

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM 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

5. Type: CLINKER

6. Description: PRODUCT

Group: DRY KILN (SEMI)

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	405C1R1	ND	1.00e+3 ug/g	8.80e+1 lbs/hr	CC
Chlorine	405C1R2	ND	1.00e+3 ug/g	8.80e+1 lbs/hr	CC
Chlorine	405C1R3	ND	1.00e+3 ug/g	8.80e+1 lbs/hr	CC
Chlorine	405C1R4	ND	1.00e+3 ug/g	8.80e+1 lbs/hr	CC
Chlorine	405C1R5	ND	1.00e+3 ug/g	8.80e+1 lbs/hr	CC
Chlorine	405C2R1	ND	1.00e+3 ug/g	9.20e+1 lbs/hr	CE
Chlorine	405C2R2	ND	1.00e+3 ug/g	9.20e+1 lbs/hr	CE
Chlorine	405C2R3	ND	1.00e+3 ug/g	9.20e+1 lbs/hr	CE
Chlorine	405C2R4	ND	1.00e+3 ug/g	9.20e+1 lbs/hr	CE
Chlorine	405C2R5	ND	1.00e+3 ug/g	9.00e+1 lbs/hr	CE
Chlorine	405C2R6	ND	1.00e+3 ug/g	9.00e+1 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	405C1R1	6.00e+0	ug/g	5.28e-1 lbs/hr	CE
Antimony	405C1R2	6.00e+0	ug/g	5.28e-1 lbs/hr	CE
Antimony	405C1R3	7.00e+0	ug/g	6.16e-1 lbs/hr	CE
Antimony	405C1R4	6.00e+0	ug/g	5.28e-1 lbs/hr	CE
Antimony	405C1R5	4.00e+0	ug/g	3.52e-1 lbs/hr	CE
Arsenic	405C1R1	4.40e+1	ug/g	3.87e+0 lbs/hr	CE
Arsenic	405C1R2	5.00e+1	ug/g	4.40e+0 lbs/hr	CE
Arsenic	405C1R3	2.00e+1	ug/g	1.76e+0 lbs/hr	CE
Arsenic	405C1R4	4.00e+1	ug/g	3.52e+0 lbs/hr	CE
Arsenic	405C1R5	5.30e+1	ug/g	4.66e+0 lbs/hr	CE
Barium	405C1R1	2.20e+2	ug/g	1.94e+1 lbs/hr	CE
Barium	405C1R2	2.20e+2	ug/g	1.94e+1 lbs/hr	CE
Barium	405C1R3	2.10e+2	ug/g	1.85e+1 lbs/hr	CE
Barium	405C1R4	2.10e+2	ug/g	1.85e+1 lbs/hr	CE
Barium	405C1R5	2.00e+2	ug/g	1.76e+1 lbs/hr	CE
Beryllium	405C1R1	1.00e+0	ug/g	8.80e-2 lbs/hr	CE
Beryllium	405C1R2	1.00e+0	ug/g	8.80e-2 lbs/hr	CE
Beryllium	405C1R3	1.10e+0	ug/g	9.68e-2 lbs/hr	CE
Beryllium	405C1R4	1.10e+0	ug/g	9.68e-2 lbs/hr	CE
Beryllium	405C1R5	1.00e+0	ug/g	4.00e-1 lbs/hr	CE
Cadmium	405C1R1	ND	4.00e-1 ug/g	3.52e-2 lbs/hr	CE
Cadmium	405C1R2	ND	4.00e-1 ug/g	3.52e-2 lbs/hr	CE
Cadmium	405C1R3	ND	4.00e-1 ug/g	3.52e-2 lbs/hr	CE
Cadmium	405C1R4	ND	4.00e-1 ug/g	3.52e-2 lbs/hr	CE
Cadmium	405C1R5	ND	4.00e-1 ug/g	3.52e-2 lbs/hr	CE
Chromium	405C1R1	2.50e+2	ug/g	2.20e+1 lbs/hr	CE
Chromium	405C1R2	2.80e+2	ug/g	2.46e+1 lbs/hr	CE
Chromium	405C1R3	1.50e+2	ug/g	1.32e+1 lbs/hr	CE
Chromium	405C1R4	2.20e+2	ug/g	1.94e+1 lbs/hr	CE
Chromium	405C1R5	2.60e+2	ug/g	2.29e+1 lbs/hr	CE
Lead	405C1R1	2.10e+1	ug/g	1.85e+0 lbs/hr	CE
Lead	405C1R2	2.00e+1	ug/g	1.76e+0 lbs/hr	CE
Lead	405C1R3	2.40e+1	ug/g	2.11e+0 lbs/hr	CE
Lead	405C1R4	1.80e+1	ug/g	1.58e+0 lbs/hr	CE
Lead	405C1R5	2.00e+1	ug/g	1.76e+0 lbs/hr	CE
Mercury	405C1R1	ND	2.00e-2 ug/g	1.76e-3 lbs/hr	CE
Mercury	405C1R2	ND	2.00e-2 ug/g	1.76e-3 lbs/hr	CE
Mercury	405C1R3	ND	2.00e-2 ug/g	1.76e-3 lbs/hr	CE
Mercury	405C1R4	ND	2.00e-2 ug/g	1.76e-3 lbs/hr	CE
Mercury	405C1R5	ND	2.00e-2 ug/g	1.76e-3 lbs/hr	CE
Silver	405C1R1	ND	1.00e+1 ug/g	8.80e-1 lbs/hr	CE
Silver	405C1R2	ND	1.00e+1 ug/g	8.80e-1 lbs/hr	CE
Silver	405C1R3	ND	1.00e+1 ug/g	8.80e-1 lbs/hr	CE
Silver	405C1R4	ND	1.00e+1 ug/g	8.80e-1 lbs/hr	CE
Silver	405C1R5	ND	1.00e+1 ug/g	8.80e-1 lbs/hr	CE
Thallium	405C1R1	ND	2.00e-1 ug/g	1.76e-2 lbs/hr	CE

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1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
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EPA ID: NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP  
 REGION: 7

Thallium	405C1R2	ND	2.00e-1	ug/g	1.76e-2	lbs/hr	CE
Thallium	405C1R3	ND	2.00e-1	ug/g	1.76e-2	lbs/hr	CE
Thallium	405C1R4	ND	2.00e-1	ug/g	1.76e-2	lbs/hr	CE
Thallium	405C1R5		2.00e-1	ug/g	1.76e-2	lbs/hr	CE

5. Type: ESP ASH

6. Description: NONRECYCLE  
 Group: DRY KILN (SEMI) Location: ESP Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	405C1R1	3.00e+4	ug/g	2.86e+2 lbs/hr	CE
Chlorine	405C1R2	3.71e+4	ug/g	2.58e+2 lbs/hr	CE
Chlorine	405C1R3	2.64e+4	ug/g	1.90e+1 lbs/hr	CE
Chlorine	405C1R4	3.09e+4	ug/g	1.54e+2 lbs/hr	CE
Chlorine	405C1R5	3.90e+4	ug/g	1.94e+2 lbs/hr	CE
Chlorine	405C2R1	4.00e+4	ug/g	3.01e+2 lbs/hr	CE
Chlorine	405C2R2	3.90e+4	ug/g	6.87e+2 lbs/hr	CE
Chlorine	405C2R3	3.60e+4	ug/g	3.20e+2 lbs/hr	CE
Chlorine	405C2R4	3.10e+4	ug/g	1.91e+2 lbs/hr	CE
Chlorine	405C2R5	2.60e+4	ug/g	2.17e+2 lbs/hr	CE
Chlorine	405C2R6	3.20e+4	ug/g	1.13e+2 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	405C1R1	ND	2.00e+1 ug/g	1.90e-1 lbs/hr	CE
Antimony	405C1R2	ND	2.00e+1 ug/g	1.39e-1 lbs/hr	CE
Antimony	405C1R3	ND	2.00e+1 ug/g	1.44e-2 lbs/hr	CE
Antimony	405C1R4	ND	2.00e+1 ug/g	9.96e-2 lbs/hr	CE
Antimony	405C1R5	ND	2.00e+1 ug/g	9.96e-2 lbs/hr	CE
Arsenic	405C1R1	6.60e+1	ug/g	6.28e-1 lbs/hr	CE
Arsenic	405C1R2	7.80e+1	ug/g	5.43e-1 lbs/hr	CE
Arsenic	405C1R3	4.90e+1	ug/g	3.53e-2 lbs/hr	CE
Arsenic	405C1R4	6.00e+1	ug/g	2.99e-1 lbs/hr	CE
Arsenic	405C1R5	7.60e+1	ug/g	3.78e-1 lbs/hr	CE
Barium	405C1R1	2.40e+2	ug/g	2.28e+0 lbs/hr	CE
Barium	405C1R2	2.40e+2	ug/g	1.67e+0 lbs/hr	CE
Barium	405C1R3	2.60e+2	ug/g	1.87e-1 lbs/hr	CE
Barium	405C1R4	2.30e+2	ug/g	1.15e+0 lbs/hr	CE
Barium	405C1R5	2.20e+2	ug/g	1.10e+0 lbs/hr	CE
Beryllium	405C1R1	2.00e+0	ug/g	1.90e-2 lbs/hr	CE
Beryllium	405C1R2	2.00e+0	ug/g	1.39e-2 lbs/hr	CE
Beryllium	405C1R3	2.00e+0	ug/g	1.44e-3 lbs/hr	CE
Beryllium	405C1R4	2.00e+0	ug/g	9.96e-3 lbs/hr	CE
Beryllium	405C1R5	3.00e+0	ug/g	1.49e-2 lbs/hr	CE
Cadmium	405C1R1	8.00e+1	ug/g	7.62e-1 lbs/hr	CE
Cadmium	405C1R2	8.40e+1	ug/g	5.85e-1 lbs/hr	CE
Cadmium	405C1R3	9.20e+1	ug/g	6.62e-2 lbs/hr	CE
Cadmium	405C1R4	8.80e+1	ug/g	4.38e-1 lbs/hr	CE
Cadmium	405C1R5	1.00e+2	ug/g	4.98e-1 lbs/hr	CE
Chromium	405C1R1	2.80e+2	ug/g	2.67e+0 lbs/hr	CE
Chromium	405C1R2	3.00e+2	ug/g	2.09e+0 lbs/hr	CE
Chromium	405C1R3	2.20e+2	ug/g	1.58e-1 lbs/hr	CE
Chromium	405C1R4	3.00e+2	ug/g	1.49e+0 lbs/hr	CE
Chromium	405C1R5	3.00e+2	ug/g	1.49e+0 lbs/hr	CE
Lead	405C1R1	2.50e+3	ug/g	2.38e+1 lbs/hr	CE
Lead	405C1R2	3.30e+3	ug/g	2.30e+1 lbs/hr	CE
Lead	405C1R3	2.80e+3	ug/g	2.02e+0 lbs/hr	CE
Lead	405C1R4	1.80e+3	ug/g	8.96e+0 lbs/hr	CE
Lead	405C1R5	2.40e+3	ug/g	1.20e+1 lbs/hr	CE
Mercury	405C1R1	9.40e-1	ug/g	8.95e-3 lbs/hr	CE
Mercury	405C1R2	1.20e+0	ug/g	8.35e-3 lbs/hr	CE
Mercury	405C1R3	2.70e-1	ug/g	1.94e-4 lbs/hr	CE
Mercury	405C1R4	5.50e-1	ug/g	2.74e-3 lbs/hr	CE
Mercury	405C1R5	3.60e-1	ug/g	1.79e-3 lbs/hr	CE

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EPA ID: NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP  
 REGION: 7

Silver	405C1R1	ND	1.00e+1	ug/g	9.52e-2	lbs/hr	CE
Silver	405C1R2	ND	1.00e+1	ug/g	6.96e-2	lbs/hr	CE
Silver	405C1R3	ND	1.00e+1	ug/g	7.20e-3	lbs/hr	CE
Silver	405C1R4	ND	1.00e+1	ug/g	4.98e-2	lbs/hr	CE
Silver	405C1R5	ND	1.00e+1	ug/g	4.98e-2	lbs/hr	CE
Thallium	405C1R1	ND	2.00e+1	ug/g	1.90e-1	lbs/hr	CE
Thallium	405C1R2	ND	2.00e+1	ug/g	1.39e-1	lbs/hr	CE
Thallium	405C1R3	ND	2.00e+1	ug/g	1.44e-2	lbs/hr	CE
Thallium	405C1R4	ND	2.00e+1	ug/g	9.96e-2	lbs/hr	CE
Thallium	405C1R5	ND	2.00e+1	ug/g	9.96e-2	lbs/hr	CE

5. Type: RAW MATERIAL

6. Description: LIMESTONE/SAND/CLAY  
 Group: DRY KILN (SEMI) Location: PREHEATER Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	405C1R1	ND	1.00e+3	ug/g	1.57e+2 lbs/hr	CE
Chlorine	405C1R2	ND	9.98e+2	ug/g	1.64e+2 lbs/hr	CE
Chlorine	405C1R3	ND	9.99e+2	ug/g	1.50e+2 lbs/hr	CE
Chlorine	405C1R4	ND	1.00e+3	ug/g	1.63e+2 lbs/hr	CE
Chlorine	405C1R5	ND	1.00e+3	ug/g	1.60e+2 lbs/hr	CE
Chlorine	405C2R1	ND	1.00e+3	ug/g	1.72e+2 lbs/hr	CE
Chlorine	405C2R2	ND	1.00e+3	ug/g	1.71e+2 lbs/hr	CE
Chlorine	405C2R3	ND	1.00e+3	ug/g	1.70e+2 lbs/hr	CE
Chlorine	405C2R4	ND	1.00e+3	ug/g	1.70e+2 lbs/hr	CE
Chlorine	405C2R5	ND	1.00e+3	ug/g	1.70e+2 lbs/hr	CE
Chlorine	405C2R6	ND	1.00e+3	ug/g	1.70e+2 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Antimony	405C1R1	ND	5.00e+0	ug/g	7.83e-1 lbs/hr	CE
Antimony	405C1R2	ND	5.00e+0	ug/g	8.22e-1 lbs/hr	CE
Antimony	405C1R3	ND	5.00e+0	ug/g	7.51e-1 lbs/hr	CE
Antimony	405C1R4	ND	5.00e+0	ug/g	8.15e-1 lbs/hr	CE
Antimony	405C1R5	ND	5.00e+0	ug/g	7.98e-1 lbs/hr	CE
Arsenic	405C1R1	ND	3.00e+0	ug/g	4.70e-1 lbs/hr	CE
Arsenic	405C1R2	ND	3.00e+0	ug/g	4.93e-1 lbs/hr	CE
Arsenic	405C1R3	ND	3.00e+0	ug/g	4.50e-1 lbs/hr	CE
Arsenic	405C1R4	ND	3.00e+0	ug/g	4.89e-1 lbs/hr	CE
Arsenic	405C1R5	ND	3.00e+0	ug/g	4.79e-1 lbs/hr	CE
Barium	405C1R1		5.20e+1	ug/g	8.15e+0 lbs/hr	CE
Barium	405C1R2		6.20e+1	ug/g	1.02e+1 lbs/hr	CE
Barium	405C1R3		5.70e+1	ug/g	8.56e+0 lbs/hr	CE
Barium	405C1R4		6.60e+1	ug/g	1.08e+1 lbs/hr	CE
Barium	405C1R5		5.40e+1	ug/g	8.62e+0 lbs/hr	CE
Beryllium	405C1R1		3.00e-1	ug/g	4.70e-2 lbs/hr	CE
Beryllium	405C1R2		3.00e-1	ug/g	4.93e-2 lbs/hr	CE
Beryllium	405C1R3		3.00e-1	ug/g	4.50e-2 lbs/hr	CE
Beryllium	405C1R4		3.00e-1	ug/g	4.89e-2 lbs/hr	CE
Beryllium	405C1R5		3.00e-1	ug/g	4.79e-2 lbs/hr	CE
Cadmium	405C1R1		2.00e+0	ug/g	3.13e-1 lbs/hr	CE
Cadmium	405C1R2		2.00e+0	ug/g	3.29e-1 lbs/hr	CE
Cadmium	405C1R3		1.00e+0	ug/g	1.50e-1 lbs/hr	CE
Cadmium	405C1R4		1.00e+0	ug/g	1.63e-1 lbs/hr	CE
Cadmium	405C1R5		1.00e+0	ug/g	1.60e-1 lbs/hr	CE
Chromium	405C1R1		1.60e+1	ug/g	2.51e+0 lbs/hr	CE
Chromium	405C1R2		1.80e+1	ug/g	2.96e+0 lbs/hr	CE
Chromium	405C1R3		1.70e+1	ug/g	2.55e+0 lbs/hr	CE
Chromium	405C1R4		1.80e+1	ug/g	2.93e+0 lbs/hr	CE
Chromium	405C1R5		1.60e+1	ug/g	2.55e+0 lbs/hr	CE
Lead	405C1R1		6.00e+0	ug/g	9.40e-1 lbs/hr	CE
Lead	405C1R2		7.00e+0	ug/g	1.15e+0 lbs/hr	CE
Lead	405C1R3		6.00e+0	ug/g	9.01e-1 lbs/hr	CE
Lead	405C1R4		6.00e+0	ug/g	9.78e-1 lbs/hr	CE
Lead	405C1R5		6.00e+0	ug/g	9.58e-1 lbs/hr	CE

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EPA NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP  
 REGION: 7

Mercury	405C1R1	ND	2.00e-2	ug/g	3.13e-3	lbs/hr	CE
Mercury	405C1R2	ND	2.00e-2	ug/g	3.29e-3	lbs/hr	CE
Mercury	405C1R3	ND	2.00e-2	ug/g	3.00e-3	lbs/hr	CE
Mercury	405C1R4	ND	2.00e-2	ug/g	3.26e-3	lbs/hr	CE
Mercury	405C1R5	ND	2.00e-2	ug/g	3.19e-3	lbs/hr	CE
Silver	405C1R1	ND	6.00e-1	ug/g	9.40e-2	lbs/hr	CE
Silver	405C1R2	ND	6.00e-1	ug/g	9.86e-2	lbs/hr	CE
Silver	405C1R3	ND	6.00e-1	ug/g	9.01e-2	lbs/hr	CE
Silver	405C1R4	ND	6.00e-1	ug/g	9.78e-2	lbs/hr	CE
Silver	405C1R5	ND	6.00e-1	ug/g	9.58e-2	lbs/hr	CE
Thallium	405C1R1	ND	4.00e+0	ug/g	6.27e-1	lbs/hr	CE
Thallium	405C1R2		8.00e+0	ug/g	1.32e+0	lbs/hr	CE
Thallium	405C1R3		1.00e+1	ug/g	1.50e+0	lbs/hr	CE
Thallium	405C1R4		8.00e+0	ug/g	1.30e+0	lbs/hr	CE
Thallium	405C1R5		1.00e+1	ug/g	1.60e+0	lbs/hr	CE

5. Type: SPIKE

6. Description: ORGANICS (1,1,1-TCE)  
 Group: DRY KILN (SEMI) Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	405C2R1	7.97e+5	ug/g	6.22e+1	lbs/hr	CE
Chlorine	405C2R2	7.97e+5	ug/g	8.21e+1	lbs/hr	CE
Chlorine	405C2R3	7.97e+5	ug/g	7.65e+1	lbs/hr	CE
Chlorine	405C2R4	7.97e+5	ug/g	6.30e+1	lbs/hr	CE
Chlorine	405C2R5	7.97e+5	ug/g	6.62e+1	lbs/hr	CE

6. Description: ORGANICS (1,2,4-TCB)  
 Group: DRY KILN (SEMI) Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	405C2R1	5.86e+5	ug/g	5.80e+1	lbs/hr	CE
Chlorine	405C2R2	5.86e+5	ug/g	7.91e+1	lbs/hr	CE
Chlorine	405C2R3	5.86e+5	ug/g	7.56e+1	lbs/hr	CE
Chlorine	405C2R4	5.86e+5	ug/g	6.74e+1	lbs/hr	CE
Chlorine	405C2R5	5.86e+5	ug/g	6.27e+1	lbs/hr	CE

6. Description: METALS (AS,CR)  
 Group: DRY KILN (SEMI) Location: KILN Phase: LIQUID

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Arsenic	405C1R1	0.00e+0		4.67e+0	lbs/hr	
Arsenic	405C1R2	0.00e+0		4.67e+0	lbs/hr	
Arsenic	405C1R3	0.00e+0		4.67e+0	lbs/hr	
Arsenic	405C1R4	0.00e+0		4.67e+0	lbs/hr	
Arsenic	405C1R5	0.00e+0		4.67e+0	lbs/hr	
Chromium	405C1R1	0.00e+0		2.17e+1	lbs/hr	
Chromium	405C1R2	0.00e+0		2.17e+1	lbs/hr	
Chromium	405C1R3	0.00e+0		2.17e+1	lbs/hr	
Chromium	405C1R4	0.00e+0		2.17e+1	lbs/hr	
Chromium	405C1R5	0.00e+0		2.17e+1	lbs/hr	

5. Type: WASTE

6. Description:  
 Group: DRY KILN (SEMI) Location: KILN Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc

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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

Chlorine	405C1R1	2.80e+4	ug/g	2.47e+2	lbs/hr	CC
Chlorine	405C1R2	3.10e+4	ug/g	2.73e+2	lbs/hr	CC
Chlorine	405C1R3	4.40e+4	ug/g	3.82e+2	lbs/hr	CC
Chlorine	405C1R4	5.60e+4	ug/g	3.38e+2	lbs/hr	CC
Chlorine	405C1R5	4.60e+4	ug/g	2.78e+2	lbs/hr	CC
Chlorine	405C2R1	1.70e+4	ug/g	1.49e+2	lbs/hr	CE
Chlorine	405C2R2	1.60e+4	ug/g	1.41e+2	lbs/hr	CE
Chlorine	405C2R3	1.70e+4	ug/g	1.55e+2	lbs/hr	CE
Chlorine	405C2R4	1.40e+4	ug/g	1.25e+2	lbs/hr	CE
Chlorine	405C2R5	1.90e+4	ug/g	1.41e+2	lbs/hr	CE
Chlorine	405C2R6	1.40e+4	ug/g	8.37e+1	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Antimony	405C1R1	4.00e+1	ug/g	3.53e-1	lbs/hr	CE	
Antimony	405C1R2	3.90e+1	ug/g	3.43e-1	lbs/hr	CE	
Antimony	405C1R3	ND	3.00e+0	ug/g	2.60e-2	lbs/hr	CE
Antimony	405C1R4	2.60e+1	ug/g	1.57e-1	lbs/hr	CE	
Antimony	405C1R5	1.20e+2	ug/g	7.25e-1	lbs/hr	CE	
Arsenic	405C1R1	1.30e+2	ug/g	1.15e+0	lbs/hr	CE	
Arsenic	405C1R2	1.30e+2	ug/g	1.14e+0	lbs/hr	CE	
Arsenic	405C1R3	6.20e+1	ug/g	5.38e-1	lbs/hr	CE	
Arsenic	405C1R4	8.70e+1	ug/g	5.25e-1	lbs/hr	CE	
Arsenic	405C1R5	1.80e+2	ug/g	1.09e+0	lbs/hr	CE	
Barium	405C1R1	7.80e+2	ug/g	6.88e+0	lbs/hr	CE	
Barium	405C1R2	8.00e+2	ug/g	7.04e+0	lbs/hr	CE	
Barium	405C1R3	4.60e+1	ug/g	3.99e-1	lbs/hr	CE	
Barium	405C1R4	1.00e+2	ug/g	6.04e-1	lbs/hr	CE	
Barium	405C1R5	3.50e+2	ug/g	2.11e+0	lbs/hr	CE	
Beryllium	405C1R1	3.40e+0	ug/g	3.00e-2	lbs/hr	CE	
Beryllium	405C1R2	3.40e+0	ug/g	2.99e-2	lbs/hr	CE	
Beryllium	405C1R3	3.40e+0	ug/g	2.95e-2	lbs/hr	CE	
Beryllium	405C1R4	4.00e+0	ug/g	2.42e-2	lbs/hr	CE	
Beryllium	405C1R5	3.60e+0	ug/g	2.17e-2	lbs/hr	CE	
Cadmium	405C1R1	6.30e+1	ug/g	5.56e-1	lbs/hr	CE	
Cadmium	405C1R2	6.50e+1	ug/g	5.72e-1	lbs/hr	CE	
Cadmium	405C1R3	1.40e+1	ug/g	1.22e-1	lbs/hr	CE	
Cadmium	405C1R4	2.80e+1	ug/g	1.69e-1	lbs/hr	CE	
Cadmium	405C1R5	1.00e+2	ug/g	6.04e-1	lbs/hr	CE	
Chromium	405C1R1	7.00e+2	ug/g	6.17e+0	lbs/hr	CE	
Chromium	405C1R2	7.20e+2	ug/g	6.34e+0	lbs/hr	CE	
Chromium	405C1R3	3.30e+2	ug/g	2.86e+0	lbs/hr	CE	
Chromium	405C1R4	3.80e+2	ug/g	2.30e+0	lbs/hr	CE	
Chromium	405C1R5	8.70e+2	ug/g	5.25e+0	lbs/hr	CE	
Lead	405C1R1	2.00e+3	ug/g	1.76e+1	lbs/hr	CE	
Lead	405C1R2	2.00e+3	ug/g	1.76e+1	lbs/hr	CE	
Lead	405C1R3	1.10e+3	ug/g	9.55e+0	lbs/hr	CE	
Lead	405C1R4	9.90e+2	ug/g	5.98e+0	lbs/hr	CE	
Lead	405C1R5	2.20e+3	ug/g	1.33e+1	lbs/hr	CE	
Mercury	405C1R1	3.00e-1	ug/g	2.65e-3	lbs/hr	CE	
Mercury	405C1R2	ND	2.00e-1	ug/g	1.76e-3	lbs/hr	CE
Mercury	405C1R3	ND	2.00e-1	ug/g	1.74e-3	lbs/hr	CE
Mercury	405C1R4	ND	2.00e-1	ug/g	1.21e-3	lbs/hr	CE
Mercury	405C1R5	ND	2.00e-1	ug/g	1.21e-3	lbs/hr	CE
Silver	405C1R1	8.00e-1	ug/g	7.06e-3	lbs/hr	CE	
Silver	405C1R2	ND	6.00e-1	ug/g	5.28e-3	lbs/hr	CE
Silver	405C1R3	ND	6.00e-1	ug/g	5.21e-3	lbs/hr	CE
Silver	405C1R4	ND	6.00e-1	ug/g	3.62e-3	lbs/hr	CE
Silver	405C1R5	1.00e+0	ug/g	6.04e-3	lbs/hr	CE	
Thallium	405C1R1	ND	4.00e+0	ug/g	3.53e-2	lbs/hr	CE
Thallium	405C1R2	ND	4.00e+0	ug/g	3.52e-2	lbs/hr	CE
Thallium	405C1R3	ND	4.00e+0	ug/g	3.47e-2	lbs/hr	CE
Thallium	405C1R4	ND	4.00e+0	ug/g	2.42e-2	lbs/hr	CE
Thallium	405C1R5	ND	4.00e+0	ug/g	2.42e-2	lbs/hr	CE

