87e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 7F 1234678 | 405C1R5 | ND | 4.10e-3 | ng/dscm | 7%O2 | 7.38e-10 | lbs/hr | CE7%O2 |
| 7F 1234789 | 405C1R1 | ND | 1.52e-2 | ng/dscm | 7%O2 | 2.88e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 405C1R2 | ND | 5.64e-3 | ng/dscm | 7%O2 | 1.17e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 405C1R3 | ND | 8.03e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 7F 1234789 | 405C1R4 | ND | 3.93e-3 | ng/dscm | 7%O2 | 7.41e-10 | lbs/hr | CE7%O2 |
| 7F 1234789 | 405C1R5 | ND | 8.19e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 7F Other | 405C1R1 | | -1.52e-2 | ng/dscm | 7%O2 | -2.88e-9 | lbs/hr | OCE |
| 7F Other | 405C1R2 | | -4.23e-3 | ng/dscm | 7%O2 | -8.74e-10 | lbs/hr | OCE |
| 7F Other | 405C1R3 | | -7.23e-3 | ng/dscm | 7%O2 | -1.33e-9 | lbs/hr | OCE |
| 7F Other | 405C1R4 | | 3.93e-3 | ng/dscm | 7%O2 | 7.41e-10 | lbs/hr | OCE |
| 7F Other | 405C1R5 | | -5.74e-3 | ng/dscm | 7%O2 | -1.03e-9 | lbs/hr | OCE |
| 7F Total | 405C1R1 | ND | 7.58e-3 | ng/dscm | 7%O2 | 1.44e-9 | lbs/hr | CE7%O2 |
| 7F Total | 405C1R2 | ND | 3.53e-3 | ng/dscm | 7%O2 | 7.29e-10 | lbs/hr | CE7%O2 |
| 7F Total | 405C1R3 | ND | 8.03e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 7F Total | 405C1R4 | | 1.57e-2 | ng/dscm | 7%O2 | 2.97e-9 | lbs/hr | CE7%O2 |
| 7F Total | 405C1R5 | ND | 6.56e-3 | ng/dscm | 7%O2 | 1.18e-9 | lbs/hr | CE7%O2 |
| 8D | 405C1R1 | | 4.93e-1 | ng/dscm | 7%O2 | 9.34e-8 | lbs/hr | CE7%O2 |
| 8D | 405C1R2 | | 4.23e-1 | ng/dscm | 7%O2 | 8.74e-8 | lbs/hr | CE7%O2 |
| 8D | 405C1R3 | | 5.38e-1 | ng/dscm | 7%O2 | 9.89e-8 | lbs/hr | CE7%O2 |
| 8D | 405C1R4 | | 4.17e-1 | ng/dscm | 7%O2 | 7.86e-8 | lbs/hr | CE7%O2 |
| 8D | 405C1R5 | | 4.26e-1 | ng/dscm | 7%O2 | 7.67e-8 | lbs/hr | CE7%O2 |
| 8F | 405C1R1 | ND | 3.03e-2 | ng/dscm | 7%O2 | 5.75e-9 | lbs/hr | CE7%O2 |
| 8F | 405C1R2 | ND | 1.41e-2 | ng/dscm | 7%O2 | 2.91e-9 | lbs/hr | CE7%O2 |
| 8F | 405C1R3 | ND | 1.61e-2 | ng/dscm | 7%O2 | 2.95e-9 | lbs/hr | CE7%O2 |
| 8F | 405C1R4 | ND | 7.87e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| 8F | 405C1R5 | ND | 8.19e-3 | ng/dscm | 7%O2 | 1.48e-9 | lbs/hr | CE7%O2 |
| TEQ | 405C1R1 | | 2.80e-1 | ng/dscm | 7%O2 | 5.31e-8 | lbs/hr | CCET |
| TEQ | 405C1R2 | | 9.86e-2 | ng/dscm | 7%O2 | 2.04e-8 | lbs/hr | CCET |
| TEQ | 405C1R3 | | 1.29e-1 | ng/dscm | 7%O2 | 2.38e-8 | lbs/hr | CCET |
| TEQ | 405C1R4 | | 1.51e-1 | ng/dscm | 7%O2 | 2.84e-8 | lbs/hr | CCET |
| TEQ | 405C1R5 | | 1.75e-1 | ng/dscm | 7%O2 | 3.16e-8 | lbs/hr | CCET |
| Total PCDD/PCDF | 405C1R1 | | 1.63e+1 | ng/dscm | 7%O2 | 3.08e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 405C1R2 | | 4.96e+0 | ng/dscm | 7%O2 | 1.02e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 405C1R3 | | 5.94e+0 | ng/dscm | 7%O2 | 1.09e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 405C1R4 | | 6.35e+0 | ng/dscm | 7%O2 | 1.20e-6 | lbs/hr | CCET |
| Total PCDD/PCDF | 405C1R5 | | 8.64e+0 | ng/dscm | 7%O2 | 1.56e-6 | lbs/hr | CCET |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

7. Category: Halogens

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc |
|--------------|-----------|---------------|---------|-----------|----------------|--------|
| Chlorine | 405C1R1 | ND | 3.48e-1 | ppmv 7%O2 | 1.94e-1 lbs/hr | CC7%O2 |
| Chlorine | 405C1R2 | ND | 3.66e-1 | ppmv 7%O2 | 2.22e-1 lbs/hr | CC7%O2 |
| Chlorine | 405C1R3 | ND | 3.50e-1 | ppmv 7%O2 | 1.89e-1 lbs/hr | CC7%O2 |
| Chlorine | 405C1R4 | ND | 4.37e-1 | ppmv 7%O2 | 2.42e-1 lbs/hr | CC7%O2 |
| Chlorine | 405C1R5 | ND | 4.44e-1 | ppmv 7%O2 | 2.35e-1 lbs/hr | CC7%O2 |
| HCl | 405C1R1 | | 2.34e+0 | ppmv 7%O2 | 6.70e-1 lbs/hr | CC7%O2 |
| HCl | 405C1R2 | | 1.87e+0 | ppmv 7%O2 | 5.83e-1 lbs/hr | CC7%O2 |
| HCl | 405C1R3 | | 2.27e+0 | ppmv 7%O2 | 6.30e-1 lbs/hr | CC7%O2 |
| HCl | 405C1R4 | | 2.47e+0 | ppmv 7%O2 | 7.04e-1 lbs/hr | CC7%O2 |
| HCl | 405C1R5 | | 3.11e+0 | ppmv 7%O2 | 8.46e-1 lbs/hr | CC7%O2 |

