

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: LONE STAR INDUSTRIES, INC.  
 2. STATE: MO  
 3. CITY: CAPE GIRARDEAU EPA MO981127319 REGION: 7  
 4. EP ID: 303 DEVICE NAME: KILN NO. 1 SYSTEM TYPE: CEMENT KILN APC SYSTEM: QC/FF

5. Type: CONTROLLED  
 6. Description: EMISSIONS Process Group: DRY KILN Location: STACK-MAIN Phase: GAS  
 7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	303C1R1	1.63e-1 ppmv 7%O2	3.60e-1 lbs/hr	CC7%O2
Chlorine	303C1R2	9.56e-2 ppmv 7%O2	2.10e-1 lbs/hr	CC7%O2
Chlorine	303C1R3	2.23e-1 ppmv 7%O2	4.70e-1 lbs/hr	CC7%O2
Chlorine	303C2R1	1.79e-2 ppmv	5.15e-2 lbs/hr	CC
Chlorine	303C2R2	3.50e-2 ppmv	1.04e-1 lbs/hr	CC
Chlorine	303C2R3	5.24e-2 ppmv	1.55e-1 lbs/hr	CC
HCl	303C1R1	2.74e+0 ppmv 7%O2	3.12e+0 lbs/hr	CC7%O2
HCl	303C1R2	1.68e+0 ppmv 7%O2	1.90e+0 lbs/hr	CC7%O2
HCl	303C1R3	7.19e-1 ppmv 7%O2	7.81e-1 lbs/hr	CC7%O2
HCl	303C2R1	5.31e+0 ppmv	7.89e+0 lbs/hr	CC
HCl	303C2R2	5.88e+0 ppmv	8.99e+0 lbs/hr	CC
HCl	303C2R3	9.67e+1 ppmv	1.47e+2 lbs/hr	CC

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	303C1R4	2.74e-1 ug/dscm	2.67e-4 lbs/hr	CC
Antimony	303C1R5	4.66e-1 ug/dscm	4.63e-4 lbs/hr	CC
Antimony	303C1R6	3.42e-1 ug/dscm	3.42e-4 lbs/hr	CC
Arsenic	303C1R4	1.74e+0 ug/dscm	1.70e-3 lbs/hr	CC
Arsenic	303C1R5	2.34e+0 ug/dscm	2.32e-3 lbs/hr	CC
Arsenic	303C1R6	2.00e+0 ug/dscm	2.00e-3 lbs/hr	CC
Arsenic	303C3R1	1.94e+0 ug/dscm 7%O2	1.40e-3 lbs/hr	7%O2
Arsenic	303C3R2	2.98e+0 ug/dscm 7%O2	2.26e-3 lbs/hr	7%O2
Arsenic	303C3R3	2.87e+0 ug/dscm 7%O2	2.14e-3 lbs/hr	7%O2
Barium	303C1R4	3.09e+1 ug/dscm	3.01e-2 lbs/hr	CC
Barium	303C1R5	3.44e+1 ug/dscm	3.42e-2 lbs/hr	CC
Barium	303C1R6	1.60e+2 ug/dscm	1.59e-1 lbs/hr	CC
Beryllium	303C1R4	1.68e-1 ug/dscm	1.63e-4 lbs/hr	CC
Beryllium	303C1R5	6.22e-2 ug/dscm	6.17e-5 lbs/hr	CC
Beryllium	303C1R6	9.94e-2 ug/dscm	9.92e-5 lbs/hr	CC
Beryllium	303C3R1	7.36e-2 ug/dscm 7%O2	5.31e-5 lbs/hr	7%O2
Beryllium	303C3R2	6.92e-2 ug/dscm 7%O2	5.25e-5 lbs/hr	7%O2
Beryllium	303C3R3	1.99e-1 ug/dscm 7%O2	1.48e-4 lbs/hr	7%O2
Cadmium	303C1R4	3.58e-1 ug/dscm	3.48e-4 lbs/hr	CC
Cadmium	303C1R5	4.11e-1 ug/dscm	4.08e-4 lbs/hr	CC
Cadmium	303C1R6	3.07e-1 ug/dscm	3.06e-4 lbs/hr	CC
Cadmium	303C3R1	2.52e+0 ug/dscm 7%O2	1.82e-3 lbs/hr	7%O2
Cadmium	303C3R2	2.09e+1 ug/dscm 7%O2	1.59e-2 lbs/hr	7%O2
Cadmium	303C3R3	6.86e-2 ug/dscm 7%O2	5.12e-5 lbs/hr	7%O2
Chromium	303C1R4	1.62e+1 ug/dscm	1.58e-2 lbs/hr	CC
Chromium	303C1R5	1.58e+1 ug/dscm	1.57e-2 lbs/hr	CC
Chromium	303C1R6	3.66e+1 ug/dscm	3.66e-2 lbs/hr	CC
Chromium	303C3R1	1.67e+1 ug/dscm 7%O2	1.21e-2 lbs/hr	7%O2
Chromium	303C3R2	6.92e-2 ug/dscm 7%O2	5.25e-5 lbs/hr	7%O2
Chromium	303C3R3	6.86e-2 ug/dscm 7%O2	5.12e-5 lbs/hr	7%O2
Chromium (Hex)	303C3R1	4.89e-1 ug/dscm 7%O2	3.53e-4 lbs/hr	CC7%O2
Chromium (Hex)	303C3R2	4.94e-1 ug/dscm 7%O2	3.75e-4 lbs/hr	CC7%O2
Chromium (Hex)	303C3R3	4.73e-1 ug/dscm 7%O2	3.53e-4 lbs/hr	CC7%O2
Lead	303C1R4	1.29e+1 ug/dscm	1.25e-2 lbs/hr	CC
Lead	303C1R5	1.33e+1 ug/dscm	1.32e-2 lbs/hr	CC
Lead	303C1R6	1.13e+1 ug/dscm	1.13e-2 lbs/hr	CC
Lead	303C3R1	1.94e+1 ug/dscm 7%O2	1.40e-2 lbs/hr	7%O2
Lead	303C3R2	1.64e+1 ug/dscm 7%O2	1.24e-2 lbs/hr	7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: LONE STAR INDUSTRIES, INC.  
 2. STATE: MO  
 3. CITY: CAPE GIRARDEAU  
 4. EP ID: 303 DEVICE NAME: KILN NO. 1