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
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US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM 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

1,1,1-Trichloroethane	405C2R1	4.82e+3	ug/g	4.23e+1	lbs/hr	CE
1,1,1-Trichloroethane	405C2R2	3.80e+3	ug/g	3.35e+1	lbs/hr	CE
1,1,1-Trichloroethane	405C2R3	4.13e+3	ug/g	3.77e+1	lbs/hr	CE
1,1,1-Trichloroethane	405C2R4	4.88e+3	ug/g	4.37e+1	lbs/hr	CE
1,1,1-Trichloroethane	405C2R5	4.17e+3	ug/g	3.10e+1	lbs/hr	CE
1,1,1-Trichloroethane	405C2R6	4.55e+3	ug/g	2.72e+1	lbs/hr	CE
Tetrachloroethene	405C2R1	3.77e+3	ug/g	3.31e+1	lbs/hr	CE
Tetrachloroethene	405C2R2	3.08e+3	ug/g	2.72e+1	lbs/hr	CE
Tetrachloroethene	405C2R3	9.83e+3	ug/g	8.96e+1	lbs/hr	CE
Tetrachloroethene	405C2R4	9.84e+3	ug/g	8.82e+1	lbs/hr	CE
Tetrachloroethene	405C2R5	1.77e+3	ug/g	1.32e+1	lbs/hr	CE
Tetrachloroethene	405C2R6	1.78e+3	ug/g	1.06e+1	lbs/hr	CE

6. Description: Group: DRY KILN (SEMI) Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	405C1R1	3.04e+3	ug/g	9.00e+0	lbs/hr	CC
Chlorine	405C1R2	2.01e+3	ug/g	6.00e+0	lbs/hr	CC
Chlorine	405C1R3	2.48e+3	ug/g	5.00e+0	lbs/hr	CC
Chlorine	405C1R4	2.02e+3	ug/g	4.00e+0	lbs/hr	CC
Chlorine	405C1R5	2.47e+3	ug/g	4.00e+0	lbs/hr	CC
Chlorine	405C2R1	3.00e+3	ug/g	8.88e+0	lbs/hr	CE
Chlorine	405C2R2	3.00e+3	ug/g	8.94e+0	lbs/hr	CE
Chlorine	405C2R3	ND 2.00e+3	ug/g	5.92e+0	lbs/hr	CE
Chlorine	405C2R4	2.00e+3	ug/g	5.96e+0	lbs/hr	CE
Chlorine	405C2R5	2.00e+3	ug/g	5.80e+0	lbs/hr	CE
Chlorine	405C2R6	2.00e+3	ug/g	4.04e+0	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Antimony	405C1R1	1.40e+1	ug/g	4.14e-2	lbs/hr	CE
Antimony	405C1R2	ND 3.00e+0	ug/g	8.94e-3	lbs/hr	CE
Antimony	405C1R3	7.00e+0	ug/g	1.41e-2	lbs/hr	CE
Antimony	405C1R4	1.00e+1	ug/g	1.98e-2	lbs/hr	CE
Antimony	405C1R5	1.40e+1	ug/g	2.27e-2	lbs/hr	CE
Arsenic	405C1R1	7.60e+1	ug/g	2.25e-1	lbs/hr	CE
Arsenic	405C1R2	5.00e+1	ug/g	1.49e-1	lbs/hr	CE
Arsenic	405C1R3	5.60e+1	ug/g	1.13e-1	lbs/hr	CE
Arsenic	405C1R4	4.40e+1	ug/g	8.71e-2	lbs/hr	CE
Arsenic	405C1R5	6.80e+1	ug/g	1.10e-1	lbs/hr	CE
Barium	405C1R1	7.80e+2	ug/g	2.31e+0	lbs/hr	CE
Barium	405C1R2	5.50e+2	ug/g	1.64e+0	lbs/hr	CE
Barium	405C1R3	6.60e+2	ug/g	1.33e+0	lbs/hr	CE
Barium	405C1R4	5.50e+2	ug/g	1.09e+0	lbs/hr	CE
Barium	405C1R5	8.20e+2	ug/g	1.33e+0	lbs/hr	CE
Beryllium	405C1R1	4.00e-1	ug/g	1.18e-3	lbs/hr	CE
Beryllium	405C1R2	2.00e-1	ug/g	5.96e-4	lbs/hr	CE
Beryllium	405C1R3	2.00e-1	ug/g	4.04e-4	lbs/hr	CE
Beryllium	405C1R4	2.00e-1	ug/g	3.96e-4	lbs/hr	CE
Beryllium	405C1R5	3.00e-1	ug/g	4.86e-4	lbs/hr	CE
Cadmium	405C1R1	6.40e+0	ug/g	1.89e-2	lbs/hr	CE
Cadmium	405C1R2	5.00e+0	ug/g	1.49e-2	lbs/hr	CE
Cadmium	405C1R3	5.60e+0	ug/g	1.13e-2	lbs/hr	CE
Cadmium	405C1R4	4.80e+0	ug/g	9.50e-3	lbs/hr	CE
Cadmium	405C1R5	6.70e+0	ug/g	1.09e-2	lbs/hr	CE
Chromium	405C1R1	5.60e+2	ug/g	1.66e+0	lbs/hr	CE
Chromium	405C1R2	3.40e+2	ug/g	1.01e+0	lbs/hr	CE
Chromium	405C1R3	3.90e+2	ug/g	7.88e-1	lbs/hr	CE
Chromium	405C1R4	3.40e+2	ug/g	6.73e-1	lbs/hr	CE
Chromium	405C1R5	5.50e+2	ug/g	8.91e-1	lbs/hr	CE
Lead	405C1R1	7.30e+2	ug/g	2.16e+0	lbs/hr	CE
Lead	405C1R2	6.50e+2	ug/g	1.94e+0	lbs/hr	CE
Lead	405C1R3	6.60e+2	ug/g	1.33e+0	lbs/hr	CE
Lead	405C1R4	5.40e+2	ug/g	1.07e+0	lbs/hr	CE
Lead	405C1R5	8.20e+2	ug/g	1.33e+0	lbs/hr	CE



SECTION 8: OTHER STREAM 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	405C1R1	1.30e+1	ug/g	3.85e-2	lbs/hr	CE
Mercury	405C1R2	9.00e+0	ug/g	2.68e-2	lbs/hr	CE
Mercury	405C1R3	1.30e+1	ug/g	2.63e-2	lbs/hr	CE
Mercury	405C1R4	1.10e+1	ug/g	2.18e-2	lbs/hr	CE
Mercury	405C1R5	1.40e+1	ug/g	2.27e-2	lbs/hr	CE
Silver	405C1R1	5.20e+0	ug/g	1.54e-2	lbs/hr	CE
Silver	405C1R2	3.80e+0	ug/g	1.13e-2	lbs/hr	CE
Silver	405C1R3	4.40e+0	ug/g	8.89e-3	lbs/hr	CE
Silver	405C1R4	3.40e+0	ug/g	6.73e-3	lbs/hr	CE
Silver	405C1R5	5.20e+0	ug/g	8.42e-3	lbs/hr	CE
Thallium	405C1R1	2.00e-1	ug/g	5.92e-4	lbs/hr	CE
Thallium	405C1R2	ND 2.00e-1	ug/g	5.96e-4	lbs/hr	CE
Thallium	405C1R3	ND 2.00e-1	ug/g	4.04e-4	lbs/hr	CE
Thallium	405C1R4	ND 2.00e-1	ug/g	3.96e-4	lbs/hr	CE
Thallium	405C1R5	2.00e-1	ug/g	3.24e-4	lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
1,2,4-Trichlorobenzene	405C2R1	3.36e+4	ug/g	9.95e+1	lbs/hr	CC
1,2,4-Trichlorobenzene	405C2R2	4.52e+4	ug/g	1.35e+2	lbs/hr	CC
1,2,4-Trichlorobenzene	405C2R3	4.35e+4	ug/g	1.29e+2	lbs/hr	CC
1,2,4-Trichlorobenzene	405C2R4	3.84e+4	ug/g	1.15e+2	lbs/hr	CC
1,2,4-Trichlorobenzene	405C2R5	3.68e+4	ug/g	1.07e+2	lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
1,1,1-Trichloroethane	405C2R1	2.63e+4	ug/g	7.79e+1	lbs/hr	CC
1,1,1-Trichloroethane	405C2R2	3.49e+4	ug/g	1.04e+2	lbs/hr	CC
1,1,1-Trichloroethane	405C2R3	3.24e+4	ug/g	9.58e+1	lbs/hr	CC
1,1,1-Trichloroethane	405C2R4	2.66e+4	ug/g	7.94e+1	lbs/hr	CC
1,1,1-Trichloroethane	405C2R5	2.85e+4	ug/g	8.26e+1	lbs/hr	CC

US EPA ARCHIVE DOCUMENT



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA ID: NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

5. Type: CLINKER

6. Description: PRODUCT  
 Group: DRY KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	406C1R1	ND	1.00e+3 ug/g	1.18e+2 lbs/hr	CE
Chlorine	406C1R2	ND	1.00e+3 ug/g	1.18e+2 lbs/hr	CE
Chlorine	406C1R3	ND	1.00e+3 ug/g	1.24e+2 lbs/hr	CE
Chlorine	406C1R4	ND	1.00e+3 ug/g	1.24e+2 lbs/hr	CE
Chlorine	406C1R5	ND	1.00e+3 ug/g	1.28e+2 lbs/hr	CE
Chlorine	406C1R6	ND	1.00e+3 ug/g	1.28e+2 lbs/hr	CE
Chlorine	406C1R7	ND	1.00e+3 ug/g	1.22e+2 lbs/hr	CE
Chlorine	406C1R8	ND	1.00e+3 ug/g	1.22e+2 lbs/hr	CE
Chlorine	406C2R1	ND	1.00e+3 ug/g	1.24e+2 lbs/hr	CC
Chlorine	406C2R2	ND	1.00e+3 ug/g	1.24e+2 lbs/hr	CC
Chlorine	406C2R3	ND	1.00e+3 ug/g	1.40e+2 lbs/hr	CC
Chlorine	406C2R4	ND	1.00e+3 ug/g	1.40e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	406C1R5	ND	3.00e+1 ug/g	3.84e+0 lbs/hr	CE
Antimony	406C1R6	ND	3.00e+1 ug/g	3.84e+0 lbs/hr	CE
Antimony	406C1R7	ND	3.00e+1 ug/g	3.66e+0 lbs/hr	CE
Antimony	406C1R8	ND	3.00e+1 ug/g	3.66e+0 lbs/hr	CE
Arsenic	406C1R5		4.60e+1 ug/g	5.89e+0 lbs/hr	CE
Arsenic	406C1R6		5.00e+1 ug/g	6.40e+0 lbs/hr	CE
Arsenic	406C1R7		5.80e+1 ug/g	7.08e+0 lbs/hr	CE
Arsenic	406C1R8		3.80e+1 ug/g	4.64e+0 lbs/hr	CE
Barium	406C1R5		4.80e+2 ug/g	6.14e+1 lbs/hr	CE
Barium	406C1R6		2.70e+2 ug/g	3.46e+1 lbs/hr	CE
Barium	406C1R7		2.60e+2 ug/g	3.17e+1 lbs/hr	CE
Barium	406C1R8		2.40e+2 ug/g	2.93e+1 lbs/hr	CE
Beryllium	406C1R5		1.00e+0 ug/g	1.28e-1 lbs/hr	CE
Beryllium	406C1R6		2.00e+0 ug/g	2.56e-1 lbs/hr	CE
Beryllium	406C1R7		2.00e+0 ug/g	2.44e-1 lbs/hr	CE
Beryllium	406C1R8		1.00e+0 ug/g	1.22e-1 lbs/hr	CE
Cadmium	406C1R5	ND	4.00e+0 ug/g	5.12e-1 lbs/hr	CE
Cadmium	406C1R6	ND	4.00e+0 ug/g	5.12e-1 lbs/hr	CE
Cadmium	406C1R7	ND	4.00e+0 ug/g	4.88e-1 lbs/hr	CE
Cadmium	406C1R8	ND	4.00e+0 ug/g	4.88e-1 lbs/hr	CE
Chromium	406C1R5		2.40e+2 ug/g	3.07e+1 lbs/hr	CE
Chromium	406C1R6		2.90e+2 ug/g	3.71e+1 lbs/hr	CE
Chromium	406C1R7		2.50e+2 ug/g	3.05e+1 lbs/hr	CE
Chromium	406C1R8		2.30e+2 ug/g	2.81e+1 lbs/hr	CE
Lead	406C1R5	ND	3.00e+1 ug/g	3.84e+0 lbs/hr	CE
Lead	406C1R6		5.00e+1 ug/g	6.40e+0 lbs/hr	CE
Lead	406C1R7	ND	3.00e+1 ug/g	3.66e+0 lbs/hr	CE
Lead	406C1R8	ND	3.00e+1 ug/g	3.66e+0 lbs/hr	CE
Mercury	406C1R5	ND	2.00e-2 ug/g	2.56e-3 lbs/hr	CE
Mercury	406C1R6	ND	2.00e-2 ug/g	2.56e-3 lbs/hr	CE
Mercury	406C1R7		2.00e-2 ug/g	2.44e-3 lbs/hr	CE
Mercury	406C1R8		2.00e-2 ug/g	2.44e-3 lbs/hr	CE
Silver	406C1R5	ND	1.00e+1 ug/g	1.28e+0 lbs/hr	CE
Silver	406C1R6		4.20e+1 ug/g	5.38e+0 lbs/hr	CE
Silver	406C1R7		1.20e+1 ug/g	1.46e+0 lbs/hr	CE
Silver	406C1R8	ND	1.00e+1 ug/g	1.22e+0 lbs/hr	CE
Thallium	406C1R5	ND	4.00e+1 ug/g	5.12e+0 lbs/hr	CE
Thallium	406C1R6	ND	4.00e+1 ug/g	5.12e+0 lbs/hr	CE
Thallium	406C1R7	ND	4.00e+1 ug/g	4.88e+0 lbs/hr	CE
Thallium	406C1R8	ND	4.00e+1 ug/g	4.88e+0 lbs/hr	CE

5. Type: ESP ASH

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA ID: NED007260672  
 SYSTEM TYPE: CEMENT KILN

REGION: 7  
 APC SYSTEM: ESP

6. Description: NONRECYCLE  
 Group: DRY KILN Location: ESP Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	406C1R1	9.50e+4	ug/g	2.26e+2 lbs/hr	CE
Chlorine	406C1R2	7.60e+4	ug/g	1.72e+2 lbs/hr	CE
Chlorine	406C1R3	8.10e+4	ug/g	2.45e+2 lbs/hr	CE
Chlorine	406C1R4	7.60e+4	ug/g	2.69e+2 lbs/hr	CE
Chlorine	406C1R5	2.70e+4	ug/g	2.10e+2 lbs/hr	CE
Chlorine	406C1R6	1.30e+4	ug/g	1.12e+2 lbs/hr	CE
Chlorine	406C1R7	1.20e+4	ug/g	8.50e+1 lbs/hr	CE
Chlorine	406C1R8	1.00e+4	ug/g	7.08e+1 lbs/hr	CE
Chlorine	406C2R1	8.62e+4	ug/g	1.93e+2 lbs/hr	CC
Chlorine	406C2R2	7.08e+4	ug/g	1.60e+2 lbs/hr	CC
Chlorine	406C2R3	8.42e+4	ug/g	1.97e+2 lbs/hr	CC
Chlorine	406C2R4	1.11e+5	ug/g	2.15e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	406C1R5	ND	1.00e+2 ug/g	7.76e-1 lbs/hr	CE
Antimony	406C1R6	ND	1.00e+2 ug/g	8.60e-1 lbs/hr	CE
Antimony	406C1R7	ND	1.00e+2 ug/g	7.08e-1 lbs/hr	CE
Antimony	406C1R8	ND	1.00e+2 ug/g	7.08e-1 lbs/hr	CE
Arsenic	406C1R5		1.50e+2 ug/g	1.16e+0 lbs/hr	CE
Arsenic	406C1R6	ND	1.00e+2 ug/g	8.60e-1 lbs/hr	CE
Arsenic	406C1R7	ND	1.00e+2 ug/g	7.08e-1 lbs/hr	CE
Arsenic	406C1R8	ND	1.00e+2 ug/g	7.08e-1 lbs/hr	CE
Barium	406C1R5		3.40e+2 ug/g	2.64e+0 lbs/hr	CE
Barium	406C1R6		2.40e+2 ug/g	2.06e+0 lbs/hr	CE
Barium	406C1R7		1.70e+2 ug/g	1.20e+0 lbs/hr	CE
Barium	406C1R8		1.70e+2 ug/g	1.20e+0 lbs/hr	CE
Beryllium	406C1R5		1.40e+1 ug/g	1.09e-1 lbs/hr	CE
Beryllium	406C1R6	ND	4.00e+0 ug/g	3.44e-2 lbs/hr	CE
Beryllium	406C1R7	ND	4.00e+0 ug/g	2.83e-2 lbs/hr	CE
Beryllium	406C1R8	ND	4.00e+0 ug/g	2.83e-2 lbs/hr	CE
Cadmium	406C1R5		1.60e+2 ug/g	1.24e+0 lbs/hr	CE
Cadmium	406C1R6		1.20e+2 ug/g	1.03e+0 lbs/hr	CE
Cadmium	406C1R7		1.20e+2 ug/g	8.50e-1 lbs/hr	CE
Cadmium	406C1R8		1.20e+2 ug/g	8.50e-1 lbs/hr	CE
Chromium	406C1R5		3.30e+2 ug/g	2.56e+0 lbs/hr	CE
Chromium	406C1R6		1.70e+2 ug/g	1.46e+0 lbs/hr	CE
Chromium	406C1R7		1.40e+2 ug/g	9.91e-1 lbs/hr	CE
Chromium	406C1R8		1.40e+2 ug/g	9.91e-1 lbs/hr	CE
Lead	406C1R5		2.90e+3 ug/g	2.25e+1 lbs/hr	CE
Lead	406C1R6		1.70e+3 ug/g	1.46e+1 lbs/hr	CE
Lead	406C1R7		1.70e+3 ug/g	1.20e+1 lbs/hr	CE
Lead	406C1R8		1.70e+3 ug/g	1.20e+1 lbs/hr	CE
Mercury	406C1R5		5.00e-2 ug/g	3.88e-4 lbs/hr	CE
Mercury	406C1R6		1.80e-1 ug/g	1.55e-3 lbs/hr	CE
Mercury	406C1R7		1.00e-1 ug/g	7.08e-4 lbs/hr	CE
Mercury	406C1R8		1.00e-1 ug/g	7.08e-4 lbs/hr	CE
Silver	406C1R5	ND	2.00e+1 ug/g	1.55e-1 lbs/hr	CE
Silver	406C1R6	ND	2.00e+1 ug/g	1.72e-1 lbs/hr	CE
Silver	406C1R7		3.00e+1 ug/g	2.12e-1 lbs/hr	CE
Silver	406C1R8	ND	2.00e+1 ug/g	1.42e-1 lbs/hr	CE
Thallium	406C1R5	ND	1.50e+2 ug/g	1.16e+0 lbs/hr	CE
Thallium	406C1R6	ND	1.50e+2 ug/g	1.29e+0 lbs/hr	CE
Thallium	406C1R7	ND	1.50e+2 ug/g	1.06e+0 lbs/hr	CE
Thallium	406C1R8	ND	1.50e+2 ug/g	1.06e+0 lbs/hr	CE

5. Type: FUEL

6. Description: COAL/COKE  
 Group: DRY KILN Location: KILN/PRECALCINER Phase: SOLID

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	406C1R1	ND	9.58e+2 ug/g	1.00e+1 lbs/hr		CC
Chlorine	406C1R2		9.79e+2 ug/g	1.30e+1 lbs/hr		CC
Chlorine	406C1R3	ND	1.01e+3 ug/g	1.20e+1 lbs/hr		CC
Chlorine	406C1R4	ND	1.03e+3 ug/g	1.20e+1 lbs/hr		CC
Chlorine	406C1R5	ND	1.00e+3 ug/g	1.50e+1 lbs/hr		CC
Chlorine	406C1R6	ND	9.95e+2 ug/g	1.90e+1 lbs/hr		CC
Chlorine	406C1R7	ND	9.80e+2 ug/g	1.90e+1 lbs/hr		CC
Chlorine	406C1R8	ND	1.02e+3 ug/g	2.10e+1 lbs/hr		CC
Chlorine	406C2R1		1.02e+3 ug/g	1.20e+1 lbs/hr		CC
Chlorine	406C2R2		1.01e+3 ug/g	1.20e+1 lbs/hr		CC
Chlorine	406C2R3		1.05e+3 ug/g	1.00e+1 lbs/hr		CC
Chlorine	406C2R4		1.03e+3 ug/g	1.10e+1 lbs/hr		CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Antimony	406C1R5	ND	3.00e+1 ug/g	4.48e-1 lbs/hr		CE
Antimony	406C1R6	ND	3.00e+1 ug/g	5.73e-1 lbs/hr		CE
Antimony	406C1R7	ND	3.00e+1 ug/g	5.81e-1 lbs/hr		CE
Antimony	406C1R8	ND	3.00e+1 ug/g	6.19e-1 lbs/hr		CE
Arsenic	406C1R5	ND	3.00e+1 ug/g	4.48e-1 lbs/hr		CE
Arsenic	406C1R6	ND	3.00e+1 ug/g	5.73e-1 lbs/hr		CE
Arsenic	406C1R7	ND	3.00e+1 ug/g	5.81e-1 lbs/hr		CE
Arsenic	406C1R8	ND	3.00e+1 ug/g	6.19e-1 lbs/hr		CE
Barium	406C1R5		1.60e+2 ug/g	2.39e+0 lbs/hr		CE
Barium	406C1R6		1.70e+2 ug/g	3.25e+0 lbs/hr		CE
Barium	406C1R7		1.60e+2 ug/g	3.10e+0 lbs/hr		CE
Barium	406C1R8		2.60e+2 ug/g	5.37e+0 lbs/hr		CE
Beryllium	406C1R5		1.00e+0 ug/g	1.49e-2 lbs/hr		CE
Beryllium	406C1R6		1.00e+0 ug/g	1.91e-2 lbs/hr		CE
Beryllium	406C1R7	ND	1.00e+0 ug/g	1.94e-2 lbs/hr		CE
Beryllium	406C1R8	ND	1.00e+0 ug/g	2.06e-2 lbs/hr		CE
Cadmium	406C1R5	ND	4.00e+0 ug/g	5.98e-2 lbs/hr		CE
Cadmium	406C1R6	ND	4.00e+0 ug/g	7.64e-2 lbs/hr		CE
Cadmium	406C1R7	ND	4.00e+0 ug/g	7.75e-2 lbs/hr		CE
Cadmium	406C1R8	ND	4.00e+0 ug/g	8.26e-2 lbs/hr		CE
Chromium	406C1R5	ND	4.00e+0 ug/g	5.98e-2 lbs/hr		CE
Chromium	406C1R6	ND	4.00e+0 ug/g	7.64e-2 lbs/hr		CE
Chromium	406C1R7	ND	4.00e+0 ug/g	7.75e-2 lbs/hr		CE
Chromium	406C1R8	ND	4.00e+0 ug/g	8.26e-2 lbs/hr		CE
Lead	406C1R5	ND	3.00e+1 ug/g	4.48e-1 lbs/hr		CE
Lead	406C1R6	ND	3.00e+1 ug/g	5.73e-1 lbs/hr		CE
Lead	406C1R7	ND	3.00e+1 ug/g	5.81e-1 lbs/hr		CE
Lead	406C1R8	ND	3.00e+1 ug/g	6.19e-1 lbs/hr		CE
Mercury	406C1R5	ND	2.00e-2 ug/g	2.99e-4 lbs/hr		CE
Mercury	406C1R6	ND	2.00e-2 ug/g	3.82e-4 lbs/hr		CE
Mercury	406C1R7	ND	2.00e-2 ug/g	3.88e-4 lbs/hr		CE
Mercury	406C1R8	ND	2.00e-2 ug/g	4.13e-4 lbs/hr		CE
Silver	406C1R5	ND	6.00e+0 ug/g	8.96e-2 lbs/hr		CE
Silver	406C1R6	ND	6.00e+0 ug/g	1.15e-1 lbs/hr		CE
Silver	406C1R7		1.80e+1 ug/g	3.49e-1 lbs/hr		CE
Silver	406C1R8	ND	6.00e+0 ug/g	1.24e-1 lbs/hr		CE
Thallium	406C1R5	ND	4.00e+1 ug/g	5.98e-1 lbs/hr		CE
Thallium	406C1R6	ND	4.00e+1 ug/g	7.64e-1 lbs/hr		CE
Thallium	406C1R7	ND	4.00e+1 ug/g	7.75e-1 lbs/hr		CE
Thallium	406C1R8	ND	4.00e+1 ug/g	8.26e-1 lbs/hr		CE