7. Category: Metals

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc |
|----------------|-----------|---------------|---------|--------------|----------------|--------|
| Antimony | 405C1R1 | ND | 2.43e+2 | ug/dscm 7%O2 | 4.60e-2 lbs/hr | CC7%O2 |
| Antimony | 405C1R2 | ND | 2.28e+2 | ug/dscm 7%O2 | 4.70e-2 lbs/hr | CC7%O2 |
| Antimony | 405C1R3 | ND | 2.51e+2 | ug/dscm 7%O2 | 4.60e-2 lbs/hr | CC7%O2 |
| Antimony | 405C1R4 | ND | 2.44e+2 | ug/dscm 7%O2 | 4.60e-2 lbs/hr | CC7%O2 |
| Antimony | 405C1R5 | ND | 2.56e+2 | ug/dscm 7%O2 | 4.60e-2 lbs/hr | CC7%O2 |
| Arsenic | 405C1R1 | ND | 1.64e+1 | ug/dscm 7%O2 | 3.10e-3 lbs/hr | CC7%O2 |
| Arsenic | 405C1R2 | ND | 1.55e+1 | ug/dscm 7%O2 | 3.20e-3 lbs/hr | CC7%O2 |
| Arsenic | 405C1R3 | ND | 1.69e+1 | ug/dscm 7%O2 | 3.10e-3 lbs/hr | CC7%O2 |
| Arsenic | 405C1R4 | ND | 1.65e+1 | ug/dscm 7%O2 | 3.10e-3 lbs/hr | CC7%O2 |
| Arsenic | 405C1R5 | ND | 1.72e+1 | ug/dscm 7%O2 | 3.10e-3 lbs/hr | CC7%O2 |
| Barium | 405C1R1 | ND | 2.38e+2 | ug/dscm 7%O2 | 4.50e-2 lbs/hr | CC7%O2 |
| Barium | 405C1R2 | ND | 3.29e+2 | ug/dscm 7%O2 | 6.80e-2 lbs/hr | CC7%O2 |
| Barium | 405C1R3 | | 1.36e+3 | ug/dscm 7%O2 | 2.50e-1 lbs/hr | CC7%O2 |
| Barium | 405C1R4 | ND | 2.39e+2 | ug/dscm 7%O2 | 4.50e-2 lbs/hr | CC7%O2 |
| Barium | 405C1R5 | ND | 2.50e+2 | ug/dscm 7%O2 | 4.50e-2 lbs/hr | CC7%O2 |
| Beryllium | 405C1R1 | ND | 5.28e-1 | ug/dscm 7%O2 | 1.00e-4 lbs/hr | CC7%O2 |
| Beryllium | 405C1R2 | ND | 4.85e-1 | ug/dscm 7%O2 | 1.00e-4 lbs/hr | CC7%O2 |
| Beryllium | 405C1R3 | ND | 5.45e-1 | ug/dscm 7%O2 | 1.00e-4 lbs/hr | CC7%O2 |
| Beryllium | 405C1R4 | ND | 5.31e-1 | ug/dscm 7%O2 | 1.00e-4 lbs/hr | CC7%O2 |
| Beryllium | 405C1R5 | ND | 5.56e-1 | ug/dscm 7%O2 | 1.00e-4 lbs/hr | CC7%O2 |
| Cadmium | 405C1R1 | | 2.80e+1 | ug/dscm 7%O2 | 5.30e-3 lbs/hr | CC7%O2 |
| Cadmium | 405C1R2 | ND | 2.96e+1 | ug/dscm 7%O2 | 6.10e-3 lbs/hr | CC7%O2 |
| Cadmium | 405C1R3 | ND | 2.45e+1 | ug/dscm 7%O2 | 4.50e-3 lbs/hr | CC7%O2 |
| Cadmium | 405C1R4 | | 4.94e+1 | ug/dscm 7%O2 | 9.30e-3 lbs/hr | CC7%O2 |
| Cadmium | 405C1R5 | ND | 7.78e+1 | ug/dscm 7%O2 | 1.40e-2 lbs/hr | CC7%O2 |
| Chromium | 405C1R1 | ND | 2.11e+1 | ug/dscm 7%O2 | 4.00e-3 lbs/hr | CC7%O2 |
| Chromium | 405C1R2 | ND | 2.33e+1 | ug/dscm 7%O2 | 4.80e-3 lbs/hr | CC7%O2 |
| Chromium | 405C1R3 | ND | 1.85e+1 | ug/dscm 7%O2 | 3.40e-3 lbs/hr | CC7%O2 |
| Chromium | 405C1R4 | ND | 7.44e+1 | ug/dscm 7%O2 | 1.40e-2 lbs/hr | CC7%O2 |
| Chromium | 405C1R5 | ND | 7.78e+1 | ug/dscm 7%O2 | 1.40e-2 lbs/hr | CC7%O2 |
| Chromium (Hex) | 405C1R1 | | 1.35e+1 | ug/dscm 7%O2 | 2.55e-3 lbs/hr | CC7%O2 |
| Chromium (Hex) | 405C1R2 | | 9.21e+0 | ug/dscm 7%O2 | 1.90e-3 lbs/hr | CC7%O2 |
| Chromium (Hex) | 405C1R3 | | 1.14e+1 | ug/dscm 7%O2 | 2.09e-3 lbs/hr | CC7%O2 |
| Chromium (Hex) | 405C1R4 | | 6.06e+0 | ug/dscm 7%O2 | 1.14e-3 lbs/hr | CC7%O2 |
| Chromium (Hex) | 405C1R5 | | 7.45e+0 | ug/dscm 7%O2 | 1.34e-3 lbs/hr | CC7%O2 |
| Lead | 405C1R1 | ND | 8.98e+2 | ug/dscm 7%O2 | 1.70e-1 lbs/hr | CC7%O2 |
| Lead | 405C1R2 | ND | 9.21e+2 | ug/dscm 7%O2 | 1.90e-1 lbs/hr | CC7%O2 |
| Lead | 405C1R3 | ND | 8.72e+2 | ug/dscm 7%O2 | 1.60e-1 lbs/hr | CC7%O2 |
| Lead | 405C1R4 | | 1.12e+3 | ug/dscm 7%O2 | 2.10e-1 lbs/hr | CC7%O2 |
| Lead | 405C1R5 | ND | 1.83e+3 | ug/dscm 7%O2 | 3.30e-1 lbs/hr | CC7%O2 |
| Mercury | 405C1R1 | ND | 2.59e+1 | ug/dscm 7%O2 | 4.90e-3 lbs/hr | CC7%O2 |
| Mercury | 405C1R2 | ND | 2.62e+1 | ug/dscm 7%O2 | 5.40e-3 lbs/hr | CC7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|----------|---------|----|---------|---------|------|---------|--------|--------|
| Mercury | 405C1R3 | ND | 1.20e+1 | ug/dscm | 7%O2 | 2.20e-3 | lbs/hr | CC7%O2 |
| Mercury | 405C1R4 | ND | 2.02e+1 | ug/dscm | 7%O2 | 3.80e-3 | lbs/hr | CC7%O2 |
| Mercury | 405C1R5 | ND | 2.00e+1 | ug/dscm | 7%O2 | 3.60e-3 | lbs/hr | CC7%O2 |
| Silver | 405C1R1 | ND | 2.11e+2 | ug/dscm | 7%O2 | 4.00e-2 | lbs/hr | CC7%O2 |
| Silver | 405C1R2 | ND | 3.29e+0 | ug/dscm | 7%O2 | 6.80e-4 | lbs/hr | CC7%O2 |
| Silver | 405C1R3 | ND | 7.08e+0 | ug/dscm | 7%O2 | 1.30e-3 | lbs/hr | CC7%O2 |
| Silver | 405C1R4 | ND | 1.17e+1 | ug/dscm | 7%O2 | 2.20e-3 | lbs/hr | CC7%O2 |
| Silver | 405C1R5 | ND | 7.23e+0 | ug/dscm | 7%O2 | 1.30e-3 | lbs/hr | CC7%O2 |
| Thallium | 405C1R1 | ND | 2.43e+2 | ug/dscm | 7%O2 | 4.60e-2 | lbs/hr | CC7%O2 |
| Thallium | 405C1R2 | ND | 2.28e+2 | ug/dscm | 7%O2 | 4.70e-2 | lbs/hr | CC7%O2 |
| Thallium | 405C1R3 | ND | 2.56e+2 | ug/dscm | 7%O2 | 4.70e-2 | lbs/hr | CC7%O2 |
| Thallium | 405C1R4 | ND | 2.13e+1 | ug/dscm | 7%O2 | 4.00e-3 | lbs/hr | CC7%O2 |
| Thallium | 405C1R5 | ND | 4.06e+1 | ug/dscm | 7%O2 | 7.30e-3 | lbs/hr | CC7%O2 |

7. Category: PAH

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|----------------|-----------|----------------------|----------------|--------|
| Acenaphthylene | 405C2R1 | 2.53e+4 ng/dscm 7%O2 | 4.36e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 405C2R2 | 2.47e+4 ng/dscm 7%O2 | 4.83e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 405C2R3 | 2.92e+4 ng/dscm 7%O2 | 5.69e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 405C2R4 | 3.70e+4 ng/dscm 7%O2 | 8.63e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 405C2R5 | 1.93e+4 ng/dscm 7%O2 | 3.39e-3 lbs/hr | CE7%O2 |
| Acenaphthylene | 405C2R6 | 3.39e+4 ng/dscm 7%O2 | 6.10e-3 lbs/hr | CE7%O2 |
| Anthracene | 405C2R1 | 7.03e+2 ng/dscm 7%O2 | 1.21e-4 lbs/hr | CE7%O2 |
| Anthracene | 405C2R2 | 3.28e+3 ng/dscm 7%O2 | 6.43e-4 lbs/hr | CE7%O2 |
| Anthracene | 405C2R3 | 7.39e+2 ng/dscm 7%O2 | 1.44e-4 lbs/hr | CE7%O2 |
| Anthracene | 405C2R4 | 1.17e+3 ng/dscm 7%O2 | 2.73e-4 lbs/hr | CE7%O2 |
| Anthracene | 405C2R6 | 9.78e+2 ng/dscm 7%O2 | 1.76e-4 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R1 | 7.85e+3 ng/dscm 7%O2 | 1.35e-3 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R2 | 1.06e+4 ng/dscm 7%O2 | 2.07e-3 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R3 | 9.77e+3 ng/dscm 7%O2 | 1.90e-3 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R4 | 1.07e+4 ng/dscm 7%O2 | 2.49e-3 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R5 | 6.96e+3 ng/dscm 7%O2 | 1.22e-3 lbs/hr | CE7%O2 |
| Fluoranthene | 405C2R6 | 1.06e+4 ng/dscm 7%O2 | 1.90e-3 lbs/hr | CE7%O2 |
| Fluorene | 405C2R1 | 8.93e+2 ng/dscm 7%O2 | 1.54e-4 lbs/hr | CE7%O2 |
| Fluorene | 405C2R3 | 1.17e+3 ng/dscm 7%O2 | 2.28e-4 lbs/hr | CE7%O2 |
| Fluorene | 405C2R4 | 1.22e+3 ng/dscm 7%O2 | 2.86e-4 lbs/hr | CE7%O2 |
| Fluorene | 405C2R5 | 9.16e+2 ng/dscm 7%O2 | 1.61e-4 lbs/hr | CE7%O2 |
| Fluorene | 405C2R6 | 1.30e+3 ng/dscm 7%O2 | 2.34e-4 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R1 | 1.62e+5 ng/dscm 7%O2 | 2.79e-2 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R2 | 1.97e+5 ng/dscm 7%O2 | 3.85e-2 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R3 | 1.74e+5 ng/dscm 7%O2 | 3.38e-2 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R4 | 1.46e+5 ng/dscm 7%O2 | 3.41e-2 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R5 | 1.70e+5 ng/dscm 7%O2 | 2.98e-2 lbs/hr | CE7%O2 |
| Naphthalene | 405C2R6 | 1.97e+5 ng/dscm 7%O2 | 3.54e-2 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R1 | 2.90e+4 ng/dscm 7%O2 | 4.99e-3 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R2 | 3.13e+4 ng/dscm 7%O2 | 6.13e-3 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R3 | 3.72e+4 ng/dscm 7%O2 | 7.24e-3 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R4 | 3.61e+4 ng/dscm 7%O2 | 8.42e-3 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R5 | 2.90e+4 ng/dscm 7%O2 | 5.08e-3 lbs/hr | CE7%O2 |
| Phenanthrene | 405C2R6 | 4.40e+4 ng/dscm 7%O2 | 7.91e-3 lbs/hr | CE7%O2 |
| Pyrene | 405C2R1 | 6.57e+3 ng/dscm 7%O2 | 1.13e-3 lbs/hr | CE7%O2 |
| Pyrene | 405C2R3 | 7.53e+3 ng/dscm 7%O2 | 1.46e-3 lbs/hr | CE7%O2 |
| Pyrene | 405C2R4 | 9.47e+3 ng/dscm 7%O2 | 2.21e-3 lbs/hr | CE7%O2 |
| Pyrene | 405C2R5 | 5.24e+3 ng/dscm 7%O2 | 9.19e-4 lbs/hr | CE7%O2 |
| Pyrene | 405C2R6 | 7.16e+3 ng/dscm 7%O2 | 1.29e-3 lbs/hr | CE7%O2 |