5. Type: RAW MATERIAL

6. Description: LIMESTONE/SAND/CLAY  
 Group: DRY KILN

Location: PRECALCINER/KILN

Phase: SOLID

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

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	406C1R1	ND	9.99e+2 ug/g	2.08e+2 lbs/hr	CC
Chlorine	406C1R2	ND	1.00e+3 ug/g	2.19e+2 lbs/hr	CC
Chlorine	406C1R3	ND	1.00e+3 ug/g	2.30e+2 lbs/hr	CC
Chlorine	406C1R4	ND	1.00e+3 ug/g	2.40e+2 lbs/hr	CC
Chlorine	406C1R5	ND	1.00e+3 ug/g	2.32e+2 lbs/hr	CC
Chlorine	406C1R6	ND	1.00e+3 ug/g	2.23e+2 lbs/hr	CC
Chlorine	406C1R7	ND	9.99e+2 ug/g	2.11e+2 lbs/hr	CC
Chlorine	406C1R8	ND	1.00e+3 ug/g	2.13e+2 lbs/hr	CC
Chlorine	406C2R1	ND	9.98e+2 ug/g	2.33e+2 lbs/hr	CC
Chlorine	406C2R2	ND	1.00e+3 ug/g	2.38e+2 lbs/hr	CC
Chlorine	406C2R3	ND	1.00e+3 ug/g	2.40e+2 lbs/hr	CC
Chlorine	406C2R4	ND	1.00e+3 ug/g	2.39e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	406C1R5	ND	3.00e+1 ug/g	6.96e+0 lbs/hr	CE
Antimony	406C1R6	ND	3.00e+1 ug/g	6.68e+0 lbs/hr	CE
Antimony	406C1R7	ND	3.00e+1 ug/g	6.34e+0 lbs/hr	CE
Antimony	406C1R8	ND	3.00e+1 ug/g	6.38e+0 lbs/hr	CE
Arsenic	406C1R5	ND	3.00e+1 ug/g	6.96e+0 lbs/hr	CE
Arsenic	406C1R6	ND	3.00e+1 ug/g	6.68e+0 lbs/hr	CE
Arsenic	406C1R7	ND	3.00e+1 ug/g	6.34e+0 lbs/hr	CE
Arsenic	406C1R8	ND	3.00e+1 ug/g	6.38e+0 lbs/hr	CE
Barium	406C1R5		3.50e+1 ug/g	8.12e+0 lbs/hr	CE
Barium	406C1R6		5.80e+1 ug/g	1.29e+1 lbs/hr	CE
Barium	406C1R7		4.10e+1 ug/g	8.66e+0 lbs/hr	CE
Barium	406C1R8		4.00e+1 ug/g	8.51e+0 lbs/hr	CE
Beryllium	406C1R5	ND	6.00e+0 ug/g	1.39e+0 lbs/hr	CE
Beryllium	406C1R6	ND	6.00e+0 ug/g	1.34e+0 lbs/hr	CE
Beryllium	406C1R7	ND	6.00e+0 ug/g	1.27e+0 lbs/hr	CE
Beryllium	406C1R8	ND	6.00e+0 ug/g	1.28e+0 lbs/hr	CE
Cadmium	406C1R5	ND	5.00e+0 ug/g	1.16e+0 lbs/hr	CE
Cadmium	406C1R6		8.00e+0 ug/g	1.78e+0 lbs/hr	CE
Cadmium	406C1R7	ND	5.00e+0 ug/g	1.06e+0 lbs/hr	CE
Cadmium	406C1R8	ND	5.00e+0 ug/g	1.06e+0 lbs/hr	CE
Chromium	406C1R5		6.00e+0 ug/g	1.39e+0 lbs/hr	CE
Chromium	406C1R6		2.10e+1 ug/g	4.68e+0 lbs/hr	CE
Chromium	406C1R7		9.00e+0 ug/g	1.90e+0 lbs/hr	CE
Chromium	406C1R8		1.00e+1 ug/g	2.13e+0 lbs/hr	CE
Lead	406C1R5	ND	3.00e+1 ug/g	6.96e+0 lbs/hr	CE
Lead	406C1R6	ND	3.00e+1 ug/g	6.68e+0 lbs/hr	CE
Lead	406C1R7	ND	3.00e+1 ug/g	6.34e+0 lbs/hr	CE
Lead	406C1R8	ND	3.00e+1 ug/g	6.38e+0 lbs/hr	CE
Mercury	406C1R5	ND	2.00e-2 ug/g	4.64e-3 lbs/hr	CE
Mercury	406C1R6	ND	2.00e-2 ug/g	4.45e-3 lbs/hr	CE
Mercury	406C1R7	ND	2.00e-2 ug/g	4.22e-3 lbs/hr	CE
Mercury	406C1R8	ND	2.00e-2 ug/g	4.26e-3 lbs/hr	CE
Silver	406C1R5	ND	6.00e+0 ug/g	1.39e+0 lbs/hr	CE
Silver	406C1R6	ND	6.00e+0 ug/g	1.34e+0 lbs/hr	CE
Silver	406C1R7	ND	6.00e+0 ug/g	1.27e+0 lbs/hr	CE
Silver	406C1R8	ND	8.00e+0 ug/g	1.70e+0 lbs/hr	CE
Thallium	406C1R5	ND	4.00e+1 ug/g	9.27e+0 lbs/hr	CE
Thallium	406C1R6	ND	4.00e+1 ug/g	8.91e+0 lbs/hr	CE
Thallium	406C1R7	ND	4.00e+1 ug/g	8.45e+0 lbs/hr	CE
Thallium	406C1R8	ND	4.00e+1 ug/g	8.51e+0 lbs/hr	CE

5. Type: SPIKE

6. Description: ORGANICS (1,1,1-TCE)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

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	406C2R1	7.97e+5 ug/g	7.41e+1 lbs/hr	CE
Chlorine	406C2R2	7.97e+5 ug/g	6.38e+1 lbs/hr	CE
Chlorine	406C2R3	7.97e+5 ug/g	7.41e+1 lbs/hr	CE
Chlorine	406C2R4	7.97e+5 ug/g	6.77e+1 lbs/hr	CE

6. Description: ORGANICS (1,2,4-TCB)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	406C2R1	5.86e+5 ug/g	6.04e+1 lbs/hr	CE
Chlorine	406C2R2	5.86e+5 ug/g	5.57e+1 lbs/hr	CE
Chlorine	406C2R3	5.86e+5 ug/g	6.33e+1 lbs/hr	CE
Chlorine	406C2R4	5.86e+5 ug/g	6.33e+1 lbs/hr	CE

6. Description: METALS (AS,CR)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Arsenic	406C1R5	0.00e+0	4.90e+0 lbs/hr	
Arsenic	406C1R6	0.00e+0	4.70e+0 lbs/hr	
Arsenic	406C1R7	0.00e+0	3.80e+0 lbs/hr	
Arsenic	406C1R8	0.00e+0	3.90e+0 lbs/hr	
Chromium	406C1R5	0.00e+0	2.28e+1 lbs/hr	
Chromium	406C1R6	0.00e+0	2.08e+1 lbs/hr	
Chromium	406C1R7	0.00e+0	1.78e+1 lbs/hr	
Chromium	406C1R8	0.00e+0	1.81e+1 lbs/hr	

5. Type: WASTE

6. Description: SPIKED METALS (AS,BE,CD,CR,PB)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	406C1R1	2.60e+4 ug/g	2.63e+2 lbs/hr	CC
Chlorine	406C1R2	2.30e+4 ug/g	1.98e+2 lbs/hr	CC
Chlorine	406C1R3	2.60e+4 ug/g	2.61e+2 lbs/hr	CC
Chlorine	406C1R4	2.10e+4 ug/g	2.07e+2 lbs/hr	CC
Chlorine	406C1R5	2.30e+4 ug/g	1.82e+2 lbs/hr	CC
Chlorine	406C1R6	1.90e+4 ug/g	1.51e+2 lbs/hr	CC
Chlorine	406C1R7	1.90e+4 ug/g	1.37e+2 lbs/hr	CC
Chlorine	406C1R8	1.91e+4 ug/g	1.38e+2 lbs/hr	CC
Chlorine	406C2R1	2.88e+4 ug/g	2.82e+2 lbs/hr	CC
Chlorine	406C2R2	3.31e+4 ug/g	3.30e+2 lbs/hr	CC
Chlorine	406C2R3	3.24e+4 ug/g	3.11e+2 lbs/hr	CC
Chlorine	406C2R4	3.19e+4 ug/g	2.81e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	406C1R1	6.93e+0 ug/g	7.00e-2 lbs/hr	CC
Antimony	406C1R2	1.05e+1 ug/g	9.00e-2 lbs/hr	CC
Antimony	406C1R3	3.59e+1 ug/g	3.60e-1 lbs/hr	CC
Antimony	406C1R4	3.96e+1 ug/g	3.90e-1 lbs/hr	CC
Antimony	406C1R5	ND 3.00e+0 ug/g	2.37e-2 lbs/hr	CE
Antimony	406C1R6	ND 3.00e+0 ug/g	2.39e-2 lbs/hr	CE
Antimony	406C1R7	6.00e+0 ug/g	4.32e-2 lbs/hr	CE
Antimony	406C1R8	4.00e+0 ug/g	2.90e-2 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

Arsenic	406C1R1	7.92e+1	ug/g	8.00e-1	lbs/hr	CC
Arsenic	406C1R2	9.88e+1	ug/g	8.50e-1	lbs/hr	CC
Arsenic	406C1R3	1.20e+2	ug/g	1.20e+0	lbs/hr	CC
Arsenic	406C1R4	1.63e+2	ug/g	1.60e+0	lbs/hr	CC
Arsenic	406C1R5	2.70e+2	ug/g	2.13e+0	lbs/hr	CE
Arsenic	406C1R6	2.60e+2	ug/g	2.07e+0	lbs/hr	CE
Arsenic	406C1R7	3.20e+2	ug/g	2.30e+0	lbs/hr	CE
Arsenic	406C1R8	3.00e+2	ug/g	2.17e+0	lbs/hr	CE
Barium	406C1R1	8.61e+2	ug/g	8.70e+0	lbs/hr	CC
Barium	406C1R2	9.42e+2	ug/g	8.10e+0	lbs/hr	CC
Barium	406C1R3	7.17e+2	ug/g	7.20e+0	lbs/hr	CC
Barium	406C1R4	6.20e+2	ug/g	6.10e+0	lbs/hr	CC
Barium	406C1R5	1.30e+3	ug/g	1.03e+1	lbs/hr	CE
Barium	406C1R6	1.40e+3	ug/g	1.11e+1	lbs/hr	CE
Barium	406C1R7	9.80e+2	ug/g	7.06e+0	lbs/hr	CE
Barium	406C1R8	9.50e+2	ug/g	6.88e+0	lbs/hr	CE
Beryllium	406C1R1	1.19e+0	ug/g	1.20e-2	lbs/hr	CC
Beryllium	406C1R2	1.98e+0	ug/g	1.70e-2	lbs/hr	CC
Beryllium	406C1R3	2.99e+0	ug/g	3.00e-2	lbs/hr	CC
Beryllium	406C1R4	3.56e+0	ug/g	3.50e-2	lbs/hr	CC
Beryllium	406C1R5	4.40e+0	ug/g	3.48e-2	lbs/hr	CE
Beryllium	406C1R6	4.20e+0	ug/g	3.34e-2	lbs/hr	CE
Beryllium	406C1R7	4.90e+0	ug/g	3.53e-2	lbs/hr	CE
Beryllium	406C1R8	4.40e+0	ug/g	3.19e-2	lbs/hr	CE
Cadmium	406C1R1	3.47e+1	ug/g	3.50e-1	lbs/hr	CC
Cadmium	406C1R2	5.00e+1	ug/g	4.30e-1	lbs/hr	CC
Cadmium	406C1R3	6.08e+1	ug/g	6.10e-1	lbs/hr	CC
Cadmium	406C1R4	6.81e+1	ug/g	6.70e-1	lbs/hr	CC
Cadmium	406C1R5	1.40e+2	ug/g	1.11e+0	lbs/hr	CE
Cadmium	406C1R6	1.30e+2	ug/g	1.03e+0	lbs/hr	CE
Cadmium	406C1R7	1.60e+2	ug/g	1.15e+0	lbs/hr	CE
Cadmium	406C1R8	1.30e+2	ug/g	9.41e-1	lbs/hr	CE
Chromium	406C1R1	6.24e+2	ug/g	6.30e+0	lbs/hr	CC
Chromium	406C1R2	8.26e+2	ug/g	7.10e+0	lbs/hr	CC
Chromium	406C1R3	6.57e+2	ug/g	6.60e+0	lbs/hr	CC
Chromium	406C1R4	9.76e+2	ug/g	9.60e+0	lbs/hr	CC
Chromium	406C1R5	1.40e+3	ug/g	1.11e+1	lbs/hr	CE
Chromium	406C1R6	1.50e+3	ug/g	1.19e+1	lbs/hr	CE
Chromium	406C1R7	1.20e+3	ug/g	8.64e+0	lbs/hr	CE
Chromium	406C1R8	1.40e+3	ug/g	1.01e+1	lbs/hr	CE
Lead	406C1R1	2.08e+3	ug/g	2.10e+1	lbs/hr	CC
Lead	406C1R2	2.67e+3	ug/g	2.30e+1	lbs/hr	CC
Lead	406C1R3	1.89e+3	ug/g	1.90e+1	lbs/hr	CC
Lead	406C1R4	2.44e+3	ug/g	2.40e+1	lbs/hr	CC
Lead	406C1R5	3.30e+3	ug/g	2.61e+1	lbs/hr	CE
Lead	406C1R6	2.60e+3	ug/g	2.07e+1	lbs/hr	CE
Lead	406C1R7	2.80e+3	ug/g	2.02e+1	lbs/hr	CE
Lead	406C1R8	3.00e+3	ug/g	2.17e+1	lbs/hr	CE
Mercury	406C1R1	1.98e-1	ug/g	2.00e-3	lbs/hr	CC
Mercury	406C1R2	ND 2.33e-1	ug/g	2.00e-3	lbs/hr	CC
Mercury	406C1R3	ND 1.99e-1	ug/g	2.00e-3	lbs/hr	CC
Mercury	406C1R4	ND 2.03e-1	ug/g	2.00e-3	lbs/hr	CC
Mercury	406C1R5	3.10e-1	ug/g	2.45e-3	lbs/hr	CE
Mercury	406C1R6	3.80e-1	ug/g	3.02e-3	lbs/hr	CE
Mercury	406C1R7	3.00e-1	ug/g	2.16e-3	lbs/hr	CE
Mercury	406C1R8	2.20e-1	ug/g	1.59e-3	lbs/hr	CE
Silver	406C1R1	ND 5.94e-1	ug/g	6.00e-3	lbs/hr	CC
Silver	406C1R2	ND 5.81e-2	ug/g	5.00e-4	lbs/hr	CC
Silver	406C1R3	7.97e-1	ug/g	8.00e-3	lbs/hr	CC
Silver	406C1R4	ND 6.10e-1	ug/g	6.00e-3	lbs/hr	CC
Silver	406C1R5	ND 6.00e+0	ug/g	4.74e-2	lbs/hr	CE
Silver	406C1R6	ND 6.00e+0	ug/g	4.78e-2	lbs/hr	CE
Silver	406C1R7	ND 6.00e+0	ug/g	4.32e-2	lbs/hr	CE
Silver	406C1R8	ND 6.00e+0	ug/g	4.34e-2	lbs/hr	CE
Thallium	406C1R1	ND 3.96e+0	ug/g	4.00e-2	lbs/hr	CC
Thallium	406C1R2	ND 3.49e+0	ug/g	3.00e-2	lbs/hr	CC
Thallium	406C1R3	ND 3.98e+0	ug/g	4.00e-2	lbs/hr	CC
Thallium	406C1R4	ND 4.07e+0	ug/g	4.00e-2	lbs/hr	CC
Thallium	406C1R5	ND 1.00e+1	ug/g	7.90e-2	lbs/hr	CE
Thallium	406C1R6	ND 1.00e+1	ug/g	7.96e-2	lbs/hr	CE
Thallium	406C1R7	ND 1.00e+1	ug/g	7.20e-2	lbs/hr	CE
Thallium	406C1R8	ND 1.00e+1	ug/g	7.24e-2	lbs/hr	CE

US EPA ARCHIVE DOCUMENT



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
1,1,1-Trichloroethane	406C2R1	1.80e+4	ug/g	1.76e+2 lbs/hr	CC
1,1,1-Trichloroethane	406C2R2	2.20e+4	ug/g	2.20e+2 lbs/hr	CC
1,1,1-Trichloroethane	406C2R3	1.90e+4	ug/g	1.83e+2 lbs/hr	CC
1,1,1-Trichloroethane	406C2R4	1.60e+4	ug/g	1.42e+2 lbs/hr	CC
Tetrachloroethene	406C2R1	1.30e+4	ug/g	1.27e+2 lbs/hr	CC
Tetrachloroethene	406C2R2	1.20e+4	ug/g	1.20e+2 lbs/hr	CC
Tetrachloroethene	406C2R3	1.39e+4	ug/g	1.34e+2 lbs/hr	CC
Tetrachloroethene	406C2R4	1.30e+4	ug/g	1.15e+2 lbs/hr	CC

6. Description:

Group: DRY KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	406C1R1	2.01e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C1R2	2.01e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C1R3	2.02e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C1R4	2.05e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C1R5	7.04e+3	ug/g	2.80e+1 lbs/hr	CC
Chlorine	406C1R6	8.00e+3	ug/g	3.20e+1 lbs/hr	CC
Chlorine	406C1R7	1.81e+4	ug/g	7.20e+1 lbs/hr	CC
Chlorine	406C1R8	4.00e+3	ug/g	1.60e+1 lbs/hr	CC
Chlorine	406C2R1	2.01e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C2R2	2.01e+3	ug/g	8.00e+0 lbs/hr	CC
Chlorine	406C2R3	3.02e+3	ug/g	1.20e+1 lbs/hr	CC
Chlorine	406C2R4	3.02e+3	ug/g	1.20e+1 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	406C1R1	4.02e+0	ug/g	1.60e-2 lbs/hr	CC
Antimony	406C1R2	1.01e+1	ug/g	4.00e-2 lbs/hr	CC
Antimony	406C1R3	1.21e+1	ug/g	4.80e-2 lbs/hr	CC
Antimony	406C1R4	1.41e+1	ug/g	5.50e-2 lbs/hr	CC
Antimony	406C1R5	ND 3.00e+1	ug/g	1.19e-1 lbs/hr	CE
Antimony	406C1R6	ND 3.00e+1	ug/g	1.20e-1 lbs/hr	CE
Antimony	406C1R7	5.20e+1	ug/g	2.07e-1 lbs/hr	CE
Antimony	406C1R8	ND 3.00e+2	ug/g	1.20e+0 lbs/hr	CE
Arsenic	406C1R1	7.04e+1	ug/g	2.80e-1 lbs/hr	CC
Arsenic	406C1R2	6.53e+1	ug/g	2.60e-1 lbs/hr	CC
Arsenic	406C1R3	8.59e+1	ug/g	3.40e-1 lbs/hr	CC
Arsenic	406C1R4	6.15e+1	ug/g	2.40e-1 lbs/hr	CC
Arsenic	406C1R5	ND 3.00e+1	ug/g	1.19e-1 lbs/hr	CE
Arsenic	406C1R6	ND 3.00e+1	ug/g	1.20e-1 lbs/hr	CE
Arsenic	406C1R7	ND 3.00e+1	ug/g	1.19e-1 lbs/hr	CE
Arsenic	406C1R8	ND 3.00e+2	ug/g	1.20e+0 lbs/hr	CE
Barium	406C1R1	6.53e+2	ug/g	2.60e+0 lbs/hr	CC
Barium	406C1R2	7.04e+2	ug/g	2.80e+0 lbs/hr	CC
Barium	406C1R3	9.85e+2	ug/g	3.90e+0 lbs/hr	CC
Barium	406C1R4	7.18e+2	ug/g	2.80e+0 lbs/hr	CC
Barium	406C1R5	4.90e+3	ug/g	1.95e+1 lbs/hr	CE
Barium	406C1R6	9.80e+2	ug/g	3.92e+0 lbs/hr	CE
Barium	406C1R7	2.20e+3	ug/g	8.76e+0 lbs/hr	CE
Barium	406C1R8	3.90e+3	ug/g	1.56e+1 lbs/hr	CE
Beryllium	406C1R1	2.51e-1	ug/g	1.00e-3 lbs/hr	CC
Beryllium	406C1R2	2.51e-1	ug/g	1.00e-3 lbs/hr	CC
Beryllium	406C1R3	5.05e-1	ug/g	2.00e-3 lbs/hr	CC
Beryllium	406C1R4	5.13e-1	ug/g	2.00e-3 lbs/hr	CC
Beryllium	406C1R5	ND 5.00e+0	ug/g	1.99e-2 lbs/hr	CE
Beryllium	406C1R6	ND 5.00e+0	ug/g	2.00e-2 lbs/hr	CE
Beryllium	406C1R7	ND 5.00e+0	ug/g	1.99e-2 lbs/hr	CE
Beryllium	406C1R8	ND 6.00e+1	ug/g	2.40e-1 lbs/hr	CE
Cadmium	406C1R1	6.53e+0	ug/g	2.60e-2 lbs/hr	CC



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ASH GROVE CEMENT COMPANY  
 2. STATE: NE  
 3. CITY: LOUISVILLE  
 4. EP ID: 406 DEVICE NAME: KILN NO. 2

EPA ID: NED007260672  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP REGION: 7