7. Category: Particulate

Analysis:

| 8. Substance | 9. Run ID | Concentration | Mass Rate | Calc |
|--------------|-----------|---------------|-----------|------|
|--------------|-----------|---------------|-----------|------|

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | |
|-------------|---------|---------|---------|------|---------|--------|--------|
| Particulate | 405C1R1 | 1.61e-2 | gr/dscf | 7%O2 | 6.97e+0 | lbs/hr | CC7%O2 |
| Particulate | 405C1R2 | 2.20e-2 | gr/dscf | 7%O2 | 1.04e+1 | lbs/hr | CC7%O2 |
| Particulate | 405C1R3 | 1.73e-2 | gr/dscf | 7%O2 | 7.25e+0 | lbs/hr | CC7%O2 |
| Particulate | 405C1R4 | 6.54e-2 | gr/dscf | 7%O2 | 2.82e+1 | lbs/hr | CC7%O2 |
| Particulate | 405C1R5 | 5.62e-2 | gr/dscf | 7%O2 | 2.31e+1 | lbs/hr | CC7%O2 |

7. Category: SVOC

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | Calc | |
|---------------------------|-----------|---------------|---------|---------|-----------|----------------|--------|
| 1,2,4-Trichlorobenzene | 405C2R1 | ND | 1.46e+2 | ng/dscm | 7%O2 | 2.51e-5 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 405C2R2 | ND | 6.63e+2 | ng/dscm | 7%O2 | 1.30e-4 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 405C2R3 | ND | 1.43e+2 | ng/dscm | 7%O2 | 2.78e-5 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 405C2R4 | ND | 1.19e+2 | ng/dscm | 7%O2 | 2.78e-5 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 405C2R5 | ND | 1.59e+2 | ng/dscm | 7%O2 | 2.78e-5 lbs/hr | CC7%O2 |
| 1,2,4-Trichlorobenzene | 405C2R6 | ND | 1.55e+2 | ng/dscm | 7%O2 | 2.78e-5 lbs/hr | CC7%O2 |
| 2,4,6-Trichlorophenol | 405C2R3 | | 4.88e+3 | ng/dscm | 7%O2 | 9.50e-4 lbs/hr | CE7%O2 |
| 2,4,6-Trichlorophenol | 405C2R4 | | 4.55e+3 | ng/dscm | 7%O2 | 1.06e-3 lbs/hr | CE7%O2 |
| 2-Chloronaphthalene | 405C2R1 | | 7.28e+2 | ng/dscm | 7%O2 | 1.25e-4 lbs/hr | CE7%O2 |
| 2-Chloronaphthalene | 405C2R3 | | 7.62e+2 | ng/dscm | 7%O2 | 1.48e-4 lbs/hr | CE7%O2 |
| 2-Chloronaphthalene | 405C2R4 | | 6.42e+2 | ng/dscm | 7%O2 | 1.50e-4 lbs/hr | CE7%O2 |
| 2-Chlorophenol | 405C2R1 | | 3.67e+3 | ng/dscm | 7%O2 | 6.33e-4 lbs/hr | CE7%O2 |
| 2-Chlorophenol | 405C2R3 | | 4.90e+3 | ng/dscm | 7%O2 | 9.54e-4 lbs/hr | CE7%O2 |
| 2-Chlorophenol | 405C2R4 | | 3.03e+3 | ng/dscm | 7%O2 | 7.07e-4 lbs/hr | CE7%O2 |
| 2-Chlorophenol | 405C2R5 | | 3.77e+3 | ng/dscm | 7%O2 | 6.62e-4 lbs/hr | CE7%O2 |
| 2-Chlorophenol | 405C2R6 | | 4.22e+3 | ng/dscm | 7%O2 | 7.59e-4 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R1 | | 1.53e+5 | ng/dscm | 7%O2 | 2.63e-2 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R2 | | 1.26e+5 | ng/dscm | 7%O2 | 2.47e-2 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R3 | | 1.69e+5 | ng/dscm | 7%O2 | 3.28e-2 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R4 | | 1.45e+5 | ng/dscm | 7%O2 | 3.39e-2 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R5 | | 1.62e+5 | ng/dscm | 7%O2 | 2.84e-2 lbs/hr | CE7%O2 |
| 2-Methylnaphthalene | 405C2R6 | | 1.66e+5 | ng/dscm | 7%O2 | 2.98e-2 lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 405C2R3 | | 2.55e+3 | ng/dscm | 7%O2 | 4.96e-4 lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 405C2R4 | | 1.20e+3 | ng/dscm | 7%O2 | 2.81e-4 lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 405C2R5 | | 3.48e+3 | ng/dscm | 7%O2 | 6.11e-4 lbs/hr | CE7%O2 |
| 2-Methylphenol (o-Cresol) | 405C2R6 | | 3.80e+3 | ng/dscm | 7%O2 | 6.82e-4 lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 405C2R1 | | 3.89e+3 | ng/dscm | 7%O2 | 6.70e-4 lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 405C2R3 | | 3.70e+3 | ng/dscm | 7%O2 | 7.19e-4 lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 405C2R4 | | 2.23e+3 | ng/dscm | 7%O2 | 5.20e-4 lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 405C2R5 | | 5.86e+3 | ng/dscm | 7%O2 | 1.03e-3 lbs/hr | CE7%O2 |
| 4-Methylphenol (p-Cresol) | 405C2R6 | | 5.39e+3 | ng/dscm | 7%O2 | 9.68e-4 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R1 | | 2.27e+5 | ng/dscm | 7%O2 | 3.91e-2 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R2 | | 1.71e+5 | ng/dscm | 7%O2 | 3.34e-2 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R3 | | 2.31e+5 | ng/dscm | 7%O2 | 4.49e-2 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R4 | | 1.77e+5 | ng/dscm | 7%O2 | 4.13e-2 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R5 | | 2.39e+5 | ng/dscm | 7%O2 | 4.19e-2 lbs/hr | CE7%O2 |
| Benzoic acid | 405C2R6 | | 2.58e+5 | ng/dscm | 7%O2 | 4.63e-2 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R1 | | 2.15e+5 | ng/dscm | 7%O2 | 3.71e-2 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R2 | | 9.49e+5 | ng/dscm | 7%O2 | 1.86e-1 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R3 | | 4.37e+3 | ng/dscm | 7%O2 | 8.49e-4 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R4 | | 1.65e+5 | ng/dscm | 7%O2 | 3.84e-2 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R5 | | 2.75e+5 | ng/dscm | 7%O2 | 4.82e-2 lbs/hr | CE7%O2 |
| bis(2-ethylxyl) Phthalate | 405C2R6 | | 4.95e+3 | ng/dscm | 7%O2 | 8.88e-4 lbs/hr | CE7%O2 |
| Butylbenzylphthalate | 405C2R1 | | 7.11e+2 | ng/dscm | 7%O2 | 1.23e-4 lbs/hr | CE7%O2 |
| Butylbenzylphthalate | 405C2R5 | | 7.66e+2 | ng/dscm | 7%O2 | 1.34e-4 lbs/hr | CE7%O2 |
| Butylbenzylphthalate | 405C2R6 | | 1.09e+3 | ng/dscm | 7%O2 | 1.97e-4 lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 405C2R1 | | 8.89e+3 | ng/dscm | 7%O2 | 1.53e-3 lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 405C2R2 | | 8.18e+3 | ng/dscm | 7%O2 | 1.60e-3 lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 405C2R3 | | 8.57e+3 | ng/dscm | 7%O2 | 1.67e-3 lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 405C2R4 | | 2.08e+3 | ng/dscm | 7%O2 | 4.86e-4 lbs/hr | CE7%O2 |
| di-n-Butyl Phthalate | 405C2R5 | | 5.64e+3 | ng/dscm | 7%O2 | 9.89e-4 lbs/hr | CE7%O2 |

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

REGION: 7
 APC SYSTEM: ESP

| | | | | | | |
|------------------------|---------|---------|--------------|---------|--------|--------|
| di-n-Butyl Phthalate | 405C2R6 | 3.47e+4 | ng/dscm 7%O2 | 6.23e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R1 | 1.04e+4 | ng/dscm 7%O2 | 1.79e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R2 | 9.34e+3 | ng/dscm 7%O2 | 1.83e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R3 | 1.01e+4 | ng/dscm 7%O2 | 1.97e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R4 | 8.47e+3 | ng/dscm 7%O2 | 1.98e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R5 | 1.37e+4 | ng/dscm 7%O2 | 2.41e-3 | lbs/hr | CE7%O2 |
| Dibenzofuran | 405C2R6 | 1.42e+4 | ng/dscm 7%O2 | 2.55e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R1 | 7.88e+3 | ng/dscm 7%O2 | 1.36e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R2 | 2.48e+3 | ng/dscm 7%O2 | 4.85e-4 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R3 | 3.88e+4 | ng/dscm 7%O2 | 7.55e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R4 | 9.42e+3 | ng/dscm 7%O2 | 2.20e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R5 | 1.82e+4 | ng/dscm 7%O2 | 3.20e-3 | lbs/hr | CE7%O2 |
| Ethylbenzene | 405C2R6 | 1.46e+4 | ng/dscm 7%O2 | 2.63e-3 | lbs/hr | CE7%O2 |
| N-Nitrosodiphenylamine | 405C2R2 | 2.21e+5 | ng/dscm 7%O2 | 4.32e-2 | lbs/hr | CE7%O2 |
| N-Nitrosodiphenylamine | 405C2R4 | 1.58e+4 | ng/dscm 7%O2 | 3.67e-3 | lbs/hr | CE7%O2 |
| N-Nitrosodiphenylamine | 405C2R5 | 4.30e+3 | ng/dscm 7%O2 | 7.54e-4 | lbs/hr | CE7%O2 |
| Phenol | 405C2R1 | 1.22e+5 | ng/dscm 7%O2 | 2.10e-2 | lbs/hr | CE7%O2 |
| Phenol | 405C2R2 | 1.42e+5 | ng/dscm 7%O2 | 2.77e-2 | lbs/hr | CE7%O2 |
| Phenol | 405C2R3 | 1.28e+5 | ng/dscm 7%O2 | 2.49e-2 | lbs/hr | CE7%O2 |
| Phenol | 405C2R4 | 6.70e+4 | ng/dscm 7%O2 | 1.56e-2 | lbs/hr | CE7%O2 |
| Phenol | 405C2R5 | 1.49e+5 | ng/dscm 7%O2 | 2.62e-2 | lbs/hr | CE7%O2 |
| Phenol | 405C2R6 | 1.42e+5 | ng/dscm 7%O2 | 2.55e-2 | lbs/hr | CE7%O2 |