Cadmium	406C1R2		5.53e+0	ug/g	2.20e-2	lbs/hr	CC
Cadmium	406C1R3		8.33e+0	ug/g	3.30e-2	lbs/hr	CC
Cadmium	406C1R4		6.92e+0	ug/g	2.70e-2	lbs/hr	CC
Cadmium	406C1R5		1.80e+1	ug/g	7.16e-2	lbs/hr	CE
Cadmium	406C1R6	ND	4.00e+0	ug/g	1.60e-2	lbs/hr	CE
Cadmium	406C1R7		8.00e+0	ug/g	3.18e-2	lbs/hr	CE
Cadmium	406C1R8	ND	1.00e+2	ug/g	4.00e-1	lbs/hr	CE
Chromium	406C1R1		4.90e+2	ug/g	1.95e+0	lbs/hr	CC
Chromium	406C1R2		4.90e+2	ug/g	1.95e+0	lbs/hr	CC
Chromium	406C1R3		6.79e+2	ug/g	2.69e+0	lbs/hr	CC
Chromium	406C1R4		4.90e+2	ug/g	1.91e+0	lbs/hr	CC
Chromium	406C1R5		1.00e+3	ug/g	3.98e+0	lbs/hr	CE
Chromium	406C1R6		1.60e+2	ug/g	6.40e-1	lbs/hr	CE
Chromium	406C1R7		4.50e+2	ug/g	1.79e+0	lbs/hr	CE
Chromium	406C1R8		2.80e+3	ug/g	1.12e+1	lbs/hr	CE
Lead	406C1R1		6.53e+2	ug/g	2.60e+0	lbs/hr	CC
Lead	406C1R2		6.03e+2	ug/g	2.40e+0	lbs/hr	CC
Lead	406C1R3		9.09e+2	ug/g	3.60e+0	lbs/hr	CC
Lead	406C1R4		6.92e+2	ug/g	2.70e+0	lbs/hr	CC
Lead	406C1R5		9.00e+2	ug/g	3.58e+0	lbs/hr	CE
Lead	406C1R6		1.50e+2	ug/g	6.00e-1	lbs/hr	CE
Lead	406C1R7		1.00e+3	ug/g	3.98e+0	lbs/hr	CE
Lead	406C1R8		1.20e+4	ug/g	4.80e+1	lbs/hr	CE
Mercury	406C1R1		1.08e+1	ug/g	4.30e-2	lbs/hr	CC
Mercury	406C1R2		0.00e+0		0.00e+0		
Mercury	406C1R3		1.39e+1	ug/g	5.50e-2	lbs/hr	CC
Mercury	406C1R4		1.51e+1	ug/g	5.90e-2	lbs/hr	CC
Mercury	406C1R5		2.20e+0	ug/g	8.76e-3	lbs/hr	CE
Mercury	406C1R6		8.40e+0	ug/g	3.36e-2	lbs/hr	CE
Mercury	406C1R7		1.00e+0	ug/g	3.98e-3	lbs/hr	CE
Mercury	406C1R8		4.00e-1	ug/g	1.60e-3	lbs/hr	CE
Silver	406C1R1		4.77e+0	ug/g	1.90e-2	lbs/hr	CC
Silver	406C1R2		4.77e+0	ug/g	1.90e-2	lbs/hr	CC
Silver	406C1R3		6.82e+0	ug/g	2.70e-2	lbs/hr	CC
Silver	406C1R4		4.87e+0	ug/g	1.90e-2	lbs/hr	CC
Silver	406C1R5	ND	1.00e+1	ug/g	3.98e-2	lbs/hr	CE
Silver	406C1R6	ND	1.00e+1	ug/g	4.00e-2	lbs/hr	CE
Silver	406C1R7	ND	1.00e+1	ug/g	3.98e-2	lbs/hr	CE
Silver	406C1R8	ND	1.00e+2	ug/g	4.00e-1	lbs/hr	CE
Thallium	406C1R1	ND	2.01e-1	ug/g	8.00e-4	lbs/hr	CC
Thallium	406C1R2	ND	2.01e-1	ug/g	8.00e-4	lbs/hr	CC
Thallium	406C1R3		2.02e-1	ug/g	8.00e-4	lbs/hr	CC
Thallium	406C1R4		2.56e-1	ug/g	1.00e-3	lbs/hr	CC
Thallium	406C1R5	ND	4.00e+1	ug/g	1.59e-1	lbs/hr	CE
Thallium	406C1R6	ND	4.00e+1	ug/g	1.60e-1	lbs/hr	CE
Thallium	406C1R7	ND	4.00e+1	ug/g	1.59e-1	lbs/hr	CE
Thallium	406C1R8	ND	1.00e+2	ug/g	4.00e-1	lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,2,4-Trichlorobenzene	406C2R1	2.58e+4 ug/g	1.03e+2 lbs/hr	CC
1,2,4-Trichlorobenzene	406C2R2	2.40e+4 ug/g	9.54e+1 lbs/hr	CC
1,2,4-Trichlorobenzene	406C2R3	2.72e+4 ug/g	1.08e+2 lbs/hr	CC
1,2,4-Trichlorobenzene	406C2R4	2.73e+4 ug/g	1.08e+2 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	406C2R1	2.33e+4 ug/g	9.29e+1 lbs/hr	CC
1,1,1-Trichloroethane	406C2R2	2.01e+4 ug/g	8.02e+1 lbs/hr	CC
1,1,1-Trichloroethane	406C2R3	2.33e+4 ug/g	9.29e+1 lbs/hr	CC
1,1,1-Trichloroethane	406C2R4	2.13e+4 ug/g	8.49e+1 lbs/hr	CC

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: CONTINENTAL CEMENT COMPANY  
 2. STATE: MO  
 3. CITY: HANNIBAL  
 4. EP ID: 319 DEVICE NAME: KILN NO. 1

EPA ID: MOD054018288  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

5. Type: CLINKER

6. Description: PRODUCT  
 Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	319C1	ND	1.00e+2 ug/g	0.00e+0	
Chlorine	319C2	ND	1.00e+2 ug/g	0.00e+0	
Chlorine	319C3	ND	1.00e+2 ug/g	0.00e+0	
Chlorine	319C4	ND	1.00e+2 ug/g	0.00e+0	

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	319C1		3.68e+0 ug/g	5.64e-1 lbs/hr	
Arsenic	319C1		1.01e+2 ug/g	1.55e+1 lbs/hr	
Barium	319C1		2.64e+2 ug/g	4.05e+1 lbs/hr	
Beryllium	319C1		8.77e+0 ug/g	1.35e+0 lbs/hr	
Cadmium	319C1		1.72e+0 ug/g	2.64e-1 lbs/hr	
Chromium	319C1		4.83e+2 ug/g	7.40e+1 lbs/hr	
Lead	319C1		1.23e+1 ug/g	1.89e+0 lbs/hr	
Mercury	319C1	ND	1.00e-1 ug/g	1.53e-2 lbs/hr	
Silver	319C1		2.01e+0 ug/g	3.08e-1 lbs/hr	
Thallium	319C1	ND	6.90e-1 ug/g	1.06e-1 lbs/hr	

5. Type: ESP ASH

6. Description: RECYCLE  
 Group: WET KILN

Location: ESP

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	319C1		1.22e+4 ug/g	0.00e+0	
Chlorine	319C2		2.02e+4 ug/g	0.00e+0	
Chlorine	319C4		2.19e+4 ug/g	0.00e+0	

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	319C1		3.25e+0 ug/g	0.00e+0	
Arsenic	319C1		1.13e+2 ug/g	0.00e+0	
Barium	319C1		1.68e+2 ug/g	0.00e+0	
Beryllium	319C1		5.21e+0 ug/g	0.00e+0	
Cadmium	319C1		1.79e+2 ug/g	0.00e+0	
Chromium	319C1		3.30e+2 ug/g	0.00e+0	
Lead	319C1		1.42e+3 ug/g	0.00e+0	
Mercury	319C1	ND	1.00e-1 ug/g	0.00e+0	
Silver	319C1		6.00e+0 ug/g	0.00e+0	
Thallium	319C1		9.62e-1 ug/g	0.00e+0	

6. Description: NONRECYCLE  
 Group: WET KILN

Location: ESP

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	319C1		1.79e+4 ug/g	0.00e+0	
Chlorine	319C2		3.46e+4 ug/g	0.00e+0	

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: CONTINENTAL CEMENT COMPANY  
 2. STATE: MO  
 3. CITY: HANNIBAL  
 4. EP ID: 319 DEVICE NAME: KILN NO. 1

EPA ID: MOD054018288  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

Chlorine	319C4	2.89e+4	ug/g	0.00e+0	
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7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	319C1	3.42e+0	ug/g	1.22e-1 lbs/hr	
Arsenic	319C1	1.32e+2	ug/g	4.73e+0 lbs/hr	
Barium	319C1	1.93e+2	ug/g	6.91e+0 lbs/hr	
Beryllium	319C1	7.21e+0	ug/g	2.59e-1 lbs/hr	
Cadmium	319C1	2.81e+2	ug/g	1.01e+1 lbs/hr	
Chromium	319C1	3.83e+2	ug/g	1.37e+1 lbs/hr	
Lead	319C1	2.03e+3	ug/g	7.27e+1 lbs/hr	
Mercury	319C1	ND	1.00e-1 ug/g	3.58e-3 lbs/hr	
Silver	319C1	8.45e+0	ug/g	1.61e-2 lbs/hr	
Thallium	319C1	1.23e+0	ug/g	4.40e-2 lbs/hr	

5. Type: FUEL

6. Description: COAL

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	319C1	2.55e+3	ug/g	1.74e+1 lbs/hr	
Chlorine	319C2	2.61e+3	ug/g	3.13e+1 lbs/hr	CE
Chlorine	319C4	1.51e+3	ug/g	1.51e+1 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	319C1	8.26e-1	ug/g	9.52e-3 lbs/hr	
Arsenic	319C1	3.78e+0	ug/g	4.36e-2 lbs/hr	
Barium	319C1	9.22e+1	ug/g	1.06e+0 lbs/hr	
Beryllium	319C1	2.28e+0	ug/g	2.63e-2 lbs/hr	
Cadmium	319C1	ND	2.50e-1 ug/g	2.88e-3 lbs/hr	
Chromium	319C1	1.67e+1	ug/g	1.93e-1 lbs/hr	
Lead	319C1	1.03e+1	ug/g	1.19e-1 lbs/hr	
Mercury	319C1	ND	1.00e-1 ug/g	1.15e-3 lbs/hr	
Silver	319C1	ND	2.50e-1 ug/g	2.88e-3 lbs/hr	
Thallium	319C1	ND	8.26e-3 ug/g	8.26e-5 lbs/hr	CE

5. Type: RAW MATERIAL

6. Description: LIMESTONE/SHALE

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	319C1	4.69e+2	ug/g	1.87e+2 lbs/hr	
Chlorine	319C2	4.25e+2	ug/g	0.00e+0	
Chlorine	319C4	4.64e+2	ug/g	0.00e+0	

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	319C1	ND	5.93e-1 ug/g	2.39e-1 lbs/hr	
Arsenic	319C1	ND	6.00e-1 ug/g	2.42e-1 lbs/hr	

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: CONTINENTAL CEMENT COMPANY  
 2. STATE: MO  
 3. CITY: HANNIBAL  
 4. EP ID: 319 DEVICE NAME: KILN NO. 1

EPA MOD054018288  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

Substance	Run ID	Concentration	Mass Rate
Barium	319C1	4.35e+1 ug/g	1.76e+1 lbs/hr
Beryllium	319C1	4.30e-1 ug/g	1.74e-1 lbs/hr
Cadmium	319C1	ND 1.06e+0 ug/g	4.28e-1 lbs/hr
Chromium	319C1	1.16e+1 ug/g	4.68e+0 lbs/hr
Lead	319C1	2.55e+0 ug/g	1.03e+0 lbs/hr
Mercury	319C1	ND 1.00e-1 ug/g	4.04e-2 lbs/hr
Silver	319C1	ND 1.06e+0 ug/g	4.28e-1 lbs/hr
Thallium	319C1	ND 6.00e-1 ug/g	2.42e-1 lbs/hr

5. Type: WASTE

6. Description: Group: WET KILN Location: KILN Phase: SLUDGE

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	319C1	1.81e+4 ug/g	7.47e+2 lbs/hr	
Chlorine	319C2	2.21e+4 ug/g	5.30e+2 lbs/hr	CE
Chlorine	319C4	3.20e+4 ug/g	8.00e+2 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	319C1	2.85e+1 ug/g	6.66e-1 lbs/hr	
Arsenic	319C1	6.93e+0 ug/g	1.62e-1 lbs/hr	
Barium	319C1	5.34e+2 ug/g	1.25e+1 lbs/hr	
Beryllium	319C1	7.40e-1 ug/g	1.73e-2 lbs/hr	
Cadmium	319C1	6.25e+0 ug/g	1.46e-1 lbs/hr	
Chromium	319C1	1.68e+2 ug/g	3.92e+0 lbs/hr	
Lead	319C1	5.06e+2 ug/g	1.18e+1 lbs/hr	
Mercury	319C1	ND 1.00e-1 ug/g	2.33e-3 lbs/hr	
Silver	319C1	5.59e+0 ug/g	1.31e-1 lbs/hr	
Thallium	319C1	ND 7.39e+0 ug/g	1.72e-1 lbs/hr	

6. Description: CONTAINERIZED  
 Group: WET KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	319C1	3.17e+3 ug/g	3.09e+1 lbs/hr	
Chlorine	319C2	2.12e+3 ug/g	0.00e+0	
Chlorine	319C4	2.86e+4 ug/g	0.00e+0	

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	319C1	ND 7.39e-1 ug/g	1.00e-3 lbs/hr	
Arsenic	319C1	1.70e+0 ug/g	1.84e-3 lbs/hr	
Barium	319C1	1.08e+2 ug/g	1.17e-1 lbs/hr	
Beryllium	319C1	9.86e-1 ug/g	1.07e-3 lbs/hr	
Cadmium	319C1	6.33e+0 ug/g	6.86e-3 lbs/hr	
Chromium	319C1	4.13e+1 ug/g	4.47e-2 lbs/hr	
Lead	319C1	1.91e+2 ug/g	2.07e-1 lbs/hr	
Mercury	319C1	ND 1.00e-1 ug/g	1.08e-4 lbs/hr	
Silver	319C1	1.29e+0 ug/g	1.40e-3 lbs/hr	
Thallium	319C1	2.62e+0 ug/g	1.42e-3 lbs/hr	

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: CONTINENTAL CEMENT COMPANY  
 2. STATE: MO  
 3. CITY: HANNIBAL  
 4. EP ID: 319 DEVICE NAME: KILN NO. 1

EPA ID: MOD054018288  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 7

6. Description: Group: WET KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	319C1	2.52e+3 ug/g	1.59e+1 lbs/hr	
Chlorine	319C2	4.96e+3 ug/g	0.00e+0	
Chlorine	319C4	3.45e+3 ug/g	0.00e+0	

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	319C1	1.68e+1 ug/g	7.75e-2 lbs/hr	
Arsenic	319C1	4.31e+0 ug/g	1.99e-2 lbs/hr	
Barium	319C1	1.12e+2 ug/g	5.17e-1 lbs/hr	
Beryllium	319C1	2.17e+0 ug/g	1.00e-2 lbs/hr	
Cadmium	319C1	1.73e+0 ug/g	7.99e-3 lbs/hr	
Chromium	319C1	1.00e+3 ug/g	4.62e+0 lbs/hr	
Lead	319C1	1.64e+2 ug/g	7.57e-1 lbs/hr	
Mercury	319C1	ND 1.00e-1 ug/g	4.61e-4 lbs/hr	
Silver	319C1	5.06e-1 ug/g	2.34e-3 lbs/hr	
Thallium	319C1	ND 7.39e-1 ug/g	3.41e-3 lbs/hr	

6. Description: H.W LIQ Group: WET KILN Location: KILN Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	319C6R1	1.83e+4 ug/g	2.89e+2 lbs/hr	CE
Chlorine	319C6R2	1.57e+4 ug/g	2.89e+2 lbs/hr	CE
Chlorine	319C6R3	1.66e+4 ug/g	3.32e+2 lbs/hr	CE
Chlorine	319C8	1.72e+4 ug/g	2.13e+2 lbs/hr	CE

6. Description: POWDERED Group: WET KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	319C6R1	1.01e+4 ug/g	9.29e+1 lbs/hr	CE
Chlorine	319C6R2	1.35e+4 ug/g	1.08e+2 lbs/hr	CE
Chlorine	319C6R3	1.60e+4 ug/g	1.25e+2 lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPORT

EPA ID: IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

5. Type: CLINKER

6. Description: PRODUCT

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	300C2R1	3.00e+3 ug/g	1.76e+2 lbs/hr	CC
Chlorine	300C2R2	1.90e+3 ug/g	1.15e+2 lbs/hr	CC
Chlorine	300C2R3	1.40e+3 ug/g	8.34e+1 lbs/hr	CC
Chlorine	300C2R4	1.40e+3 ug/g	8.29e+1 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	300C2R1	3.20e+0 ug/g	1.87e-1 lbs/hr	CC
Antimony	300C2R2	3.15e+1 ug/g	1.91e+0 lbs/hr	CC
Antimony	300C2R3	2.00e+0 ug/g	1.19e-1 lbs/hr	CC
Antimony	300C2R4	4.69e+0 ug/g	2.78e-1 lbs/hr	CC
Arsenic	300C2R1	2.15e+2 ug/g	1.26e+1 lbs/hr	CC
Arsenic	300C2R2	2.14e+2 ug/g	1.30e+1 lbs/hr	CC
Arsenic	300C2R3	8.63e+2 ug/g	5.14e+1 lbs/hr	CC
Arsenic	300C2R4	7.33e+2 ug/g	4.34e+1 lbs/hr	CC
Barium	300C2R1	9.75e+1 ug/g	5.71e+0 lbs/hr	CC
Barium	300C2R2	1.05e+2 ug/g	6.37e+0 lbs/hr	CC
Barium	300C2R3	1.24e+2 ug/g	7.40e+0 lbs/hr	CC
Barium	300C2R4	1.13e+2 ug/g	6.70e+0 lbs/hr	CC
Beryllium	300C2R1	5.49e+0 ug/g	3.22e-1 lbs/hr	CC
Beryllium	300C2R2	6.44e+0 ug/g	3.90e-1 lbs/hr	CC
Beryllium	300C2R3	7.95e+0 ug/g	4.74e-1 lbs/hr	CC
Beryllium	300C2R4	7.15e+0 ug/g	4.23e-1 lbs/hr	CC
Cadmium	300C2R1	8.28e-1 ug/g	4.85e-2 lbs/hr	CC
Cadmium	300C2R2	8.37e-1 ug/g	5.07e-2 lbs/hr	CC
Cadmium	300C2R3	1.11e+0 ug/g	6.61e-2 lbs/hr	CC
Cadmium	300C2R4	8.57e-1 ug/g	5.07e-2 lbs/hr	CC
Chromium	300C2R1	2.27e+2 ug/g	1.33e+1 lbs/hr	CC
Chromium	300C2R2	3.69e+2 ug/g	2.24e+1 lbs/hr	CC
Chromium	300C2R3	3.19e+2 ug/g	1.90e+1 lbs/hr	CC
Chromium	300C2R4	2.99e+2 ug/g	1.77e+1 lbs/hr	CC
Lead	300C2R1	8.80e+0 ug/g	5.16e-1 lbs/hr	CC
Lead	300C2R2	4.00e+0 ug/g	2.43e-1 lbs/hr	CC
Lead	300C2R3	4.81e+0 ug/g	2.87e-1 lbs/hr	CC
Lead	300C2R4	4.06e+0 ug/g	2.40e-1 lbs/hr	CC
Mercury	300C2R1	ND 1.13e-1 ug/g	6.61e-3 lbs/hr	CC
Mercury	300C2R2	ND 7.28e-2 ug/g	4.41e-3 lbs/hr	CC
Mercury	300C2R3	ND 1.11e-1 ug/g	6.61e-3 lbs/hr	CC
Mercury	300C2R4	ND 7.45e-2 ug/g	4.41e-3 lbs/hr	CC
Silver	300C2R1	7.52e-2 ug/g	4.41e-3 lbs/hr	CC
Silver	300C2R2	ND 7.28e-2 ug/g	4.41e-3 lbs/hr	CC
Silver	300C2R3	7.40e-2 ug/g	4.41e-3 lbs/hr	CC
Silver	300C2R4	7.45e-2 ug/g	4.41e-3 lbs/hr	CC
Thallium	300C2R1	ND 1.88e-1 ug/g	1.10e-2 lbs/hr	CC
Thallium	300C2R2	ND 1.46e-1 ug/g	8.82e-3 lbs/hr	CC
Thallium	300C2R3	ND 1.85e-1 ug/g	1.10e-2 lbs/hr	CC
Thallium	300C2R4	ND 1.49e-1 ug/g	8.82e-3 lbs/hr	CC

5. Type: ESP ASH

6. Description: NONRECYCLE

Group: WET KILN

Location: ESP

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	300C2R1	5.60e+4 ug/g	6.00e+2 lbs/hr	CC
Chlorine	300C2R2	5.50e+4 ug/g	4.81e+2 lbs/hr	CC

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPORT

EPA ID: IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Chlorine	300C2R3	4.70e+4	ug/g	4.11e+2	lbs/hr	CC
Chlorine	300C2R4	4.80e+4	ug/g	4.20e+2	lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Antimony	300C2R1	2.69e+1	ug/g	2.89e-1	lbs/hr	CC
Antimony	300C2R2	1.29e+2	ug/g	1.13e+0	lbs/hr	CC
Antimony	300C2R3	2.42e+1	ug/g	2.12e-1	lbs/hr	CC
Antimony	300C2R4	2.67e+1	ug/g	2.34e-1	lbs/hr	CC
Arsenic	300C2R1	1.01e+2	ug/g	1.08e+0	lbs/hr	CC
Arsenic	300C2R2	1.29e+2	ug/g	1.13e+0	lbs/hr	CC
Arsenic	300C2R3	2.16e+2	ug/g	1.89e+0	lbs/hr	CC
Arsenic	300C2R4	2.67e+2	ug/g	2.33e+0	lbs/hr	CC
Barium	300C2R1	1.06e+2	ug/g	1.14e+0	lbs/hr	CC
Barium	300C2R2	1.12e+2	ug/g	9.79e-1	lbs/hr	CC
Barium	300C2R3	8.98e+1	ug/g	7.85e-1	lbs/hr	CC
Barium	300C2R4	7.87e+1	ug/g	6.88e-1	lbs/hr	CC
Beryllium	300C2R1	5.14e+0	ug/g	5.51e-2	lbs/hr	CC
Beryllium	300C2R2	4.29e+0	ug/g	3.75e-2	lbs/hr	CC
Beryllium	300C2R3	4.79e+0	ug/g	4.19e-2	lbs/hr	CC
Beryllium	300C2R4	6.31e+0	ug/g	5.51e-2	lbs/hr	CC
Cadmium	300C2R1	3.74e+1	ug/g	4.01e-1	lbs/hr	CC
Cadmium	300C2R2	3.38e+1	ug/g	2.95e-1	lbs/hr	CC
Cadmium	300C2R3	2.19e+1	ug/g	1.92e-1	lbs/hr	CC
Cadmium	300C2R4	2.35e+1	ug/g	2.05e-1	lbs/hr	CC
Chromium	300C2R1	9.11e+1	ug/g	9.77e-1	lbs/hr	CC
Chromium	300C2R2	9.69e+1	ug/g	8.47e-1	lbs/hr	CC
Chromium	300C2R3	8.05e+1	ug/g	7.03e-1	lbs/hr	CC
Chromium	300C2R4	7.79e+1	ug/g	6.81e-1	lbs/hr	CC
Lead	300C2R1	4.28e+3	ug/g	4.59e+1	lbs/hr	CC
Lead	300C2R2	4.42e+3	ug/g	3.86e+1	lbs/hr	CC
Lead	300C2R3	3.67e+3	ug/g	3.21e+1	lbs/hr	CC
Lead	300C2R4	3.87e+3	ug/g	3.39e+1	lbs/hr	CC
Mercury	300C2R1	4.11e-1	ug/g	4.41e-3	lbs/hr	CC
Mercury	300C2R2	5.04e-1	ug/g	4.41e-3	lbs/hr	CC
Mercury	300C2R3	2.52e-1	ug/g	2.20e-3	lbs/hr	CC
Mercury	300C2R4	2.52e-1	ug/g	2.20e-3	lbs/hr	CC
Silver	300C2R1	2.67e+0	ug/g	2.87e-2	lbs/hr	CC
Silver	300C2R2	3.28e+0	ug/g	2.87e-2	lbs/hr	CC
Silver	300C2R3	2.77e+0	ug/g	2.43e-2	lbs/hr	CC
Silver	300C2R4	2.27e+0	ug/g	1.98e-2	lbs/hr	CC
Thallium	300C2R1	1.44e+0	ug/g	1.54e-2	lbs/hr	CC
Thallium	300C2R2	1.26e+0	ug/g	1.10e-2	lbs/hr	CC
Thallium	300C2R3	7.57e-1	ug/g	6.61e-3	lbs/hr	CC
Thallium	300C2R4	1.77e+0	ug/g	1.54e-2	lbs/hr	CC

6. Description: RECYCLE

Group: WET KILN

Location: ESP

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	300C2R1	4.60e+4	ug/g	2.65e+2	lbs/hr	CC
Chlorine	300C2R2	5.80e+4	ug/g	1.55e+2	lbs/hr	CC
Chlorine	300C2R3	5.40e+4	ug/g	1.02e+2	lbs/hr	CC
Chlorine	300C2R4	4.70e+4	ug/g	2.54e+2	lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Antimony	300C2R1	2.79e+1	ug/g	1.61e-1	lbs/hr	CC
Antimony	300C2R2	1.36e+2	ug/g	3.64e-1	lbs/hr	CC
Antimony	300C2R3	4.10e+1	ug/g	7.72e-2	lbs/hr	CC
Antimony	300C2R4	8.98e+0	ug/g	4.85e-2	lbs/hr	CC
Arsenic	300C2R1	1.41e+2	ug/g	8.13e-1	lbs/hr	CC

US EPA ARCHIVE DOCUMENT



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPORT

EPA IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Arsenic	300C2R2	1.36e+2	ug/g	3.64e-1	lbs/hr	CC
Arsenic	300C2R3	2.92e+2	ug/g	5.49e-1	lbs/hr	CC
Arsenic	300C2R4	1.44e+2	ug/g	7.78e-1	lbs/hr	CC
Barium	300C2R1	8.65e+1	ug/g	4.98e-1	lbs/hr	CC
Barium	300C2R2	1.06e+2	ug/g	2.84e-1	lbs/hr	CC
Barium	300C2R3	8.91e+1	ug/g	1.68e-1	lbs/hr	CC
Barium	300C2R4	1.47e+1	ug/g	7.94e-2	lbs/hr	CC
Beryllium	300C2R1	1.53e+0	ug/g	8.82e-3	lbs/hr	CC
Beryllium	300C2R2	1.65e+0	ug/g	4.41e-3	lbs/hr	CC
Beryllium	300C2R3	1.17e+0	ug/g	2.20e-3	lbs/hr	CC
Beryllium	300C2R4	8.17e-1	ug/g	4.41e-3	lbs/hr	CC
Cadmium	300C2R1	2.95e+1	ug/g	1.70e-1	lbs/hr	CC
Cadmium	300C2R2	3.37e+1	ug/g	9.04e-2	lbs/hr	CC
Cadmium	300C2R3	2.81e+1	ug/g	5.29e-2	lbs/hr	CC
Cadmium	300C2R4	3.67e+0	ug/g	1.98e-2	lbs/hr	CC
Chromium	300C2R1	1.03e+2	ug/g	5.93e-1	lbs/hr	CC
Chromium	300C2R2	9.87e+1	ug/g	2.65e-1	lbs/hr	CC
Chromium	300C2R3	9.15e+1	ug/g	1.72e-1	lbs/hr	CC
Chromium	300C2R4	1.55e+1	ug/g	8.38e-2	lbs/hr	CC
Lead	300C2R1	3.29e+3	ug/g	1.89e+1	lbs/hr	CC
Lead	300C2R2	4.40e+3	ug/g	1.18e+1	lbs/hr	CC
Lead	300C2R3	4.28e+3	ug/g	8.04e+0	lbs/hr	CC
Lead	300C2R4	5.92e+2	ug/g	3.19e+0	lbs/hr	CC
Mercury	300C2R1	0.00e+0		0.00e+0		
Mercury	300C2R2	0.00e+0		0.00e+0		
Mercury	300C2R3	0.00e+0		0.00e+0		
Mercury	300C2R4	0.00e+0		0.00e+0		
Silver	300C2R1	1.91e+0	ug/g	1.10e-2	lbs/hr	CC
Silver	300C2R2	3.29e+0	ug/g	8.82e-3	lbs/hr	CC
Silver	300C2R3	3.52e+0	ug/g	6.61e-3	lbs/hr	CC
Silver	300C2R4	8.17e-1	ug/g	4.41e-3	lbs/hr	CC
Thallium	300C2R1	1.15e+0	ug/g	6.61e-3	lbs/hr	CC
Thallium	300C2R2	1.65e+0	ug/g	4.41e-3	lbs/hr	CC
Thallium	300C2R3	1.17e+0	ug/g	2.20e-3	lbs/hr	CC
Thallium	300C2R4	1.22e+0	ug/g	6.61e-3	lbs/hr	CC

5. Type: FUEL

6. Description: COAL

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	300C1R1	4.00e+2	ug/g	1.15e+0	lbs/hr	CC
Chlorine	300C1R2	3.00e+2	ug/g	8.64e-1	lbs/hr	CC
Chlorine	300C1R3	3.00e+2	ug/g	8.58e-1	lbs/hr	CC
Chlorine	300C1R4	4.00e+2	ug/g	1.44e+0	lbs/hr	CC
Chlorine	300C2R1	3.00e+2	ug/g	1.98e-1	lbs/hr	CC
Chlorine	300C2R2	4.00e+2	ug/g	1.68e-1	lbs/hr	CC
Chlorine	300C2R3	3.00e+2	ug/g	5.28e-1	lbs/hr	CC
Chlorine	300C2R4	4.00e+2	ug/g	1.60e-1	lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Antimony	300C2R1	ND	4.47e-1	ug/g	2.95e-4	lbs/hr	CE
Antimony	300C2R2	ND	4.04e-4	ug/g	1.70e-7	lbs/hr	CE
Antimony	300C2R3	ND	4.13e-1	ug/g	7.27e-4	lbs/hr	CE
Antimony	300C2R4	ND	3.03e-1	ug/g	1.21e-4	lbs/hr	CE
Arsenic	300C2R1		6.51e-1	ug/g	4.30e-4	lbs/hr	CE
Arsenic	300C2R2		5.78e-1	ug/g	2.43e-4	lbs/hr	CE
Arsenic	300C2R3		9.40e-1	ug/g	2.20e-3	lbs/hr	CE
Arsenic	300C2R4		9.97e-1	ug/g	3.99e-4	lbs/hr	CE
Barium	300C2R1		2.05e+0	ug/g	2.20e-3	lbs/hr	
Barium	300C2R2		2.45e+0	ug/g	1.03e-3	lbs/hr	CE
Barium	300C2R3		5.39e+0	ug/g	8.82e-3	lbs/hr	
Barium	300C2R4		2.03e+0	ug/g	8.12e-4	lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPORT

EPA ID: IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Beryllium	300C2R1	ND	5.60e-2	ug/g	3.70e-5	lbs/hr	CE
Beryllium	300C2R2	ND	4.00e-2	ug/g	1.68e-5	lbs/hr	CE
Beryllium	300C2R3	ND	4.00e-2	ug/g	7.04e-5	lbs/hr	CE
Beryllium	300C2R4		4.30e-2	ug/g	1.72e-5	lbs/hr	CE
Cadmium	300C2R1	ND	9.30e-2	ug/g	6.14e-5	lbs/hr	CE
Cadmium	300C2R2	ND	7.90e-2	ug/g	3.32e-5	lbs/hr	CE
Cadmium	300C2R3		2.48e-1	ug/g	4.36e-4	lbs/hr	CE
Cadmium	300C2R4	ND	6.10e-2	ug/g	2.44e-5	lbs/hr	CE
Chromium	300C2R1		3.00e+0	ug/g	2.20e-3	lbs/hr	
Chromium	300C2R2		4.00e+0	ug/g	2.20e-3	lbs/hr	
Chromium	300C2R3		2.00e+0	ug/g	4.41e-3	lbs/hr	
Chromium	300C2R4		3.00e+0	ug/g	2.20e-3	lbs/hr	
Lead	300C2R1		1.45e+0	ug/g	9.57e-4	lbs/hr	CE
Lead	300C2R2		3.57e+0	ug/g	2.20e-3	lbs/hr	
Lead	300C2R3		9.87e+0	ug/g	1.76e-2	lbs/hr	
Lead	300C2R4		1.65e+0	ug/g	6.60e-4	lbs/hr	CE
Mercury	300C2R1	ND	7.90e-2	ug/g	5.21e-5	lbs/hr	CE
Mercury	300C2R2	ND	7.20e-2	ug/g	3.02e-5	lbs/hr	CE
Mercury	300C2R3	ND	9.50e-2	ug/g	1.67e-4	lbs/hr	CE
Mercury	300C2R4	ND	7.60e-2	ug/g	3.04e-5	lbs/hr	CE
Silver	300C2R1	ND	9.30e-2	ug/g	6.14e-5	lbs/hr	CE
Silver	300C2R2		8.70e-2	ug/g	3.65e-5	lbs/hr	CE
Silver	300C2R3		1.12e-1	ug/g	1.97e-4	lbs/hr	CE
Silver	300C2R4		1.04e-1	ug/g	4.16e-5	lbs/hr	CE
Thallium	300C2R1	ND	1.86e-1	ug/g	1.23e-4	lbs/hr	CE
Thallium	300C2R2	ND	1.58e-1	ug/g	6.64e-5	lbs/hr	CE
Thallium	300C2R3	ND	1.86e-1	ug/g	3.27e-4	lbs/hr	CE
Thallium	300C2R4		4.27e-1	ug/g	1.71e-4	lbs/hr	CE

5. Type: RAW MATERIAL

6. Description:

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	300C1R1	7.00e+1	ug/g	7.10e+0	lbs/hr	CC
Chlorine	300C1R2	5.00e+1	ug/g	5.07e+0	lbs/hr	CC
Chlorine	300C1R3	5.00e+1	ug/g	5.20e+0	lbs/hr	CC
Chlorine	300C1R4	5.00e+1	ug/g	5.39e+0	lbs/hr	CC
Chlorine	300C2R1	5.00e+1	ug/g	5.13e+0	lbs/hr	CC
Chlorine	300C2R2	5.00e+1	ug/g	4.95e+0	lbs/hr	CC
Chlorine	300C2R3	6.00e+1	ug/g	6.26e+0	lbs/hr	CC
Chlorine	300C2R4	5.00e+1	ug/g	5.19e+0	lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Antimony	300C2R1	ND	3.88e-1	ug/g	3.97e-2	lbs/hr
Antimony	300C2R2	ND	3.27e-1	ug/g	3.31e-2	lbs/hr
Antimony	300C2R3	ND	2.37e-1	ug/g	2.43e-2	lbs/hr
Antimony	300C2R4	ND	3.39e-1	ug/g	3.53e-2	lbs/hr
Arsenic	300C2R1		1.60e+0	ug/g	1.65e-1	lbs/hr
Arsenic	300C2R2		5.01e-1	ug/g	5.07e-2	lbs/hr
Arsenic	300C2R3		2.23e+0	ug/g	2.34e-1	lbs/hr
Arsenic	300C2R4		3.13e+0	ug/g	3.26e-1	lbs/hr
Barium	300C2R1	ND	6.40e+0	ug/g	6.57e-1	lbs/hr
Barium	300C2R2		4.78e+0	ug/g	4.74e-1	lbs/hr
Barium	300C2R3		2.80e+0	ug/g	2.93e-1	lbs/hr
Barium	300C2R4		4.66e+0	ug/g	4.85e-1	lbs/hr
Beryllium	300C2R1		5.20e-1	ug/g	5.29e-2	lbs/hr
Beryllium	300C2R2		5.70e-2	ug/g	6.61e-3	lbs/hr
Beryllium	300C2R3		3.84e-1	ug/g	3.97e-2	lbs/hr
Beryllium	300C2R4		1.74e-1	ug/g	1.76e-2	lbs/hr
Cadmium	300C2R1		2.22e-1	ug/g	2.20e-2	lbs/hr
Cadmium	300C2R2	ND	8.20e-2	ug/g	8.82e-3	lbs/hr

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPOUT

EPA IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Cadmium	300C2R3	2.13e-1	ug/g	2.20e-2	lbs/hr	
Cadmium	300C2R4	1.23e-1	ug/g	1.32e-2	lbs/hr	
Chromium	300C2R1	6.00e+0	ug/g	5.89e-1	lbs/hr	
Chromium	300C2R2	4.00e+0	ug/g	3.64e-1	lbs/hr	
Chromium	300C2R3	2.00e+0	ug/g	1.61e-1	lbs/hr	
Chromium	300C2R4	2.00e+0	ug/g	2.40e-1	lbs/hr	
Lead	300C2R1	4.05e+0	ug/g	4.17e-1	lbs/hr	
Lead	300C2R2	1.70e+0	ug/g	1.68e-1	lbs/hr	
Lead	300C2R3	1.27e+1	ug/g	1.33e+0	lbs/hr	
Lead	300C2R4	5.22e+0	ug/g	5.42e-1	lbs/hr	
Mercury	300C2R1	ND	9.30e-2	ug/g	8.82e-3	lbs/hr
Mercury	300C2R2	ND	8.60e-2	ug/g	8.82e-3	lbs/hr
Mercury	300C2R3	ND	8.10e-2	ug/g	8.82e-3	lbs/hr
Mercury	300C2R4	ND	7.60e-2	ug/g	8.82e-3	lbs/hr
Silver	300C2R1	ND	8.50e-2	ug/g	8.82e-3	lbs/hr
Silver	300C2R2	ND	6.80e-2	ug/g	6.61e-3	lbs/hr
Silver	300C2R3	ND	8.50e-2	ug/g	8.82e-3	lbs/hr
Silver	300C2R4	ND	9.57e-1	ug/g	9.92e-2	lbs/hr
Thallium	300C2R1	ND	1.71e-1	ug/g	1.76e-2	lbs/hr
Thallium	300C2R2	ND	1.64e-1	ug/g	1.54e-2	lbs/hr
Thallium	300C2R3	ND	1.71e-1	ug/g	1.76e-2	lbs/hr
Thallium	300C2R4	ND	1.64e-1	ug/g	1.76e-2	lbs/hr

5. Type: SPIKE

6. Description: METALS (CR6)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chromium	300C2R1	2.77e+5	ug/g	1.63e+1	lbs/hr	CC
Chromium	300C2R2	5.96e+5	ug/g	2.74e+1	lbs/hr	CC
Chromium	300C2R3	1.36e+5	ug/g	6.79e+0	lbs/hr	CC
Chromium	300C2R4	1.66e+5	ug/g	1.01e+1	lbs/hr	CC

5. Type: WASTE

6. Description: SPIKED METALS (AS,BE,CR6,CD,SB,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	300C1R1	4.50e+4	ug/g	4.24e+2	lbs/hr	CC
Chlorine	300C1R2	4.20e+4	ug/g	4.07e+2	lbs/hr	CC
Chlorine	300C1R3	3.50e+4	ug/g	3.26e+2	lbs/hr	CC
Chlorine	300C1R4	5.40e+4	ug/g	4.54e+2	lbs/hr	CC
Chlorine	300C2R1	4.80e+4	ug/g	6.25e+2	lbs/hr	CC
Chlorine	300C2R2	4.10e+4	ug/g	5.78e+2	lbs/hr	CC
Chlorine	300C2R3	4.30e+4	ug/g	5.16e+2	lbs/hr	CC
Chlorine	300C2R4	5.70e+4	ug/g	7.42e+2	lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Antimony	300C2R1	4.27e+2	ug/g	5.56e+0	lbs/hr	CC
Antimony	300C2R2	3.89e+2	ug/g	5.49e+0	lbs/hr	CC
Antimony	300C2R3	4.73e+2	ug/g	5.68e+0	lbs/hr	CC
Antimony	300C2R4	4.26e+2	ug/g	5.54e+0	lbs/hr	CC
Arsenic	300C2R1	1.50e+2	ug/g	1.96e+0	lbs/hr	CC
Arsenic	300C2R2	1.66e+2	ug/g	2.34e+0	lbs/hr	CC
Arsenic	300C2R3	1.99e+2	ug/g	2.38e+0	lbs/hr	CC
Arsenic	300C2R4	1.59e+2	ug/g	2.07e+0	lbs/hr	CC
Barium	300C2R1	5.66e+1	ug/g	7.39e-1	lbs/hr	
Barium	300C2R2	3.88e+1	ug/g	5.47e-1	lbs/hr	
Barium	300C2R3	1.16e+1	ug/g	1.39e-1	lbs/hr	

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION  
 2. STATE: IN  
 3. CITY: LOGANSPORT  
 4. EP ID: 300 DEVICE NAME: KILN NO. 1

EPA ID: IND005081542  
 SYSTEM TYPE: CEMENT KILN

REGION: 5  
 APC SYSTEM: ESP

Element	Run ID	Concentration	Units	Mass Rate	Calc
Barium	300C2R4	1.19e+1	ug/g	1.54e-1 lbs/hr	
Beryllium	300C2R1	1.63e+1	ug/g	2.12e-1 lbs/hr	CC
Beryllium	300C2R2	1.47e+1	ug/g	2.07e-1 lbs/hr	CC
Beryllium	300C2R3	1.98e+1	ug/g	2.38e-1 lbs/hr	CC
Beryllium	300C2R4	2.01e+1	ug/g	2.62e-1 lbs/hr	CC
Cadmium	300C2R1	4.71e+1	ug/g	6.13e-1 lbs/hr	CC
Cadmium	300C2R2	3.71e+1	ug/g	5.22e-1 lbs/hr	CC
Cadmium	300C2R3	4.37e+1	ug/g	5.25e-1 lbs/hr	CC
Cadmium	300C2R4	4.50e+1	ug/g	5.86e-1 lbs/hr	CC
Chromium	300C2R1	1.04e+3	ug/g	1.35e+1 lbs/hr	CC
Chromium	300C2R2	8.70e+2	ug/g	1.23e+1 lbs/hr	CC
Chromium	300C2R3	9.87e+2	ug/g	1.18e+1 lbs/hr	CC
Chromium	300C2R4	9.58e+2	ug/g	1.25e+1 lbs/hr	CC
Lead	300C2R1	1.41e+3	ug/g	1.84e+1 lbs/hr	CC
Lead	300C2R2	1.49e+3	ug/g	2.09e+1 lbs/hr	CC
Lead	300C2R3	1.39e+3	ug/g	1.67e+1 lbs/hr	CC
Lead	300C2R4	1.26e+3	ug/g	1.64e+1 lbs/hr	CC
Mercury	300C2R1	5.50e-2	ug/g	7.16e-4 lbs/hr	CE
Mercury	300C2R2	6.00e-2	ug/g	8.46e-4 lbs/hr	CE
Mercury	300C2R3	6.30e-2	ug/g	7.56e-4 lbs/hr	CE
Mercury	300C2R4	3.00e-2	ug/g	3.91e-4 lbs/hr	CE
Silver	300C2R1	3.57e+0	ug/g	4.63e-2 lbs/hr	
Silver	300C2R2	1.22e+0	ug/g	1.76e-2 lbs/hr	
Silver	300C2R3	8.91e-1	ug/g	1.10e-2 lbs/hr	
Silver	300C2R4	ND 9.20e-2	ug/g	2.20e-3 lbs/hr	
Thallium	300C2R1	1.87e-1	ug/g	2.20e-3 lbs/hr	
Thallium	300C2R2	ND 1.68e-1	ug/g	2.20e-3 lbs/hr	
Thallium	300C2R3	ND 1.86e-1	ug/g	2.20e-3 lbs/hr	
Thallium	300C2R4	ND 1.84e-1	ug/g	2.20e-3 lbs/hr	

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Units	Mass Rate	Calc
1,1,1-Trichloroethane	300C1R1	2.15e+4	ug/g	2.02e+2 lbs/hr	CC
1,1,1-Trichloroethane	300C1R2	1.97e+4	ug/g	1.91e+2 lbs/hr	CC
1,1,1-Trichloroethane	300C1R3	2.56e+3	ug/g	2.38e+1 lbs/hr	CC
1,1,1-Trichloroethane	300C1R4	2.02e+4	ug/g	1.69e+2 lbs/hr	CC
Carbon Tetrachloride	300C1R1	7.08e+3	ug/g	6.67e+1 lbs/hr	CC
Carbon Tetrachloride	300C1R2	2.80e+3	ug/g	2.72e+1 lbs/hr	CC
Carbon Tetrachloride	300C1R3	7.63e+2	ug/g	7.10e+0 lbs/hr	CC
Carbon Tetrachloride	300C1R4	6.21e+3	ug/g	5.21e+1 lbs/hr	CC
Tetrachloroethene	300C1R1	2.48e+4	ug/g	2.33e+2 lbs/hr	CC
Tetrachloroethene	300C1R2	2.44e+4	ug/g	2.37e+2 lbs/hr	CC
Tetrachloroethene	300C1R3	3.20e+4	ug/g	2.98e+2 lbs/hr	CC
Tetrachloroethene	300C1R4	3.85e+4	ug/g	3.23e+2 lbs/hr	CC

6. Description: SPIKED METALS (AS,BE,CR6,CD,SB,PB)

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Units	Mass Rate	Calc
Chlorine	300C1R1	2.60e+4	ug/g	5.85e+1 lbs/hr	CC
Chlorine	300C1R2	2.60e+4	ug/g	4.87e+1 lbs/hr	CC
Chlorine	300C1R3	3.50e+4	ug/g	5.91e+1 lbs/hr	CC
Chlorine	300C1R4	4.00e+4	ug/g	6.83e+1 lbs/hr	CC
Chlorine	300C2R1	1.80e+3	ug/g	3.83e+0 lbs/hr	CC
Chlorine	300C2R2	1.20e+3	ug/g	2.29e+0 lbs/hr	CC
Chlorine	300C2R3	1.00e+3	ug/g	2.16e+0 lbs/hr	CC
Chlorine	300C2R4	1.20e+3	ug/g	2.67e+0 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Units	Mass Rate	Calc
Antimony	300C2R1	3.79e+3	ug/g	8.04e+0 lbs/hr	CC
Antimony	300C2R2	4.41e+3	ug/g	8.41e+0 lbs/hr	CC

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: IN

3. CITY: LOGANSPORT

EPA ID: IND005081542

REGION: 5

4. EP ID: 300 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Antimony	300C2R3	4.56e+3	ug/g	9.83e+0	lbs/hr	CC
Antimony	300C2R4	4.36e+3	ug/g	9.69e+0	lbs/hr	CC
Arsenic	300C2R1	5.58e+3	ug/g	1.19e+1	lbs/hr	CC
Arsenic	300C2R2	6.67e+3	ug/g	1.27e+1	lbs/hr	CC
Arsenic	300C2R3	6.65e+3	ug/g	1.43e+1	lbs/hr	CC
Arsenic	300C2R4	5.91e+3	ug/g	1.31e+1	lbs/hr	CC
Barium	300C2R1	8.06e+2	ug/g	1.72e+0	lbs/hr	CC
Barium	300C2R2	5.25e+2	ug/g	1.00e+0	lbs/hr	CC
Barium	300C2R3	6.14e+2	ug/g	1.32e+0	lbs/hr	CC
Barium	300C2R4	7.40e+2	ug/g	1.64e+0	lbs/hr	CC
Beryllium	300C2R1	3.22e+2	ug/g	6.83e-1	lbs/hr	CC
Beryllium	300C2R2	3.88e+2	ug/g	7.41e-1	lbs/hr	CC
Beryllium	300C2R3	3.65e+2	ug/g	7.87e-1	lbs/hr	CC
Beryllium	300C2R4	3.48e+2	ug/g	7.74e-1	lbs/hr	CC
Cadmium	300C2R1	1.16e+1	ug/g	2.43e-2	lbs/hr	CC
Cadmium	300C2R2	5.78e+0	ug/g	1.10e-2	lbs/hr	CC
Cadmium	300C2R3	6.13e+0	ug/g	1.32e-2	lbs/hr	CC
Cadmium	300C2R4	6.95e+0	ug/g	1.54e-2	lbs/hr	CC
Chromium	300C2R1	1.99e+4	ug/g	4.23e+1	lbs/hr	CC
Chromium	300C2R2	1.95e+4	ug/g	3.73e+1	lbs/hr	CC
Chromium	300C2R3	2.11e+4	ug/g	4.56e+1	lbs/hr	CC
Chromium	300C2R4	2.08e+4	ug/g	4.63e+1	lbs/hr	CC
Lead	300C2R1	3.20e+4	ug/g	6.81e+1	lbs/hr	CC
Lead	300C2R2	3.93e+4	ug/g	7.50e+1	lbs/hr	CC
Lead	300C2R3	3.63e+4	ug/g	7.83e+1	lbs/hr	CC
Lead	300C2R4	3.55e+4	ug/g	7.89e+1	lbs/hr	CC
Mercury	300C2R1	1.19e+1	ug/g	2.43e-2	lbs/hr	CC
Mercury	300C2R2	1.62e+1	ug/g	3.09e-2	lbs/hr	CC
Mercury	300C2R3	1.23e+1	ug/g	2.65e-2	lbs/hr	CC
Mercury	300C2R4	1.79e+1	ug/g	3.97e-2	lbs/hr	CC
Silver	300C2R1	9.58e+0	ug/g	1.98e-2	lbs/hr	CC
Silver	300C2R2	3.47e+0	ug/g	6.61e-3	lbs/hr	CC
Silver	300C2R3	3.06e+0	ug/g	6.61e-3	lbs/hr	CC
Silver	300C2R4	2.98e+0	ug/g	6.61e-3	lbs/hr	CC
Thallium	300C2R1	ND 1.66e-1	ug/g	3.53e-4	lbs/hr	CE
Thallium	300C2R2	ND 1.57e-1	ug/g	3.00e-4	lbs/hr	CE
Thallium	300C2R3	ND 1.66e-1	ug/g	3.58e-4	lbs/hr	CE
Thallium	300C2R4	3.22e-1	ug/g	7.15e-4	lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Trichlorobenzene	300C1R1	2.31e+4 ug/g	5.20e+1 lbs/hr	CC
Trichlorobenzene	300C1R2	3.12e+4 ug/g	5.84e+1 lbs/hr	CC
Trichlorobenzene	300C1R3	3.08e+4 ug/g	5.21e+1 lbs/hr	CC
Trichlorobenzene	300C1R4	2.99e+4 ug/g	5.11e+1 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	300C1R1	1.64e+4 ug/g	3.68e+1 lbs/hr	CC
1,1,1-Trichloroethane	300C1R2	8.22e+3 ug/g	1.54e+1 lbs/hr	CC
1,1,1-Trichloroethane	300C1R3	6.63e+3 ug/g	1.12e+1 lbs/hr	CC
1,1,1-Trichloroethane	300C1R4	8.35e+3 ug/g	1.42e+1 lbs/hr	CC