7. Category: THC & CO

Analysis:

| 8. Substance | 9. Run ID | Concentration | | Mass Rate | Calc | |
|--------------|-----------|---------------|-----------|-----------|--------|----|
| ∞ | 405C1R1 | 9.51e+2 | ppmv 7%O2 | 2.09e+2 | lbs/hr | CE |
| ∞ | 405C1R2 | 9.78e+2 | ppmv 7%O2 | 2.35e+2 | lbs/hr | CE |
| ∞ | 405C1R3 | 9.05e+2 | ppmv 7%O2 | 1.93e+2 | lbs/hr | CE |
| ∞ | 405C1R4 | 1.08e+3 | ppmv 7%O2 | 2.36e+2 | lbs/hr | CE |
| ∞ | 405C1R5 | 1.12e+3 | ppmv 7%O2 | 2.35e+2 | lbs/hr | CE |
| ∞ | 405C2R1 | 4.88e+2 | ppmv 7%O2 | 9.76e+1 | lbs/hr | CE |
| ∞ | 405C2R2 | 7.48e+2 | ppmv 7%O2 | 1.70e+2 | lbs/hr | CE |
| ∞ | 405C2R3 | 6.94e+2 | ppmv 7%O2 | 1.57e+2 | lbs/hr | CE |
| ∞ | 405C2R4 | 6.15e+2 | ppmv 7%O2 | 1.67e+2 | lbs/hr | CE |
| ∞ | 405C2R5 | 8.06e+2 | ppmv 7%O2 | 1.64e+2 | lbs/hr | CE |
| ∞ | 405C2R6 | 8.51e+2 | ppmv 7%O2 | 1.77e+2 | lbs/hr | CE |
| CO(MHRA) | 405C1R1 | 1.32e+3 | ppmv 7%O2 | 2.91e+2 | lbs/hr | CE |
| CO(MHRA) | 405C1R2 | 1.16e+3 | ppmv 7%O2 | 2.78e+2 | lbs/hr | CE |
| CO(MHRA) | 405C1R3 | 9.95e+2 | ppmv 7%O2 | 2.12e+2 | lbs/hr | CE |
| CO(MHRA) | 405C1R4 | 1.41e+3 | ppmv 7%O2 | 3.09e+2 | lbs/hr | CE |
| CO(MHRA) | 405C1R5 | 1.07e+3 | ppmv 7%O2 | 2.24e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R1 | 7.44e+2 | ppmv 7%O2 | 1.49e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R2 | 1.15e+3 | ppmv 7%O2 | 2.61e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R3 | 1.26e+3 | ppmv 7%O2 | 2.85e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R4 | 9.25e+2 | ppmv 7%O2 | 2.51e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R5 | 1.24e+3 | ppmv 7%O2 | 2.52e+2 | lbs/hr | CE |
| CO(MHRA) | 405C2R6 | 1.14e+3 | ppmv 7%O2 | 2.37e+2 | lbs/hr | CE |
| THC | 405C1R1 | 1.18e+1 | ppmv 7%O2 | 4.08e+0 | lbs/hr | CE |
| THC | 405C1R2 | 1.34e+1 | ppmv 7%O2 | 5.05e+0 | lbs/hr | CE |
| THC | 405C1R3 | 1.29e+1 | ppmv 7%O2 | 4.33e+0 | lbs/hr | CE |
| THC | 405C1R4 | 1.29e+1 | ppmv 7%O2 | 4.44e+0 | lbs/hr | CE |
| THC | 405C1R5 | 1.65e+1 | ppmv 7%O2 | 5.42e+0 | lbs/hr | CE |
| THC | 405C2R1 | 1.38e+1 | ppmv 7%O2 | 4.34e+0 | lbs/hr | CE |
| THC | 405C2R2 | 1.52e+1 | ppmv 7%O2 | 5.43e+0 | lbs/hr | CE |
| THC | 405C2R3 | 1.81e+1 | ppmv 7%O2 | 6.43e+0 | lbs/hr | CE |
| THC | 405C2R4 | 2.04e+1 | ppmv 7%O2 | 8.69e+0 | lbs/hr | CE |
| THC | 405C2R5 | 1.45e+1 | ppmv 7%O2 | 4.64e+0 | lbs/hr | CE |
| THC | 405C2R6 | 1.57e+1 | ppmv 7%O2 | 5.15e+0 | lbs/hr | CE |
| THC(MHRA) | 405C1R1 | 1.96e+1 | ppmv 7%O2 | 6.78e+0 | lbs/hr | CE |
| THC(MHRA) | 405C1R2 | 2.33e+1 | ppmv 7%O2 | 8.79e+0 | lbs/hr | CE |

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA ID: NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

| | | | | | | | |
|-----------|---------|---------|------|------|---------|--------|----|
| THC(MHRA) | 405C1R3 | 2.57e+1 | ppmv | 7%O2 | 8.62e+0 | lbs/hr | CE |
| THC(MHRA) | 405C1R4 | 1.66e+1 | ppmv | 7%O2 | 5.71e+0 | lbs/hr | CE |
| THC(MHRA) | 405C1R5 | 2.24e+1 | ppmv | 7%O2 | 7.36e+0 | lbs/hr | CE |
| THC(MHRA) | 405C2R1 | 1.91e+1 | ppmv | 7%O2 | 6.01e+0 | lbs/hr | CE |
| THC(MHRA) | 405C2R2 | 1.71e+1 | ppmv | 7%O2 | 6.11e+0 | lbs/hr | CE |
| THC(MHRA) | 405C2R3 | 2.53e+1 | ppmv | 7%O2 | 8.98e+0 | lbs/hr | CE |
| THC(MHRA) | 405C2R4 | 2.42e+1 | ppmv | 7%O2 | 1.03e+1 | lbs/hr | CE |
| THC(MHRA) | 405C2R5 | 1.85e+1 | ppmv | 7%O2 | 5.93e+0 | lbs/hr | CE |
| THC(MHRA) | 405C2R6 | 2.18e+1 | ppmv | 7%O2 | 7.15e+0 | lbs/hr | CE |