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: PR

3. CITY: DORADO

4. EP ID: 301 DEVICE NAME: KILN NO. 1

EPA ID: PRD980526115  
SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

REGION: 2

5. Type: FUEL

6. Description: COAL

Group: DRY KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	301C1R1	ND	1.15e+3 ug/g	1.71e+1 lbs/hr	
Chlorine	301C1R2	ND	1.15e+3 ug/g	1.81e+1 lbs/hr	
Chlorine	301C1R3	ND	1.15e+3 ug/g	2.02e+1 lbs/hr	
Chlorine	301C2R1		1.38e+3 ug/g	2.14e+1 lbs/hr	CC
Chlorine	301C2R2		1.40e+3 ug/g	2.22e+1 lbs/hr	CC
Chlorine	301C2R3		1.09e+3 ug/g	1.68e+1 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	301C2R1		1.66e+0 ug/g	2.58e-2 lbs/hr	CE
Antimony	301C2R2	ND	5.00e-1 ug/g	7.94e-3 lbs/hr	CE
Antimony	301C2R3	ND	5.00e-1 ug/g	7.72e-3 lbs/hr	CE
Arsenic	301C2R1		7.40e-1 ug/g	1.15e-2 lbs/hr	CE
Arsenic	301C2R2		9.00e-1 ug/g	1.43e-2 lbs/hr	CE
Arsenic	301C2R3		1.05e+0 ug/g	1.62e-2 lbs/hr	CE
Barium	301C2R1		5.89e+1 ug/g	9.15e-1 lbs/hr	CE
Barium	301C2R2		7.22e+1 ug/g	1.15e+0 lbs/hr	CE
Barium	301C2R3		7.42e+1 ug/g	1.15e+0 lbs/hr	CE
Beryllium	301C2R1	ND	5.00e-1 ug/g	7.77e-3 lbs/hr	CE
Beryllium	301C2R2	ND	5.00e-1 ug/g	7.94e-3 lbs/hr	CE
Beryllium	301C2R3	ND	5.00e-1 ug/g	7.72e-3 lbs/hr	CE
Cadmium	301C2R1		7.90e-1 ug/g	1.23e-2 lbs/hr	CE
Cadmium	301C2R2		7.50e-1 ug/g	1.19e-2 lbs/hr	CE
Cadmium	301C2R3		5.80e-1 ug/g	8.96e-3 lbs/hr	CE
Chromium	301C2R1		1.01e+1 ug/g	1.57e-1 lbs/hr	CE
Chromium	301C2R2		1.27e+1 ug/g	2.02e-1 lbs/hr	CE
Chromium	301C2R3		1.26e+1 ug/g	1.95e-1 lbs/hr	CE
Lead	301C2R1	ND	2.00e+0 ug/g	3.11e-2 lbs/hr	CE
Lead	301C2R2	ND	2.00e+0 ug/g	3.18e-2 lbs/hr	CE
Lead	301C2R3	ND	2.00e+0 ug/g	3.09e-2 lbs/hr	CE
Mercury	301C2R1		6.50e-1 ug/g	1.01e-2 lbs/hr	CE
Mercury	301C2R2		4.00e-1 ug/g	6.35e-3 lbs/hr	CE
Mercury	301C2R3		5.30e-1 ug/g	8.18e-3 lbs/hr	CE
Nickel	301C2R1	ND	5.00e+0 ug/g	7.77e-2 lbs/hr	CE
Nickel	301C2R2	ND	5.00e+0 ug/g	7.94e-2 lbs/hr	CE
Nickel	301C2R3	ND	5.00e+0 ug/g	7.72e-2 lbs/hr	CE
Selenium	301C2R1		4.37e+0 ug/g	6.79e-2 lbs/hr	CE
Selenium	301C2R2		1.26e+0 ug/g	2.00e-2 lbs/hr	CE
Selenium	301C2R3		1.88e+0 ug/g	2.90e-2 lbs/hr	CE
Silver	301C2R1	ND	5.00e+0 ug/g	7.77e-2 lbs/hr	CE
Silver	301C2R2	ND	5.00e+0 ug/g	7.94e-2 lbs/hr	CE
Silver	301C2R3	ND	5.00e+0 ug/g	7.72e-2 lbs/hr	CE
Thallium	301C2R1	ND	4.00e+0 ug/g	6.22e-2 lbs/hr	CE
Thallium	301C2R2	ND	4.00e+0 ug/g	6.35e-2 lbs/hr	CE
Thallium	301C2R3	ND	4.00e+0 ug/g	6.18e-2 lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
1,2,4-Trichlorobenzene	301C1R1	ND	6.29e-1 ug/g	1.00e-2 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R2	ND	6.34e-1 ug/g	1.00e-2 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R3	ND	5.70e-1 ug/g	1.00e-2 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
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SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION  
 2. STATE: PR  
 3. CITY: DORADO  
 4. EP ID: 301 DEVICE NAME: KILN NO. 1

EPA ID: PRD980526115  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF REGION: 2

1,1,1-Trichloroethane	301C1R1	ND	1.00e+2	ug/g	1.59e+0	lbs/hr	CC
1,1,1-Trichloroethane	301C1R2	ND	1.00e+2	ug/g	1.58e+0	lbs/hr	CC
1,1,1-Trichloroethane	301C1R3	ND	9.98e+1	ug/g	1.75e+0	lbs/hr	CC

5. Type: RAW MATERIAL

6. Description:  
 Group: DRY KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	301C1R1	3.40e+2	ug/g	1.21e+2 lbs/hr	CC
Chlorine	301C1R2	3.30e+2	ug/g	1.18e+2 lbs/hr	CC
Chlorine	301C1R3	2.80e+2	ug/g	1.00e+2 lbs/hr	CC
Chlorine	301C2R1	3.20e+2	ug/g	1.03e+2 lbs/hr	CC
Chlorine	301C2R2	3.20e+2	ug/g	1.03e+2 lbs/hr	CC
Chlorine	301C2R3	3.20e+2	ug/g	1.03e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	301C1R1	ND	5.00e+0 ug/g	1.79e+0 lbs/hr	CE
Antimony	301C1R2	ND	5.00e+0 ug/g	1.79e+0 lbs/hr	CE
Antimony	301C1R3	ND	5.00e+0 ug/g	1.79e+0 lbs/hr	CE
Antimony	301C2R1	ND	5.00e+0 ug/g	1.60e+0 lbs/hr	CE
Antimony	301C2R2	ND	5.00e+0 ug/g	1.61e+0 lbs/hr	CE
Antimony	301C2R3	ND	5.00e+0 ug/g	1.60e+0 lbs/hr	CE
Arsenic	301C1R1		2.16e+1 ug/g	7.72e+0 lbs/hr	CE
Arsenic	301C1R2		1.04e+1 ug/g	3.72e+0 lbs/hr	CE
Arsenic	301C1R3	ND	5.00e+0 ug/g	1.79e+0 lbs/hr	CE
Arsenic	301C2R1		1.23e+1 ug/g	3.94e+0 lbs/hr	CE
Arsenic	301C2R2		1.23e+1 ug/g	3.95e+0 lbs/hr	CE
Arsenic	301C2R3		1.23e+1 ug/g	3.94e+0 lbs/hr	CE
Barium	301C1R1		9.50e+1 ug/g	3.39e+1 lbs/hr	CE
Barium	301C1R2		2.18e+1 ug/g	7.79e+0 lbs/hr	CE
Barium	301C1R3		1.12e+2 ug/g	4.01e+1 lbs/hr	CE
Barium	301C2R1		7.63e+1 ug/g	2.45e+1 lbs/hr	CE
Barium	301C2R2		7.63e+1 ug/g	2.45e+1 lbs/hr	CE
Barium	301C2R3		7.63e+1 ug/g	2.45e+1 lbs/hr	CE
Beryllium	301C1R1		8.60e-1 ug/g	3.07e-1 lbs/hr	CE
Beryllium	301C1R2		7.50e-1 ug/g	2.68e-1 lbs/hr	CE
Beryllium	301C1R3		6.60e-1 ug/g	2.36e-1 lbs/hr	CE
Beryllium	301C2R1		8.00e-1 ug/g	2.56e-1 lbs/hr	CE
Beryllium	301C2R2		8.00e-1 ug/g	2.57e-1 lbs/hr	CE
Beryllium	301C2R3		8.00e-1 ug/g	2.56e-1 lbs/hr	CE
Cadmium	301C1R1		1.88e+0 ug/g	6.72e-1 lbs/hr	CE
Cadmium	301C1R2		1.67e+0 ug/g	5.97e-1 lbs/hr	CE
Cadmium	301C1R3		2.17e+0 ug/g	7.76e-1 lbs/hr	CE
Cadmium	301C2R1		1.90e+0 ug/g	6.09e-1 lbs/hr	CE
Cadmium	301C2R2		1.90e+0 ug/g	6.10e-1 lbs/hr	CE
Cadmium	301C2R3		1.90e+0 ug/g	6.09e-1 lbs/hr	CE
Chromium	301C1R1		1.92e+1 ug/g	6.86e+0 lbs/hr	CE
Chromium	301C1R2		1.72e+1 ug/g	6.15e+0 lbs/hr	CE
Chromium	301C1R3		1.79e+1 ug/g	6.40e+0 lbs/hr	CE
Chromium	301C2R1		1.81e+1 ug/g	5.80e+0 lbs/hr	CE
Chromium	301C2R2		1.81e+1 ug/g	5.81e+0 lbs/hr	CE
Chromium	301C2R3		1.81e+1 ug/g	5.80e+0 lbs/hr	CE
Lead	301C1R1	ND	2.00e+0 ug/g	7.14e-1 lbs/hr	CE
Lead	301C1R2	ND	2.00e+0 ug/g	7.15e-1 lbs/hr	CE
Lead	301C1R3	ND	2.00e+0 ug/g	7.15e-1 lbs/hr	CE
Lead	301C2R1	ND	2.00e+0 ug/g	6.41e-1 lbs/hr	CE
Lead	301C2R2	ND	2.00e+0 ug/g	6.42e-1 lbs/hr	CE
Lead	301C2R3	ND	2.00e+0 ug/g	6.41e-1 lbs/hr	CE
Mercury	301C1R1	ND	5.00e-1 ug/g	1.79e-1 lbs/hr	CE
Mercury	301C1R2	ND	5.00e-1 ug/g	1.79e-1 lbs/hr	CE
Mercury	301C1R3	ND	5.00e-1 ug/g	1.79e-1 lbs/hr	CE
Mercury	301C2R1	ND	5.00e-1 ug/g	1.60e-1 lbs/hr	CE
Mercury	301C2R2	ND	5.00e-1 ug/g	1.61e-1 lbs/hr	CE

US EPA ARCHIVE DOCUMENT



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION  
 2. STATE: PR  
 3. CITY: DORADO  
 4. EP ID: 301 DEVICE NAME: KILN NO. 1

EPA ID: PRD980526115  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF REGION: 2

Mercury	301C2R3	ND	5.00e-1	ug/g	1.60e-1	lbs/hr	CE
Nickel	301C1R1		5.81e+0	ug/g	2.08e+0	lbs/hr	CE
Nickel	301C1R2		5.18e+0	ug/g	1.85e+0	lbs/hr	CE
Nickel	301C1R3		5.18e+0	ug/g	1.85e+0	lbs/hr	CE
Nickel	301C2R1		5.40e+0	ug/g	1.73e+0	lbs/hr	CE
Nickel	301C2R2		5.40e+0	ug/g	1.73e+0	lbs/hr	CE
Nickel	301C2R3		5.40e+0	ug/g	1.73e+0	lbs/hr	CE
Selenium	301C1R1		1.45e+1	ug/g	5.18e+0	lbs/hr	CE
Selenium	301C1R2		6.07e+0	ug/g	2.17e+0	lbs/hr	CE
Selenium	301C1R3		1.11e+1	ug/g	3.97e+0	lbs/hr	CE
Selenium	301C2R1		1.06e+1	ug/g	3.40e+0	lbs/hr	CE
Selenium	301C2R2		1.06e+1	ug/g	3.40e+0	lbs/hr	CE
Selenium	301C2R3		1.06e+1	ug/g	3.40e+0	lbs/hr	CE
Silver	301C1R1	ND	5.00e+0	ug/g	1.79e+0	lbs/hr	CE
Silver	301C1R2	ND	5.00e+0	ug/g	1.79e+0	lbs/hr	CE
Silver	301C1R3	ND	5.00e+0	ug/g	1.79e+0	lbs/hr	CE
Silver	301C2R1	ND	5.00e+0	ug/g	1.60e+0	lbs/hr	CE
Silver	301C2R2	ND	5.00e+0	ug/g	1.61e+0	lbs/hr	CE
Silver	301C2R3	ND	5.00e+0	ug/g	1.60e+0	lbs/hr	CE
Thallium	301C1R1		9.20e-1	ug/g	3.29e-1	lbs/hr	CE
Thallium	301C1R2		6.00e-1	ug/g	2.14e-1	lbs/hr	CE
Thallium	301C1R3		6.60e-1	ug/g	2.36e-1	lbs/hr	CE
Thallium	301C2R1		7.00e-1	ug/g	2.24e-1	lbs/hr	CE
Thallium	301C2R2		7.00e-1	ug/g	2.25e-1	lbs/hr	CE
Thallium	301C2R3		7.00e-1	ug/g	2.24e-1	lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
1,2,4-Trichlorobenzene	301C1R1	ND	5.88e-1 ug/g	2.10e-1 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R2	ND	5.88e-1 ug/g	2.10e-1 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R3	ND	5.87e-1 ug/g	2.10e-1 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
1,1,1-Trichloroethane	301C1R1	ND	1.12e-1 ug/g	4.00e-2 lbs/hr	CC
1,1,1-Trichloroethane	301C1R2	ND	1.12e-1 ug/g	4.00e-2 lbs/hr	CC
1,1,1-Trichloroethane	301C1R3	ND	1.12e-1 ug/g	4.00e-2 lbs/hr	CC

5. Type: SPIKE

6. Description: ORGANICS/METALS (AS,BE,CD,CR,PB,TI)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	301C1R1		1.00e+6 ug/g	4.28e+2 lbs/hr	CC
Chlorine	301C1R2		1.00e+6 ug/g	4.28e+2 lbs/hr	CC
Chlorine	301C1R3		1.00e+6 ug/g	4.22e+2 lbs/hr	CC
Chlorine	301C2R1		1.00e+6 ug/g	3.99e+2 lbs/hr	CC
Chlorine	301C2R2		1.00e+6 ug/g	4.13e+2 lbs/hr	CC
Chlorine	301C2R3		1.00e+6 ug/g	3.97e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	301C2R1		4.75e+2 ug/g	1.89e-1 lbs/hr	CC
Arsenic	301C2R2		4.57e+2 ug/g	1.89e-1 lbs/hr	CC
Arsenic	301C2R3		4.85e+2 ug/g	1.93e-1 lbs/hr	CC
Beryllium	301C2R1		3.20e+2 ug/g	1.27e-1 lbs/hr	CC
Beryllium	301C2R2		3.09e+2 ug/g	1.28e-1 lbs/hr	CC
Beryllium	301C2R3		3.21e+2 ug/g	1.28e-1 lbs/hr	CC
Cadmium	301C2R1		3.09e+3 ug/g	1.23e+0 lbs/hr	CC
Cadmium	301C2R2		2.92e+3 ug/g	1.20e+0 lbs/hr	CC

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: PR

3. CITY: DORADO

EPA PRD980526115

REGION: 2

4. EP ID: 301 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Cadmium	301C2R3	3.02e+3	ug/g	1.20e+0	lbs/hr	CC
Chromium	301C2R1	2.18e+4	ug/g	8.68e+0	lbs/hr	CC
Chromium	301C2R2	2.06e+4	ug/g	8.49e+0	lbs/hr	CC
Chromium	301C2R3	2.14e+4	ug/g	8.49e+0	lbs/hr	CC
Lead	301C2R1	6.82e+4	ug/g	2.72e+1	lbs/hr	CC
Lead	301C2R2	6.71e+4	ug/g	2.77e+1	lbs/hr	CC
Lead	301C2R3	6.96e+4	ug/g	2.77e+1	lbs/hr	CC
Thallium	301C2R1	1.27e+3	ug/g	5.06e-1	lbs/hr	CC
Thallium	301C2R2	1.24e+3	ug/g	5.10e-1	lbs/hr	CC
Thallium	301C2R3	4.05e+0	ug/g	1.61e-3	lbs/hr	CC

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,2,4-Trichlorobenzene	301C1R1	4.27e+5 ug/g	1.83e+2 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R2	4.26e+5 ug/g	1.82e+2 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R3	4.25e+5 ug/g	1.79e+2 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	301C1R1	9.41e+5 ug/g	4.03e+2 lbs/hr	CC
1,1,1-Trichloroethane	301C1R2	9.42e+5 ug/g	4.03e+2 lbs/hr	CC
1,1,1-Trichloroethane	301C1R3	9.42e+5 ug/g	3.97e+2 lbs/hr	CC

5. Type: WASTE

6. Description:

Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	301C1R1	7.24e+3 ug/g	9.04e+1 lbs/hr	CC
Chlorine	301C1R2	9.84e+3 ug/g	1.23e+2 lbs/hr	CC
Chlorine	301C1R3	7.32e+3 ug/g	9.07e+1 lbs/hr	CC
Chlorine	301C2R1	9.35e+3 ug/g	1.01e+2 lbs/hr	CC
Chlorine	301C2R2	1.28e+4 ug/g	1.42e+2 lbs/hr	CC
Chlorine	301C2R3	1.01e+4 ug/g	1.09e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	301C2R1	2.08e+0 ug/g	2.25e-2 lbs/hr	CE
Antimony	301C2R2	ND 5.00e-1 ug/g	5.54e-3 lbs/hr	CE
Antimony	301C2R3	6.00e-1 ug/g	6.48e-3 lbs/hr	CE
Arsenic	301C2R1	ND 5.00e-1 ug/g	5.41e-3 lbs/hr	CE
Arsenic	301C2R2	ND 5.00e-1 ug/g	5.54e-3 lbs/hr	CE
Arsenic	301C2R3	ND 5.00e-1 ug/g	5.40e-3 lbs/hr	CE
Barium	301C2R1	1.81e+0 ug/g	1.96e-2 lbs/hr	CE
Barium	301C2R2	2.02e+0 ug/g	2.24e-2 lbs/hr	CE
Barium	301C2R3	1.77e+0 ug/g	1.91e-2 lbs/hr	CE
Beryllium	301C2R1	ND 5.00e-1 ug/g	5.41e-3 lbs/hr	CE
Beryllium	301C2R2	ND 5.00e-1 ug/g	5.54e-3 lbs/hr	CE
Beryllium	301C2R3	ND 5.00e-1 ug/g	5.40e-3 lbs/hr	CE
Cadmium	301C2R1	ND 5.00e-1 ug/g	5.41e-3 lbs/hr	CE
Cadmium	301C2R2	ND 5.00e-1 ug/g	5.54e-3 lbs/hr	CE
Cadmium	301C2R3	ND 5.00e-1 ug/g	5.40e-3 lbs/hr	CE
Chromium	301C2R1	1.19e+0 ug/g	1.29e-2 lbs/hr	CE
Chromium	301C2R2	1.20e+0 ug/g	1.33e-2 lbs/hr	CE
Chromium	301C2R3	1.19e+0 ug/g	1.29e-2 lbs/hr	CE
Lead	301C2R1	3.20e+1 ug/g	3.46e-1 lbs/hr	CE
Lead	301C2R2	3.34e+1 ug/g	3.70e-1 lbs/hr	CE
Lead	301C2R3	3.21e+1 ug/g	3.47e-1 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: ESSROC CORPORATION

2. STATE: PR

3. CITY: DORADO

EPA ID: PRD980526115

REGION: 2

4. EP ID: 301 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Mercury	301C2R1	8.11e+0	ug/g	8.78e-2	lbs/hr	CE
Mercury	301C2R2	8.94e+0	ug/g	9.91e-2	lbs/hr	CE
Mercury	301C2R3	8.16e+0	ug/g	8.82e-2	lbs/hr	CE
Nickel	301C2R1	2.16e+0	ug/g	2.34e-2	lbs/hr	CE
Nickel	301C2R2	2.32e+0	ug/g	2.57e-2	lbs/hr	CE
Nickel	301C2R3	2.04e+0	ug/g	2.20e-2	lbs/hr	CE
Selenium	301C2R1	ND 5.00e-1	ug/g	5.41e-3	lbs/hr	CE
Selenium	301C2R2	ND 5.00e-1	ug/g	5.54e-3	lbs/hr	CE
Selenium	301C2R3	ND 5.00e-1	ug/g	5.40e-3	lbs/hr	CE
Silver	301C2R1	1.73e+0	ug/g	1.87e-2	lbs/hr	CE
Silver	301C2R2	1.10e+0	ug/g	1.22e-2	lbs/hr	CE
Silver	301C2R3	2.77e+0	ug/g	2.99e-2	lbs/hr	CE
Thallium	301C2R1	ND 1.00e+0	ug/g	1.08e-2	lbs/hr	CE
Thallium	301C2R2	ND 1.00e+0	ug/g	1.11e-2	lbs/hr	CE
Thallium	301C2R3	ND 1.00e+0	ug/g	1.08e-2	lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,2,4-Trichlorobenzene	301C1R1	ND 2.00e+3 ug/g	2.50e+1 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R2	ND 2.00e+3 ug/g	2.50e+1 lbs/hr	CC
1,2,4-Trichlorobenzene	301C1R3	ND 2.00e+3 ug/g	2.48e+1 lbs/hr	CC

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	301C1R1	ND 2.00e+1 ug/g	2.50e-1 lbs/hr	CC
1,1,1-Trichloroethane	301C1R2	ND 2.00e+1 ug/g	2.50e-1 lbs/hr	CC
1,1,1-Trichloroethane	301C1R3	ND 2.02e+1 ug/g	2.50e-1 lbs/hr	CC

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA ID: SCD003351699

REGION: 4

4. EP ID: 200 DEVICE NAME: KILN NO. 4

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5. Type: FUEL

6. Description: COAL

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	200C1R1	1.30e+3	ug/g	2.08e+0 lbs/hr	CE
Chlorine	200C1R2	1.30e+3	ug/g	7.80e-1 lbs/hr	CE
Chlorine	200C1R3	1.20e+3	ug/g	4.80e-1 lbs/hr	CE
Chlorine	200C1R4	1.20e+3	ug/g	1.20e+0 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	200C1R1	ND	2.00e+1 ug/g	3.20e-2 lbs/hr	CE
Arsenic	200C1R2	ND	2.00e+1 ug/g	1.20e-2 lbs/hr	CE
Arsenic	200C1R3	ND	2.00e+1 ug/g	8.00e-3 lbs/hr	CE
Arsenic	200C1R4	ND	2.00e+1 ug/g	2.00e-2 lbs/hr	CE
Beryllium	200C1R1	ND	5.00e-1 ug/g	8.00e-4 lbs/hr	CE
Beryllium	200C1R2	ND	5.00e-1 ug/g	3.00e-4 lbs/hr	CE
Beryllium	200C1R3	ND	5.00e-1 ug/g	2.00e-4 lbs/hr	CE
Beryllium	200C1R4	ND	5.00e-1 ug/g	5.00e-4 lbs/hr	CE
Cadmium	200C1R1	ND	1.00e+0 ug/g	1.60e-3 lbs/hr	CE
Cadmium	200C1R2	ND	1.00e+0 ug/g	6.00e-4 lbs/hr	CE
Cadmium	200C1R3	ND	1.00e+0 ug/g	4.00e-4 lbs/hr	CE
Cadmium	200C1R4	ND	1.00e+0 ug/g	1.00e-3 lbs/hr	CE
Chromium	200C1R1		9.10e+0 ug/g	1.46e-2 lbs/hr	CE
Chromium	200C1R2		7.30e+0 ug/g	4.38e-3 lbs/hr	CE
Chromium	200C1R3	ND	5.00e+0 ug/g	2.00e-3 lbs/hr	CE
Chromium	200C1R4	ND	5.00e+0 ug/g	5.00e-3 lbs/hr	CE
Lead	200C1R1	ND	1.00e+1 ug/g	1.60e-2 lbs/hr	CE
Lead	200C1R2	ND	1.00e+1 ug/g	6.00e-3 lbs/hr	CE
Lead	200C1R3	ND	1.00e+1 ug/g	4.00e-3 lbs/hr	CE
Lead	200C1R4	ND	1.00e+1 ug/g	1.00e-2 lbs/hr	CE

5. Type: RAW MATERIAL

6. Description:

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	200C1R1	ND	5.00e+0 ug/g	3.88e-1 lbs/hr	CE
Chlorine	200C1R2	ND	5.00e+0 ug/g	3.89e-1 lbs/hr	CE
Chlorine	200C1R3		3.90e+1 ug/g	2.93e+0 lbs/hr	CE
Chlorine	200C1R4		3.90e+1 ug/g	2.92e+0 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	200C1R1	ND	2.00e+1 ug/g	1.55e+0 lbs/hr	CE
Arsenic	200C1R2	ND	2.00e+1 ug/g	1.56e+0 lbs/hr	CE
Arsenic	200C1R3	ND	2.00e+1 ug/g	1.50e+0 lbs/hr	CE
Arsenic	200C1R4	ND	2.00e+1 ug/g	1.50e+0 lbs/hr	CE
Beryllium	200C1R1	ND	5.00e-1 ug/g	3.88e-2 lbs/hr	CE
Beryllium	200C1R2	ND	5.00e-1 ug/g	3.89e-2 lbs/hr	CE
Beryllium	200C1R3	ND	5.00e-1 ug/g	3.76e-2 lbs/hr	CE
Beryllium	200C1R4	ND	5.00e-1 ug/g	3.74e-2 lbs/hr	CE
Cadmium	200C1R1	ND	1.00e+0 ug/g	7.76e-2 lbs/hr	CE
Cadmium	200C1R2	ND	1.00e+0 ug/g	7.78e-2 lbs/hr	CE
Cadmium	200C1R3	ND	1.00e+0 ug/g	7.52e-2 lbs/hr	CE
Cadmium	200C1R4	ND	1.00e+0 ug/g	7.48e-2 lbs/hr	CE
Chromium	200C1R1		7.80e+0 ug/g	6.05e-1 lbs/hr	CE
Chromium	200C1R2		1.20e+1 ug/g	9.34e-1 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

4. EP ID: 200 DEVICE NAME: KILN NO. 4

EPA ID: SCD003351699

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

REGION: 4

Chromium	200C1R3	8.00e+0	ug/g	6.02e-1	lbs/hr	CE	
Chromium	200C1R4	7.00e+0	ug/g	5.24e-1	lbs/hr	CE	
Lead	200C1R1	ND	1.00e+1	ug/g	7.76e-1	lbs/hr	CE
Lead	200C1R2	ND	1.00e+1	ug/g	7.78e-1	lbs/hr	CE
Lead	200C1R3	ND	1.00e+1	ug/g	7.52e-1	lbs/hr	CE
Lead	200C1R4	ND	1.00e+1	ug/g	7.48e-1	lbs/hr	CE

5. Type: SPIKE

6. Description: SPIKE B,METALS (AS,BE,CD,CR,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	200C1R1	1.50e+3	ug/g	9.41e-1	lbs/hr	CE
Chlorine	200C1R2	1.20e+4	ug/g	6.02e+0	lbs/hr	CE
Chlorine	200C1R3	6.30e+3	ug/g	2.87e+0	lbs/hr	CE
Chlorine	200C1R4	6.20e+3	ug/g	3.65e+0	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Arsenic	200C1R1	ND	2.00e+1	ug/g	1.25e-2	lbs/hr	CE
Arsenic	200C1R2	ND	2.00e+1	ug/g	1.00e-2	lbs/hr	CE
Arsenic	200C1R3	ND	2.00e+1	ug/g	9.10e-3	lbs/hr	CE
Arsenic	200C1R4	ND	2.00e+1	ug/g	1.18e-2	lbs/hr	CE
Beryllium	200C1R1	ND	5.00e-1	ug/g	3.13e-4	lbs/hr	CE
Beryllium	200C1R2	ND	5.00e-1	ug/g	2.51e-4	lbs/hr	CE
Beryllium	200C1R3	ND	5.00e-1	ug/g	2.28e-4	lbs/hr	CE
Beryllium	200C1R4	ND	5.00e-1	ug/g	2.94e-4	lbs/hr	CE
Cadmium	200C1R1	8.50e+2	ug/g	5.33e-1	lbs/hr	CE	
Cadmium	200C1R2	7.90e+2	ug/g	3.97e-1	lbs/hr	CE	
Cadmium	200C1R3	6.50e+2	ug/g	2.96e-1	lbs/hr	CE	
Cadmium	200C1R4	5.30e+2	ug/g	3.12e-1	lbs/hr	CE	
Chromium	200C1R1	8.90e+2	ug/g	5.58e-1	lbs/hr	CE	
Chromium	200C1R2	5.50e+1	ug/g	2.76e-2	lbs/hr	CE	
Chromium	200C1R3	2.40e+2	ug/g	1.09e-1	lbs/hr	CE	
Chromium	200C1R4	3.70e+2	ug/g	2.18e-1	lbs/hr	CE	
Lead	200C1R1	1.20e+2	ug/g	7.52e-2	lbs/hr	CE	
Lead	200C1R2	1.20e+3	ug/g	6.02e-1	lbs/hr	CE	
Lead	200C1R3	3.30e+3	ug/g	1.50e+0	lbs/hr	CE	
Lead	200C1R4	5.00e+3	ug/g	2.94e+0	lbs/hr	CE	

6. Description: SPIKE C,METALS (AS,BE,CD,CR,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	200C1R1	1.00e+1	ug/g	4.93e-3	lbs/hr	CE
Chlorine	200C1R2	1.60e+1	ug/g	7.28e-3	lbs/hr	CE
Chlorine	200C1R3	1.90e+1	ug/g	7.83e-3	lbs/hr	CE
Chlorine	200C1R4	4.50e+1	ug/g	1.82e-2	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Arsenic	200C1R1	3.40e+3	ug/g	1.68e+0	lbs/hr	CE
Arsenic	200C1R2	7.50e+3	ug/g	3.41e+0	lbs/hr	CE
Arsenic	200C1R3	7.70e+3	ug/g	3.17e+0	lbs/hr	CE
Arsenic	200C1R4	7.20e+3	ug/g	2.91e+0	lbs/hr	CE
Beryllium	200C1R1	1.30e+1	ug/g	6.41e-3	lbs/hr	CE
Beryllium	200C1R2	6.10e+1	ug/g	2.78e-2	lbs/hr	CE
Beryllium	200C1R3	6.60e+1	ug/g	2.72e-2	lbs/hr	CE
Beryllium	200C1R4	5.40e+1	ug/g	2.18e-2	lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA ID: SCD003351699

REGION: 4

4. EP ID: 200 DEVICE NAME: KILN NO. 4

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Cadmium	200C1R1	1.10e+3	ug/g	5.42e-1	lbs/hr	CE	
Cadmium	200C1R2	2.70e+3	ug/g	1.23e+0	lbs/hr	CE	
Cadmium	200C1R3	2.30e+3	ug/g	9.48e-1	lbs/hr	CE	
Cadmium	200C1R4	2.10e+3	ug/g	8.48e-1	lbs/hr	CE	
Chromium	200C1R1	ND	5.00e+0	ug/g	2.47e-3	lbs/hr	CE
Chromium	200C1R2	ND	5.00e+0	ug/g	2.28e-3	lbs/hr	CE
Chromium	200C1R3	ND	5.00e+0	ug/g	2.06e-3	lbs/hr	CE
Chromium	200C1R4	ND	5.00e+0	ug/g	2.02e-3	lbs/hr	CE
Lead	200C1R1	ND	1.00e+1	ug/g	4.93e-3	lbs/hr	CE
Lead	200C1R2	ND	2.90e+1	ug/g	1.32e-2	lbs/hr	CE
Lead	200C1R3	ND	1.00e+1	ug/g	4.12e-3	lbs/hr	CE
Lead	200C1R4	ND	1.00e+1	ug/g	4.04e-3	lbs/hr	CE

6. Description: SPIKE A, METALS (AS, BE, CD, CR, PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Chlorine	200C1R1	ND	5.00e+2	ug/g	2.46e-1	lbs/hr	CE
Chlorine	200C1R2	ND	5.00e+2	ug/g	2.53e-1	lbs/hr	CE
Chlorine	200C1R3	ND	5.00e+2	ug/g	1.66e-1	lbs/hr	CE
Chlorine	200C1R4	ND	5.00e+2	ug/g	1.96e-1	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Arsenic	200C1R1	ND	2.00e+1	ug/g	9.84e-3	lbs/hr	CE
Arsenic	200C1R2	ND	2.00e+1	ug/g	1.01e-2	lbs/hr	CE
Arsenic	200C1R3	ND	2.00e+1	ug/g	6.64e-3	lbs/hr	CE
Arsenic	200C1R4	ND	2.00e+1	ug/g	7.84e-3	lbs/hr	CE
Beryllium	200C1R1	ND	5.00e-1	ug/g	2.46e-4	lbs/hr	CE
Beryllium	200C1R2	ND	5.00e-1	ug/g	2.53e-4	lbs/hr	CE
Beryllium	200C1R3	ND	5.00e-1	ug/g	1.66e-4	lbs/hr	CE
Beryllium	200C1R4	ND	5.00e-1	ug/g	1.96e-4	lbs/hr	CE
Cadmium	200C1R1	ND	1.90e+2	ug/g	9.35e-2	lbs/hr	CE
Cadmium	200C1R2	ND	1.90e+2	ug/g	9.61e-2	lbs/hr	CE
Cadmium	200C1R3	ND	2.80e+2	ug/g	9.30e-2	lbs/hr	CE
Cadmium	200C1R4	ND	3.00e+2	ug/g	1.18e-1	lbs/hr	CE
Chromium	200C1R1	ND	1.10e+5	ug/g	5.41e+1	lbs/hr	CE
Chromium	200C1R2	ND	1.10e+5	ug/g	5.57e+1	lbs/hr	CE
Chromium	200C1R3	ND	1.10e+5	ug/g	3.65e+1	lbs/hr	CE
Chromium	200C1R4	ND	1.20e+5	ug/g	4.70e+1	lbs/hr	CE
Lead	200C1R1	ND	4.60e+1	ug/g	2.26e-2	lbs/hr	CE
Lead	200C1R2	ND	1.00e+1	ug/g	5.06e-3	lbs/hr	CE
Lead	200C1R3	ND	1.00e+1	ug/g	3.32e-3	lbs/hr	CE
Lead	200C1R4	ND	1.00e+1	ug/g	3.92e-3	lbs/hr	CE

5. Type: TIER I

6. Description: METALS FEED LIMIT

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Mercury	200C1R1	0.00e+0			6.07e+0	lbs/hr	
Mercury	200C1R2	0.00e+0			6.07e+0	lbs/hr	
Mercury	200C1R3	0.00e+0			6.07e+0	lbs/hr	
Mercury	200C1R4	0.00e+0			6.07e+0	lbs/hr	

5. Type: WASTE

6. Description:

Group: WET KILN

Location: KILN

Phase: SOLID

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA SCD003351699

REGION: 4

4. EP ID: 200 DEVICE NAME: KILN NO. 4

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	200C1R1	4.20e+4	ug/g	4.28e+2 lbs/hr	CE
Chlorine	200C1R2	4.40e+4	ug/g	3.70e+2 lbs/hr	CE
Chlorine	200C1R3	5.70e+4	ug/g	5.13e+2 lbs/hr	CE
Chlorine	200C1R4	6.60e+4	ug/g	5.54e+2 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	200C1R1	ND	2.00e+1 ug/g	2.04e-1 lbs/hr	CE
Arsenic	200C1R2	ND	2.00e+1 ug/g	1.68e-1 lbs/hr	CE
Arsenic	200C1R3	ND	2.00e+1 ug/g	1.80e-1 lbs/hr	CE
Arsenic	200C1R4	ND	2.00e+1 ug/g	1.68e-1 lbs/hr	CE
Beryllium	200C1R1	ND	5.00e-1 ug/g	5.10e-3 lbs/hr	CE
Beryllium	200C1R2	ND	5.00e-1 ug/g	4.20e-3 lbs/hr	CE
Beryllium	200C1R3	ND	5.00e-1 ug/g	4.50e-3 lbs/hr	CE
Beryllium	200C1R4	ND	5.00e-1 ug/g	4.20e-3 lbs/hr	CE
Cadmium	200C1R1		2.30e+1 ug/g	2.35e-1 lbs/hr	CE
Cadmium	200C1R2		2.30e+1 ug/g	1.93e-1 lbs/hr	CE
Cadmium	200C1R3		3.70e+1 ug/g	3.33e-1 lbs/hr	CE
Cadmium	200C1R4		8.00e+0 ug/g	6.72e-2 lbs/hr	CE
Chromium	200C1R1		9.80e+1 ug/g	1.00e+0 lbs/hr	CE
Chromium	200C1R2		1.10e+2 ug/g	9.24e-1 lbs/hr	CE
Chromium	200C1R3		5.00e+1 ug/g	4.50e-1 lbs/hr	CE
Chromium	200C1R4		7.80e+0 ug/g	6.55e-2 lbs/hr	CE
Lead	200C1R1		2.00e+2 ug/g	2.04e+0 lbs/hr	CE
Lead	200C1R2		2.00e+2 ug/g	1.68e+0 lbs/hr	CE
Lead	200C1R3		4.20e+1 ug/g	3.78e-1 lbs/hr	CE
Lead	200C1R4		9.60e+0 ug/g	8.06e-2 lbs/hr	CE



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA SCD003351699

REGION: 4

4. EP ID: 201 DEVICE NAME: KILN NO. 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5. Type: FUEL

6. Description: COAL

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	201C1R1	1.90e+3	ug/g	4.56e+0 lbs/hr	CE
Chlorine	201C1R2	1.50e+3	ug/g	8.70e+0 lbs/hr	CE
Chlorine	201C1R3	1.40e+3	ug/g	1.96e+0 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	201C1R1	1.10e+1	ug/g	2.64e-2 lbs/hr	CE
Arsenic	201C1R2	ND	2.00e+1 ug/g	1.16e-1 lbs/hr	CE
Arsenic	201C1R3	ND	2.00e+1 ug/g	2.80e-2 lbs/hr	CE
Beryllium	201C1R1	ND	5.00e-1 ug/g	1.20e-3 lbs/hr	CE
Beryllium	201C1R2	ND	5.00e-1 ug/g	2.90e-3 lbs/hr	CE
Beryllium	201C1R3	ND	5.00e-1 ug/g	7.00e-4 lbs/hr	CE
Cadmium	201C1R1	ND	1.00e+0 ug/g	2.40e-3 lbs/hr	CE
Cadmium	201C1R2	ND	1.00e+0 ug/g	5.80e-3 lbs/hr	CE
Cadmium	201C1R3	ND	1.00e+0 ug/g	1.40e-3 lbs/hr	CE
Chromium	201C1R1	ND	5.00e+0 ug/g	1.20e-2 lbs/hr	CE
Chromium	201C1R2	ND	8.30e+0 ug/g	4.81e-2 lbs/hr	CE
Chromium	201C1R3	ND	7.40e+0 ug/g	1.04e-2 lbs/hr	CE
Lead	201C1R1	ND	1.00e+1 ug/g	2.40e-2 lbs/hr	CE
Lead	201C1R2	ND	1.00e+1 ug/g	5.80e-2 lbs/hr	CE
Lead	201C1R3	ND	1.00e+1 ug/g	1.40e-2 lbs/hr	CE

5. Type: RAW MATERIAL

6. Description:

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	201C1R1	1.20e+1	ug/g	1.18e+0 lbs/hr	CE
Chlorine	201C1R2	1.10e+1	ug/g	9.48e-1 lbs/hr	CE
Chlorine	201C1R3	5.00e+1	ug/g	4.08e+0 lbs/hr	CE
Chlorine	201C1R4	4.40e+0	ug/g	3.64e-1 lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	201C1R1	ND	2.00e+1 ug/g	1.97e+0 lbs/hr	CE
Arsenic	201C1R2	ND	2.00e+1 ug/g	1.72e+0 lbs/hr	CE
Arsenic	201C1R3	ND	2.00e+1 ug/g	1.63e+0 lbs/hr	CE
Arsenic	201C1R4	ND	2.00e+1 ug/g	1.66e+0 lbs/hr	CE
Beryllium	201C1R1	ND	5.00e-1 ug/g	4.93e-2 lbs/hr	CE
Beryllium	201C1R2	ND	5.00e-1 ug/g	4.31e-2 lbs/hr	CE
Beryllium	201C1R3	ND	5.00e-1 ug/g	4.08e-2 lbs/hr	CE
Beryllium	201C1R4	ND	5.00e-1 ug/g	4.14e-2 lbs/hr	CE
Cadmium	201C1R1	ND	1.00e+0 ug/g	9.86e-2 lbs/hr	CE
Cadmium	201C1R2	ND	1.00e+0 ug/g	8.62e-2 lbs/hr	CE
Cadmium	201C1R3	ND	1.00e+0 ug/g	8.16e-2 lbs/hr	CE
Cadmium	201C1R4	ND	1.00e+0 ug/g	8.28e-2 lbs/hr	CE
Chromium	201C1R1	ND	5.00e+0 ug/g	4.93e-1 lbs/hr	CE
Chromium	201C1R2	ND	1.20e+1 ug/g	1.03e+0 lbs/hr	CE
Chromium	201C1R3	ND	9.50e+0 ug/g	7.75e-1 lbs/hr	CE
Chromium	201C1R4	ND	1.30e+1 ug/g	1.08e+0 lbs/hr	CE
Lead	201C1R1	ND	1.00e+1 ug/g	9.86e-1 lbs/hr	CE
Lead	201C1R2	ND	1.00e+1 ug/g	8.62e-1 lbs/hr	CE
Lead	201C1R3	ND	1.00e+1 ug/g	8.16e-1 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA ID: SCD003351699

REGION: 4

4. EP ID: 201 DEVICE NAME: KILN NO. 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Lead	201C1R4	ND	1.00e+1	ug/g	8.28e-1	lbs/hr	CE
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5. Type: SPIKE

6. Description: SPIKE A,METALS (AS,BE,CD,CR,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID		Concentration		Mass Rate		Calc
Chlorine	201C1R1	ND	5.00e+2	ug/g	1.57e-1	lbs/hr	CE
Chlorine	201C1R2	ND	5.00e+2	ug/g	2.02e-1	lbs/hr	CE
Chlorine	201C1R3	ND	5.00e+2	ug/g	2.08e-1	lbs/hr	CE
Chlorine	201C1R4	ND	5.00e+2	ug/g	2.74e-1	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID		Concentration		Mass Rate		Calc
Arsenic	201C1R1	ND	2.00e+1	ug/g	6.28e-3	lbs/hr	CE
Arsenic	201C1R2	ND	2.00e+1	ug/g	8.07e-3	lbs/hr	CE
Arsenic	201C1R3	ND	2.00e+1	ug/g	8.31e-3	lbs/hr	CE
Arsenic	201C1R4	ND	2.00e+1	ug/g	1.10e-2	lbs/hr	CE
Beryllium	201C1R1	ND	5.00e-1	ug/g	1.57e-4	lbs/hr	CE
Beryllium	201C1R2	ND	5.00e-1	ug/g	2.02e-4	lbs/hr	CE
Beryllium	201C1R3	ND	5.00e-1	ug/g	2.08e-4	lbs/hr	CE
Beryllium	201C1R4	ND	5.00e-1	ug/g	2.74e-4	lbs/hr	CE
Cadmium	201C1R1		4.70e+2	ug/g	1.47e-1	lbs/hr	CE
Cadmium	201C1R2		1.10e+2	ug/g	4.44e-2	lbs/hr	CE
Cadmium	201C1R3		1.00e+2	ug/g	4.15e-2	lbs/hr	CE
Cadmium	201C1R4		1.20e+2	ug/g	6.58e-2	lbs/hr	CE
Chromium	201C1R1		9.60e+4	ug/g	3.01e+1	lbs/hr	CE
Chromium	201C1R2		9.40e+4	ug/g	3.79e+1	lbs/hr	CE
Chromium	201C1R3		8.30e+4	ug/g	3.45e+1	lbs/hr	CE
Chromium	201C1R4		8.70e+4	ug/g	4.77e+1	lbs/hr	CE
Lead	201C1R1		4.20e+2	ug/g	1.32e-1	lbs/hr	CE
Lead	201C1R2		4.90e+2	ug/g	1.98e-1	lbs/hr	CE
Lead	201C1R3		7.80e+1	ug/g	3.24e-2	lbs/hr	CE
Lead	201C1R4		3.60e+1	ug/g	1.97e-2	lbs/hr	CE

6. Description: SPIKE B,METALS (AS,BE,CD,CR,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID		Concentration		Mass Rate		Calc
Chlorine	201C1R1		4.50e+3	ug/g	1.64e+0	lbs/hr	CE
Chlorine	201C1R2		4.70e+3	ug/g	1.98e+0	lbs/hr	CE
Chlorine	201C1R3	ND	5.00e+2	ug/g	1.72e-1	lbs/hr	CE
Chlorine	201C1R4		4.10e+3	ug/g	2.16e+0	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID		Concentration		Mass Rate		Calc
Arsenic	201C1R1	ND	2.00e+1	ug/g	7.30e-3	lbs/hr	CE
Arsenic	201C1R2	ND	2.00e+1	ug/g	8.41e-3	lbs/hr	CE
Arsenic	201C1R3	ND	2.00e+1	ug/g	6.87e-3	lbs/hr	CE
Arsenic	201C1R4	ND	2.00e+1	ug/g	1.05e-2	lbs/hr	CE
Beryllium	201C1R1	ND	5.00e-1	ug/g	1.83e-4	lbs/hr	CE
Beryllium	201C1R2	ND	5.00e-1	ug/g	2.10e-4	lbs/hr	CE
Beryllium	201C1R3	ND	5.00e-1	ug/g	1.72e-4	lbs/hr	CE
Beryllium	201C1R4	ND	5.00e-1	ug/g	2.63e-4	lbs/hr	CE
Cadmium	201C1R1		7.10e+2	ug/g	2.59e-1	lbs/hr	CE
Cadmium	201C1R2		6.30e+2	ug/g	2.65e-1	lbs/hr	CE
Cadmium	201C1R3		8.60e+2	ug/g	2.95e-1	lbs/hr	CE
Cadmium	201C1R4		8.00e+2	ug/g	4.21e-1	lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA ID: SCD003351699

REGION: 4

4. EP ID: 201 DEVICE NAME: KILN NO. 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Chromium	201C1R1	1.20e+3	ug/g	4.38e-1	lbs/hr	CE
Chromium	201C1R2	7.60e+3	ug/g	3.20e+0	lbs/hr	CE
Chromium	201C1R3	4.30e+3	ug/g	1.48e+0	lbs/hr	CE
Chromium	201C1R4	9.00e+3	ug/g	4.73e+0	lbs/hr	CE
Lead	201C1R1	1.80e+4	ug/g	6.57e+0	lbs/hr	CE
Lead	201C1R2	6.20e+4	ug/g	2.61e+1	lbs/hr	CE
Lead	201C1R3	4.30e+4	ug/g	1.48e+1	lbs/hr	CE
Lead	201C1R4	8.30e+4	ug/g	4.36e+1	lbs/hr	CE