7. Category: VOC

Analysis:

| 8. Substance | 9. Run ID | Concentration | | | Mass Rate | | Calc | |
|-----------------------|-----------|---------------|---------|---------|-----------|---------|--------|--------|
| 1,1,1-Trichloroethane | 405C2R1 | ND | 3.92e+4 | ng/dscm | 7%O2 | 6.75e-3 | lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 405C2R2 | ND | 2.10e+4 | ng/dscm | 7%O2 | 4.10e-3 | lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 405C2R3 | ND | 9.53e+3 | ng/dscm | 7%O2 | 1.85e-3 | lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 405C2R4 | ND | 7.38e+3 | ng/dscm | 7%O2 | 1.72e-3 | lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 405C2R5 | ND | 4.53e+4 | ng/dscm | 7%O2 | 7.94e-3 | lbs/hr | CC7%O2 |
| 1,1,1-Trichloroethane | 405C2R6 | ND | 1.11e+4 | ng/dscm | 7%O2 | 1.98e-3 | lbs/hr | CC7%O2 |
| 1,1-Dichloroethene | 405C2R1 | | 3.01e+3 | ng/dscm | 7%O2 | 5.18e-4 | lbs/hr | CE7%O2 |
| 1,1-Dichloroethene | 405C2R5 | | 2.51e+3 | ng/dscm | 7%O2 | 4.40e-4 | lbs/hr | CE7%O2 |
| 1,1-Dichloroethene | 405C2R6 | | 4.77e+3 | ng/dscm | 7%O2 | 8.56e-4 | lbs/hr | CE7%O2 |
| Acetone | 405C2R1 | | 1.46e+5 | ng/dscm | 7%O2 | 2.51e-2 | lbs/hr | CE7%O2 |
| Acetone | 405C2R2 | | 1.76e+5 | ng/dscm | 7%O2 | 3.44e-2 | lbs/hr | CE7%O2 |
| Acetone | 405C2R3 | | 2.64e+5 | ng/dscm | 7%O2 | 5.13e-2 | lbs/hr | CE7%O2 |
| Acetone | 405C2R4 | | 1.96e+5 | ng/dscm | 7%O2 | 4.57e-2 | lbs/hr | CE7%O2 |
| Acetone | 405C2R5 | | 1.14e+5 | ng/dscm | 7%O2 | 2.00e-2 | lbs/hr | CE7%O2 |
| Acetone | 405C2R6 | | 1.82e+5 | ng/dscm | 7%O2 | 3.26e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R1 | | 1.74e+5 | ng/dscm | 7%O2 | 3.01e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R2 | | 1.67e+5 | ng/dscm | 7%O2 | 3.26e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R3 | | 1.86e+5 | ng/dscm | 7%O2 | 3.62e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R4 | | 1.81e+5 | ng/dscm | 7%O2 | 4.21e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R5 | | 2.99e+5 | ng/dscm | 7%O2 | 5.24e-2 | lbs/hr | CE7%O2 |
| Benzene | 405C2R6 | | 3.02e+5 | ng/dscm | 7%O2 | 5.42e-2 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R1 | | 4.80e+3 | ng/dscm | 7%O2 | 8.26e-4 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R2 | | 7.18e+3 | ng/dscm | 7%O2 | 1.41e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R3 | | 3.83e+4 | ng/dscm | 7%O2 | 7.45e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R4 | | 4.40e+3 | ng/dscm | 7%O2 | 1.03e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R5 | | 7.16e+3 | ng/dscm | 7%O2 | 1.26e-3 | lbs/hr | CE7%O2 |
| Bromoethane | 405C2R6 | | 6.17e+3 | ng/dscm | 7%O2 | 1.11e-3 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R1 | | 5.24e+4 | ng/dscm | 7%O2 | 9.02e-3 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R2 | | 5.27e+4 | ng/dscm | 7%O2 | 1.03e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R3 | | 7.24e+4 | ng/dscm | 7%O2 | 1.41e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R4 | | 4.56e+4 | ng/dscm | 7%O2 | 1.06e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R5 | | 8.78e+4 | ng/dscm | 7%O2 | 1.54e-2 | lbs/hr | CE7%O2 |
| Carbon disulfide | 405C2R6 | | 1.05e+5 | ng/dscm | 7%O2 | 1.88e-2 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R1 | | 1.25e+4 | ng/dscm | 7%O2 | 2.15e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R2 | | 5.70e+3 | ng/dscm | 7%O2 | 1.12e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R3 | | 1.11e+4 | ng/dscm | 7%O2 | 2.16e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R4 | | 1.31e+4 | ng/dscm | 7%O2 | 3.06e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R5 | | 2.25e+4 | ng/dscm | 7%O2 | 3.95e-3 | lbs/hr | CE7%O2 |
| Chlorobenzene | 405C2R6 | | 2.21e+4 | ng/dscm | 7%O2 | 3.97e-3 | lbs/hr | CE7%O2 |
| Chloroethane | 405C2R4 | | 1.41e+3 | ng/dscm | 7%O2 | 3.29e-4 | lbs/hr | CE7%O2 |
| Chloroethane | 405C2R5 | | 6.54e+3 | ng/dscm | 7%O2 | 1.15e-3 | lbs/hr | CE7%O2 |
| Chloroethane | 405C2R6 | | 6.92e+3 | ng/dscm | 7%O2 | 1.24e-3 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R1 | | 1.45e+5 | ng/dscm | 7%O2 | 2.49e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R2 | | 1.46e+5 | ng/dscm | 7%O2 | 2.86e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R3 | | 2.11e+5 | ng/dscm | 7%O2 | 4.11e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R4 | | 1.32e+5 | ng/dscm | 7%O2 | 3.07e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R5 | | 4.71e+5 | ng/dscm | 7%O2 | 8.27e-2 | lbs/hr | CE7%O2 |
| Chloromethane | 405C2R6 | | 3.12e+5 | ng/dscm | 7%O2 | 5.61e-2 | lbs/hr | CE7%O2 |