6. Description: SPIKE C,METALS (AS,BE,CD,CR,PB)

Group: WET KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	201C1R1	7.70e+3	ug/g	3.25e+0	lbs/hr	CE
Chlorine	201C1R2	1.10e+4	ug/g	4.79e+0	lbs/hr	CE
Chlorine	201C1R3	1.10e+4	ug/g	4.23e+0	lbs/hr	CE
Chlorine	201C1R4	6.00e+2	ug/g	4.62e-1	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Arsenic	201C1R1	2.00e+4	ug/g	8.44e+0	lbs/hr	CE
Arsenic	201C1R2	1.90e+4	ug/g	8.27e+0	lbs/hr	CE
Arsenic	201C1R3	6.70e+3	ug/g	2.58e+0	lbs/hr	CE
Arsenic	201C1R4	1.10e+4	ug/g	8.48e+0	lbs/hr	CE
Beryllium	201C1R1	1.50e+2	ug/g	6.33e-2	lbs/hr	CE
Beryllium	201C1R2	1.50e+2	ug/g	6.53e-2	lbs/hr	CE
Beryllium	201C1R3	1.20e+2	ug/g	4.61e-2	lbs/hr	CE
Beryllium	201C1R4	1.70e+2	ug/g	1.31e-1	lbs/hr	CE
Cadmium	201C1R1	7.50e+3	ug/g	3.16e+0	lbs/hr	CE
Cadmium	201C1R2	7.10e+3	ug/g	3.09e+0	lbs/hr	CE
Cadmium	201C1R3	5.30e+3	ug/g	2.04e+0	lbs/hr	CE
Cadmium	201C1R4	8.90e+3	ug/g	6.86e+0	lbs/hr	CE
Chromium	201C1R1	2.90e+3	ug/g	1.22e+0	lbs/hr	CE
Chromium	201C1R2	2.40e+3	ug/g	1.04e+0	lbs/hr	CE
Chromium	201C1R3	1.80e+3	ug/g	6.92e-1	lbs/hr	CE
Chromium	201C1R4	1.30e+3	ug/g	1.00e+0	lbs/hr	CE
Lead	201C1R1	5.00e+2	ug/g	2.11e-1	lbs/hr	CE
Lead	201C1R2	1.40e+2	ug/g	6.09e-2	lbs/hr	CE
Lead	201C1R3	9.40e+1	ug/g	3.61e-2	lbs/hr	CE
Lead	201C1R4	3.00e+1	ug/g	2.31e-2	lbs/hr	CE

5. Type: TIER I

6. Description: METALS FEED LIMIT

Group: WET KILN

Location: KILN

Phase: SLURRY

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Mercury	201C1R1	0.00e+0		6.84e+0	lbs/hr	
Mercury	201C1R2	0.00e+0		6.84e+0	lbs/hr	
Mercury	201C1R3	0.00e+0		6.84e+0	lbs/hr	
Mercury	201C1R4	0.00e+0		6.84e+0	lbs/hr	

5. Type: WASTE

6. Description:

Group: WET KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	201C1R1	4.20e+4	ug/g	7.48e+2	lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: GIANT CEMENT COMPANY

2. STATE: SC

3. CITY: HARLEYVILLE

EPA ID: SCD003351699

REGION: 4

4. EP ID: 201 DEVICE NAME: KILN NO. 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Chlorine	201C1R2	4.20e+4	ug/g	3.28e+2	lbs/hr	CE
Chlorine	201C1R3	3.80e+4	ug/g	3.65e+2	lbs/hr	CE
Chlorine	201C1R4	5.00e+4	ug/g	5.10e+2	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Arsenic	201C1R1	ND	2.00e+1	ug/g	3.56e-1	lbs/hr	CE
Arsenic	201C1R2	ND	2.00e+1	ug/g	1.56e-1	lbs/hr	CE
Arsenic	201C1R3	ND	2.00e+1	ug/g	1.92e-1	lbs/hr	CE
Arsenic	201C1R4	ND	2.00e+1	ug/g	2.04e-1	lbs/hr	CE
Beryllium	201C1R1	ND	5.00e-1	ug/g	8.90e-3	lbs/hr	CE
Beryllium	201C1R2	ND	5.00e-1	ug/g	3.90e-3	lbs/hr	CE
Beryllium	201C1R3	ND	5.00e-1	ug/g	4.80e-3	lbs/hr	CE
Beryllium	201C1R4	ND	5.00e-1	ug/g	5.10e-3	lbs/hr	CE
Cadmium	201C1R1		1.30e+1	ug/g	2.31e-1	lbs/hr	CE
Cadmium	201C1R2		5.90e+0	ug/g	4.60e-2	lbs/hr	CE
Cadmium	201C1R3		4.80e+0	ug/g	4.61e-2	lbs/hr	CE
Cadmium	201C1R4		3.00e+0	ug/g	3.06e-2	lbs/hr	CE
Chromium	201C1R1		9.80e+1	ug/g	1.74e+0	lbs/hr	CE
Chromium	201C1R2		5.10e+1	ug/g	3.98e-1	lbs/hr	CE
Chromium	201C1R3		4.00e+1	ug/g	3.84e-1	lbs/hr	CE
Chromium	201C1R4		3.50e+1	ug/g	3.57e-1	lbs/hr	CE
Lead	201C1R1		2.20e+2	ug/g	3.92e+0	lbs/hr	CE
Lead	201C1R2		1.30e+2	ug/g	1.01e+0	lbs/hr	CE
Lead	201C1R3		1.10e+2	ug/g	1.06e+0	lbs/hr	CE
Lead	201C1R4		9.40e+1	ug/g	9.59e-1	lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: HEARTLAND CEMENT COMPANY  
 2. STATE: KS  
 3. CITY: INDEPENDENCE  
 4. EP ID: 202 DEVICE NAME: KILN NO. 1

EPA KSD98073999  
 SYSTEM TYPE: CEMENT KILN

REGION: 7  
 APC SYSTEM: FF

5. Type: CLINKER

6. Description: PRODUCT  
 Group: DRY KILN Location: KILN Phase: SOLID

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	202C2R1	ND	8.37e-1 ug/g	0.00e+0	
Antimony	202C2R2	ND	8.25e-1 ug/g	0.00e+0	
Antimony	202C2R3	ND	8.29e-1 ug/g	0.00e+0	
Arsenic	202C2R1		6.75e+0 ug/g	0.00e+0	
Arsenic	202C2R2		7.74e+0 ug/g	0.00e+0	
Arsenic	202C2R3		8.87e+0 ug/g	0.00e+0	
Barium	202C2R1		1.18e+2 ug/g	0.00e+0	
Barium	202C2R2		1.10e+2 ug/g	0.00e+0	
Barium	202C2R3		1.16e+2 ug/g	0.00e+0	
Beryllium	202C2R1		7.95e-1 ug/g	0.00e+0	
Beryllium	202C2R2		7.59e-1 ug/g	0.00e+0	
Beryllium	202C2R3		7.33e-1 ug/g	0.00e+0	
Cadmium	202C2R1		5.10e+0 ug/g	0.00e+0	
Cadmium	202C2R2		5.56e+0 ug/g	0.00e+0	
Cadmium	202C2R3		2.33e+0 ug/g	0.00e+0	
Chromium	202C2R1		1.14e+2 ug/g	0.00e+0	
Chromium	202C2R2		1.14e+2 ug/g	0.00e+0	
Chromium	202C2R3		1.19e+2 ug/g	0.00e+0	
Lead	202C2R1		2.70e+1 ug/g	0.00e+0	
Lead	202C2R2		4.90e+1 ug/g	0.00e+0	
Lead	202C2R3		2.85e+1 ug/g	0.00e+0	
Mercury	202C2R1	ND	1.00e-1 ug/g	0.00e+0	
Mercury	202C2R2	ND	1.00e-1 ug/g	0.00e+0	
Mercury	202C2R3	ND	1.00e-1 ug/g	0.00e+0	
Silver	202C2R1	ND	7.48e+0 ug/g	0.00e+0	
Silver	202C2R2	ND	1.47e+0 ug/g	0.00e+0	
Silver	202C2R3	ND	1.48e+0 ug/g	0.00e+0	
Thallium	202C2R1	ND	8.47e-1 ug/g	0.00e+0	
Thallium	202C2R2	ND	8.35e-1 ug/g	0.00e+0	
Thallium	202C2R3	ND	8.39e-1 ug/g	0.00e+0	

5. Type: FUEL

6. Description: COKE  
 Group: DRY KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	202C1R1		7.08e+2 ug/g	1.91e+0 lbs/hr	CE
Chlorine	202C1R2		8.88e+2 ug/g	2.08e+0 lbs/hr	CE
Chlorine	202C1R3		1.25e+3 ug/g	3.03e+0 lbs/hr	CE

5. Type: RAW MATERIAL

6. Description: ROCK/SAND/CLAY/SHALE  
 Group: DRY KILN Location: KILN Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	202C1R1		1.76e+3 ug/g	2.39e+2 lbs/hr	CE
Chlorine	202C1R2		1.42e+3 ug/g	2.03e+2 lbs/hr	CE
Chlorine	202C1R3		1.25e+3 ug/g	1.75e+2 lbs/hr	CE
Chlorine	202C2R1		4.32e+3 ug/g	5.29e+2 lbs/hr	CE
Chlorine	202C2R2		1.48e+3 ug/g	1.98e+2 lbs/hr	CE
Chlorine	202C2R3		1.15e+3 ug/g	1.51e+2 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: HEARTLAND CEMENT COMPANY  
 2. STATE: KS  
 3. CITY: INDEPENDENCE  
 4. EP ID: 202 DEVICE NAME: KILN NO. 1

EPA ID: KSD980739999  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

REGION: 7

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	202C2R1	ND	8.33e-1 ug/g	1.02e-1 lbs/hr	CE
Antimony	202C2R2	ND	8.24e-1 ug/g	1.10e-1 lbs/hr	CE
Antimony	202C2R3	ND	8.16e-1 ug/g	1.07e-1 lbs/hr	CE
Arsenic	202C2R1		3.84e+0 ug/g	4.71e-1 lbs/hr	CE
Arsenic	202C2R2		2.78e+0 ug/g	3.73e-1 lbs/hr	CE
Arsenic	202C2R3		4.02e+0 ug/g	5.26e-1 lbs/hr	CE
Barium	202C2R1		7.27e+1 ug/g	8.91e+0 lbs/hr	CE
Barium	202C2R2		7.46e+1 ug/g	1.00e+1 lbs/hr	CE
Barium	202C2R3		9.11e+1 ug/g	1.19e+1 lbs/hr	CE
Beryllium	202C2R1		5.46e-1 ug/g	6.69e-2 lbs/hr	CE
Beryllium	202C2R2		5.84e-1 ug/g	7.83e-2 lbs/hr	CE
Beryllium	202C2R3		6.33e-1 ug/g	8.29e-2 lbs/hr	CE
Cadmium	202C2R1	ND	1.49e+0 ug/g	1.83e-1 lbs/hr	CE
Cadmium	202C2R2	ND	1.47e+0 ug/g	1.97e-1 lbs/hr	CE
Cadmium	202C2R3	ND	1.46e+0 ug/g	1.91e-1 lbs/hr	CE
Chromium	202C2R1		2.14e+1 ug/g	2.62e+0 lbs/hr	CE
Chromium	202C2R2		2.00e+1 ug/g	2.68e+0 lbs/hr	CE
Chromium	202C2R3		1.72e+1 ug/g	2.25e+0 lbs/hr	CE
Lead	202C2R1		8.13e+1 ug/g	9.96e+0 lbs/hr	CE
Lead	202C2R2		5.40e+1 ug/g	7.24e+0 lbs/hr	CE
Lead	202C2R3		3.69e+1 ug/g	4.83e+0 lbs/hr	CE
Mercury	202C2R1	ND	1.00e-1 ug/g	1.23e-2 lbs/hr	CE
Mercury	202C2R2	ND	1.00e-1 ug/g	1.34e-2 lbs/hr	CE
Mercury	202C2R3	ND	1.00e-1 ug/g	1.31e-2 lbs/hr	CE
Silver	202C2R1	ND	1.49e+0 ug/g	1.83e-1 lbs/hr	CE
Silver	202C2R2		1.50e+0 ug/g	2.01e-1 lbs/hr	CE
Silver	202C2R3	ND	1.46e+0 ug/g	1.91e-1 lbs/hr	CE
Thallium	202C2R1	ND	8.42e-1 ug/g	1.03e-1 lbs/hr	CE
Thallium	202C2R2	ND	8.33e-1 ug/g	1.12e-1 lbs/hr	CE
Thallium	202C2R3	ND	8.25e-1 ug/g	1.08e-1 lbs/hr	CE

5. Type: SPIKE

6. Description: METALS (AS,CD,CR,PB)  
 Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	202C2R1		1.99e+4 ug/g	1.50e+0 lbs/hr	CC
Arsenic	202C2R2		1.85e+4 ug/g	1.38e+0 lbs/hr	CC
Arsenic	202C2R3		2.02e+4 ug/g	1.50e+0 lbs/hr	CC
Cadmium	202C2R1		1.51e+5 ug/g	1.14e+1 lbs/hr	CC
Cadmium	202C2R2		1.45e+5 ug/g	1.08e+1 lbs/hr	CC
Cadmium	202C2R3		1.53e+5 ug/g	1.13e+1 lbs/hr	CC
Chromium	202C2R1		3.65e+5 ug/g	2.75e+1 lbs/hr	CC
Chromium	202C2R2		3.63e+5 ug/g	2.70e+1 lbs/hr	CC
Chromium	202C2R3		3.60e+5 ug/g	2.67e+1 lbs/hr	CC
Lead	202C2R1		4.64e+5 ug/g	3.50e+1 lbs/hr	CC
Lead	202C2R2		4.74e+5 ug/g	3.53e+1 lbs/hr	CC
Lead	202C2R3		4.67e+5 ug/g	3.47e+1 lbs/hr	CC

5. Type: WASTE

6. Description:

Group: DRY KILN

Location: KILN

Phase: SOLID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Chlorine	202C1R1		7.22e+2 ug/g	6.37e+0 lbs/hr	CE
Chlorine	202C1R2		7.30e+2 ug/g	5.52e+0 lbs/hr	CE

SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: HEARTLAND CEMENT COMPANY  
 2. STATE: KS  
 3. CITY: INDEPENDENCE  
 4. EP ID: 202 DEVICE NAME: KILN NO. 1

EPA ID: KSD980739999  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF REGION: 7

Chlorine	202C1R3	9.10e+2	ug/g	7.00e+0	lbs/hr	CE
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7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Antimony	202C1R1	1.96e+0	ug/g	1.73e-2	lbs/hr	CE	
Antimony	202C1R2	ND	8.10e-1	ug/g	6.13e-3	lbs/hr	CE
Antimony	202C1R3	ND	8.16e-1	ug/g	6.27e-3	lbs/hr	CE
Arsenic	202C1R1	ND	8.20e-1	ug/g	7.24e-3	lbs/hr	CE
Arsenic	202C1R2	ND	8.20e-1	ug/g	6.20e-3	lbs/hr	CE
Arsenic	202C1R3	ND	8.25e-1	ug/g	6.34e-3	lbs/hr	CE
Barium	202C1R1	1.88e+1	ug/g	1.66e-1	lbs/hr	CE	
Barium	202C1R2	4.12e+0	ug/g	3.12e-2	lbs/hr	CE	
Barium	202C1R3	4.24e+0	ug/g	3.26e-2	lbs/hr	CE	
Beryllium	202C1R1	ND	1.50e-1	ug/g	1.32e-3	lbs/hr	CE
Beryllium	202C1R2	ND	1.50e-1	ug/g	1.14e-3	lbs/hr	CE
Beryllium	202C1R3	ND	1.50e-1	ug/g	1.15e-3	lbs/hr	CE
Cadmium	202C1R1	1.37e+0	ug/g	1.21e-2	lbs/hr	CE	
Cadmium	202C1R2	ND	2.50e-1	ug/g	1.89e-3	lbs/hr	CE
Cadmium	202C1R3	ND	2.50e-1	ug/g	1.92e-3	lbs/hr	CE
Chromium	202C1R1	2.74e+1	ug/g	2.42e-1	lbs/hr	CE	
Chromium	202C1R2	6.22e+0	ug/g	4.71e-2	lbs/hr	CE	
Chromium	202C1R3	1.08e+1	ug/g	8.30e-2	lbs/hr	CE	
Lead	202C1R1	4.97e+1	ug/g	4.39e-1	lbs/hr	CE	
Lead	202C1R2	7.45e+0	ug/g	5.64e-2	lbs/hr	CE	
Lead	202C1R3	ND	8.25e-1	ug/g	6.34e-3	lbs/hr	CE
Mercury	202C1R1	ND	1.00e-1	ug/g	8.83e-4	lbs/hr	CE
Mercury	202C1R2	ND	1.00e-1	ug/g	7.57e-4	lbs/hr	CE
Mercury	202C1R3	ND	1.00e-1	ug/g	7.69e-4	lbs/hr	CE
Silver	202C1R1	ND	2.50e-1	ug/g	2.21e-3	lbs/hr	CE
Silver	202C1R2	ND	2.50e-1	ug/g	1.89e-3	lbs/hr	CE
Silver	202C1R3	ND	2.50e-1	ug/g	1.92e-3	lbs/hr	CE
Thallium	202C1R1	ND	8.20e-1	ug/g	7.24e-3	lbs/hr	CE
Thallium	202C1R2	ND	8.20e-1	ug/g	6.20e-3	lbs/hr	CE
Thallium	202C1R3	ND	8.25e-1	ug/g	6.34e-3	lbs/hr	CE

6. Description:

Group: DRY KILN

Location: KILN

Phase: LIQUID

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc
Chlorine	202C1R1	2.13e+4	ug/g	9.21e+1	lbs/hr	CE
Chlorine	202C1R2	2.37e+4	ug/g	1.30e+2	lbs/hr	CE
Chlorine	202C1R3	9.10e+2	ug/g	5.30e+0	lbs/hr	CE
Chlorine	202C2R1	1.44e+4	ug/g	2.09e+2	lbs/hr	CE
Chlorine	202C2R2	1.25e+4	ug/g	1.98e+2	lbs/hr	CE
Chlorine	202C2R3	1.58e+4	ug/g	2.56e+2	lbs/hr	CE

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate		Calc	
Antimony	202C1R1	3.34e+0	ug/g	1.44e-2	lbs/hr	CE	
Antimony	202C1R2	3.40e+0	ug/g	1.86e-2	lbs/hr	CE	
Antimony	202C1R3	ND	8.16e-1	ug/g	4.75e-3	lbs/hr	CE
Antimony	202C2R1	1.85e+0	ug/g	2.69e-2	lbs/hr	CE	
Antimony	202C2R2	ND	8.33e-1	ug/g	1.32e-2	lbs/hr	CE
Antimony	202C2R3	ND	8.38e-1	ug/g	1.36e-2	lbs/hr	CE
Arsenic	202C1R1	1.08e+0	ug/g	4.67e-3	lbs/hr	CE	
Arsenic	202C1R2	2.13e+0	ug/g	1.16e-2	lbs/hr	CE	
Arsenic	202C1R3	ND	8.25e-1	ug/g	4.81e-3	lbs/hr	CE
Arsenic	202C2R1	2.71e+0	ug/g	3.94e-2	lbs/hr	CE	
Arsenic	202C2R2	2.09e+0	ug/g	3.31e-2	lbs/hr	CE	
Arsenic	202C2R3	2.02e+0	ug/g	3.28e-2	lbs/hr	CE	
Barium	202C1R1	1.25e+2	ug/g	5.40e-1	lbs/hr	CE	
Barium	202C1R2	2.16e+2	ug/g	1.18e+0	lbs/hr	CE	



SECTION 8: OTHER STREAM ANALYSES

1. COMPANY: HEARTLAND CEMENT COMPANY  
 2. STATE: KS  
 3. CITY: INDEPENDENCE  
 4. EP ID: 202 DEVICE NAME: KILN NO. 1

EPA ID: KSD980739999  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

REGION: 7

Barium	202C1R3		4.24e+0	ug/g	2.47e-2	lbs/hr	CE
Barium	202C2R1		1.77e+2	ug/g	2.57e+0	lbs/hr	CE
Barium	202C2R2		1.38e+2	ug/g	2.19e+0	lbs/hr	CE
Barium	202C2R3		1.25e+2	ug/g	2.03e+0	lbs/hr	CE
Beryllium	202C1R1	ND	1.50e-1	ug/g	6.49e-4	lbs/hr	CE
Beryllium	202C1R2		1.77e-1	ug/g	9.67e-4	lbs/hr	CE
Beryllium	202C1R3	ND	1.50e-1	ug/g	8.74e-4	lbs/hr	CE
Beryllium	202C2R1		1.57e-1	ug/g	2.28e-3	lbs/hr	CE
Beryllium	202C2R2	ND	1.50e-1	ug/g	2.38e-3	lbs/hr	CE
Beryllium	202C2R3	ND	1.50e-1	ug/g	2.43e-3	lbs/hr	CE
Cadmium	202C1R1		1.28e+0	ug/g	5.53e-3	lbs/hr	CE
Cadmium	202C1R2		1.51e+0	ug/g	8.25e-3	lbs/hr	CE
Cadmium	202C1R3	ND	2.50e-1	ug/g	1.46e-3	lbs/hr	CE
Cadmium	202C2R1		5.14e+0	ug/g	7.47e-2	lbs/hr	CE
Cadmium	202C2R2		3.10e+0	ug/g	4.91e-2	lbs/hr	CE
Cadmium	202C2R3		3.11e+0	ug/g	5.04e-2	lbs/hr	CE
Chromium	202C1R1		9.55e+1	ug/g	4.13e-1	lbs/hr	CE
Chromium	202C1R2		1.17e+2	ug/g	6.39e-1	lbs/hr	CE
Chromium	202C1R3		1.08e+1	ug/g	6.29e-2	lbs/hr	CE
Chromium	202C2R1		1.12e+2	ug/g	1.63e+0	lbs/hr	CE
Chromium	202C2R2		1.95e+2	ug/g	3.09e+0	lbs/hr	CE
Chromium	202C2R3		1.89e+2	ug/g	3.06e+0	lbs/hr	CE
Lead	202C1R1		1.74e+2	ug/g	7.52e-1	lbs/hr	CE
Lead	202C1R2		2.17e+2	ug/g	1.19e+0	lbs/hr	CE
Lead	202C1R3	ND	8.25e-1	ug/g	4.81e-3	lbs/hr	CE
Lead	202C2R1		1.27e+2	ug/g	1.85e+0	lbs/hr	CE
Lead	202C2R2		8.95e+1	ug/g	1.42e+0	lbs/hr	CE
Lead	202C2R3		9.21e+1	ug/g	1.49e+0	lbs/hr	CE
Mercury	202C1R1		1.73e-1	ug/g	7.48e-4	lbs/hr	CE
Mercury	202C1R2		1.89e-1	ug/g	1.03e-3	lbs/hr	CE
Mercury	202C1R3	ND	1.00e-1	ug/g	5.83e-4	lbs/hr	CE
Mercury	202C2R1	ND	1.00e-1	ug/g	1.45e-3	lbs/hr	CE
Mercury	202C2R2	ND	1.00e-1	ug/g	1.59e-3	lbs/hr	CE
Mercury	202C2R3		1.39e-1	ug/g	2.25e-3	lbs/hr	CE
Silver	202C1R1		1.03e+0	ug/g	4.45e-3	lbs/hr	CE
Silver	202C1R2		1.09e+0	ug/g	5.96e-3	lbs/hr	CE
Silver	202C1R3	ND	2.50e-1	ug/g	1.46e-3	lbs/hr	CE
Silver	202C2R1		1.16e+0	ug/g	1.69e-2	lbs/hr	CE
Silver	202C2R2		1.82e+0	ug/g	2.89e-2	lbs/hr	CE
Silver	202C2R3		1.63e+0	ug/g	2.64e-2	lbs/hr	CE
Thallium	202C1R1	ND	9.40e-1	ug/g	4.06e-3	lbs/hr	CE
Thallium	202C1R2	ND	8.35e-1	ug/g	4.56e-3	lbs/hr	CE
Thallium	202C1R3	ND	8.25e-1	ug/g	4.81e-3	lbs/hr	CE
Thallium	202C2R1	ND	8.49e-1	ug/g	1.23e-2	lbs/hr	CE
Thallium	202C2R2	ND	8.42e-1	ug/g	1.33e-2	lbs/hr	CE
Thallium	202C2R3	ND	8.48e-1	ug/g	1.37e-2	lbs/hr	CE

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