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SECTION 7: EMISSIONS ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY
 2. STATE: NE
 3. CITY: LOUISVILLE
 4. EP ID: 405 DEVICE NAME: KILN NO. 1

EPA NED007260672
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

| | | | | | | | | |
|------------------------|---------|---------|---------|---------|---------|---------|--------|--------|
| m,p-Xylene | 405C2R1 | 2.10e+4 | ng/dscm | 7%O2 | 3.62e-3 | lbs/hr | CE7%O2 | |
| m,p-Xylene | 405C2R2 | 5.70e+3 | ng/dscm | 7%O2 | 1.12e-3 | lbs/hr | CE7%O2 | |
| m,p-Xylene | 405C2R3 | 1.64e+4 | ng/dscm | 7%O2 | 3.20e-3 | lbs/hr | CE7%O2 | |
| m,p-Xylene | 405C2R4 | 1.53e+4 | ng/dscm | 7%O2 | 3.57e-3 | lbs/hr | CE7%O2 | |
| m,p-Xylene | 405C2R5 | 5.57e+4 | ng/dscm | 7%O2 | 9.78e-3 | lbs/hr | CE7%O2 | |
| m,p-Xylene | 405C2R6 | 4.55e+4 | ng/dscm | 7%O2 | 8.17e-3 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R1 | 3.16e+3 | ng/dscm | 7%O2 | 5.45e-4 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R2 | 4.79e+3 | ng/dscm | 7%O2 | 9.37e-4 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R3 | 1.94e+4 | ng/dscm | 7%O2 | 3.77e-3 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R4 | 6.23e+3 | ng/dscm | 7%O2 | 1.45e-3 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R5 | 1.57e+4 | ng/dscm | 7%O2 | 2.75e-3 | lbs/hr | CE7%O2 | |
| Methyl Ethyl Ketone | 405C2R6 | 2.88e+4 | ng/dscm | 7%O2 | 5.17e-3 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R1 | 1.04e+4 | ng/dscm | 7%O2 | 1.80e-3 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R2 | 1.55e+4 | ng/dscm | 7%O2 | 3.04e-3 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R3 | 2.05e+4 | ng/dscm | 7%O2 | 3.99e-3 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R4 | 9.98e+3 | ng/dscm | 7%O2 | 2.33e-3 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R5 | 2.80e+3 | ng/dscm | 7%O2 | 4.91e-4 | lbs/hr | CE7%O2 | |
| Methylene Chloride | 405C2R6 | 4.01e+3 | ng/dscm | 7%O2 | 7.21e-4 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R1 | 9.64e+3 | ng/dscm | 7%O2 | 1.66e-3 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R2 | 2.57e+3 | ng/dscm | 7%O2 | 5.03e-4 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R3 | 7.37e+3 | ng/dscm | 7%O2 | 1.43e-3 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R4 | 4.11e+3 | ng/dscm | 7%O2 | 9.59e-4 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R5 | 2.16e+4 | ng/dscm | 7%O2 | 3.78e-3 | lbs/hr | CE7%O2 | |
| o-Xylene | 405C2R6 | 1.78e+4 | ng/dscm | 7%O2 | 3.19e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R1 | 1.38e+4 | ng/dscm | 7%O2 | 2.37e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R2 | 1.02e+4 | ng/dscm | 7%O2 | 2.00e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R3 | 1.35e+4 | ng/dscm | 7%O2 | 2.62e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R4 | 2.24e+4 | ng/dscm | 7%O2 | 5.22e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R5 | 2.15e+4 | ng/dscm | 7%O2 | 3.78e-3 | lbs/hr | CE7%O2 | |
| Styrene | 405C2R6 | 2.64e+4 | ng/dscm | 7%O2 | 4.74e-3 | lbs/hr | CE7%O2 | |
| Tetrachloroethene | 405C2R1 | ND | 1.15e+3 | ng/dscm | 7%O2 | 1.98e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 405C2R2 | ND | 1.08e+3 | ng/dscm | 7%O2 | 2.12e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 405C2R3 | ND | 9.53e+2 | ng/dscm | 7%O2 | 1.85e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 405C2R4 | ND | 8.52e+2 | ng/dscm | 7%O2 | 1.98e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 405C2R5 | ND | 2.34e+3 | ng/dscm | 7%O2 | 4.10e-4 | lbs/hr | CC7%O2 |
| Tetrachloroethene | 405C2R6 | ND | 1.92e+3 | ng/dscm | 7%O2 | 3.44e-4 | lbs/hr | CC7%O2 |
| Toluene | 405C2R1 | 6.64e+4 | ng/dscm | 7%O2 | 1.14e-2 | lbs/hr | CE7%O2 | |
| Toluene | 405C2R2 | 3.03e+4 | ng/dscm | 7%O2 | 5.93e-3 | lbs/hr | CE7%O2 | |
| Toluene | 405C2R3 | 5.86e+4 | ng/dscm | 7%O2 | 1.14e-2 | lbs/hr | CE7%O2 | |
| Toluene | 405C2R4 | 6.19e+4 | ng/dscm | 7%O2 | 1.44e-2 | lbs/hr | CE7%O2 | |
| Toluene | 405C2R5 | 2.21e+5 | ng/dscm | 7%O2 | 3.88e-2 | lbs/hr | CE7%O2 | |
| Toluene | 405C2R6 | 1.43e+5 | ng/dscm | 7%O2 | 2.57e-2 | lbs/hr | CE7%O2 | |
| Trichloroethene | 405C2R5 | 1.03e+3 | ng/dscm | 7%O2 | 1.80e-4 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R1 | 2.62e+3 | ng/dscm | 7%O2 | 4.51e-4 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R2 | 1.56e+4 | ng/dscm | 7%O2 | 3.05e-3 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R3 | 7.66e+3 | ng/dscm | 7%O2 | 1.49e-3 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R4 | 3.84e+4 | ng/dscm | 7%O2 | 8.96e-3 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R5 | 5.95e+3 | ng/dscm | 7%O2 | 1.04e-3 | lbs/hr | CE7%O2 | |
| Trichlorofluoromethane | 405C2R6 | 8.21e+3 | ng/dscm | 7%O2 | 1.47e-3 | lbs/hr | CE7%O2 | |

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