EPA ID: MO981127319  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: QC/FF

REGION: 7

Substance	Run ID	Concentration	Units	Mass Rate	Limit
Lead	303C3R3	3.82e+1	ug/dscm 7%O2	2.85e-2 lbs/hr	7%O2
Mercury	303C1R4	4.26e+0	ug/dscm	4.14e-3 lbs/hr	CC
Mercury	303C1R5	2.90e+0	ug/dscm	2.88e-3 lbs/hr	CC
Mercury	303C1R6	2.90e+0	ug/dscm	2.89e-3 lbs/hr	CC
Mercury	303C3R1	5.53e+1	ug/dscm 7%O2	3.99e-2 lbs/hr	7%O2
Mercury	303C3R2	4.77e+1	ug/dscm 7%O2	3.62e-2 lbs/hr	7%O2
Mercury	303C3R3	1.72e+2	ug/dscm 7%O2	1.28e-1 lbs/hr	7%O2
Silver	303C1R4	9.96e-2	ug/dscm	9.70e-5 lbs/hr	CC
Silver	303C1R5	1.04e-1	ug/dscm	1.04e-4 lbs/hr	CC
Silver	303C1R6	1.19e-1	ug/dscm	1.19e-4 lbs/hr	CC
Thallium	303C1R4	1.18e+0	ug/dscm	1.15e-3 lbs/hr	CC
Thallium	303C1R5	7.73e-1	ug/dscm	7.67e-4 lbs/hr	CC
Thallium	303C1R6	7.55e-1	ug/dscm	7.54e-4 lbs/hr	CC

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	303C1R1	2.20e-2 gr/dscf 7%O2	3.81e+1 lbs/hr	
Particulate	303C1R2	2.50e-2 gr/dscf 7%O2	4.33e+1 lbs/hr	
Particulate	303C1R3	2.10e-2 gr/dscf 7%O2	3.38e+1 lbs/hr	
Particulate	303C2R1	2.60e-2 gr/dscf 7%O2	4.25e+1 lbs/hr	
Particulate	303C2R2	2.40e-2 gr/dscf 7%O2	4.01e+1 lbs/hr	
Particulate	303C2R3	2.30e-2 gr/dscf 7%O2	3.81e+1 lbs/hr	

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
CO	303C1R1	1.11e+3 ppmv 7%O2	9.75e+2 lbs/hr	CE
CO	303C1R2	9.86e+2 ppmv 7%O2	8.57e+2 lbs/hr	CE
CO	303C1R3	9.97e+2 ppmv 7%O2	8.31e+2 lbs/hr	CE
CO	303C1R4	1.54e+3 ppmv 7%O2	0.00e+0	
CO	303C1R5	1.37e+3 ppmv 7%O2	0.00e+0	
CO	303C1R6	1.40e+3 ppmv 7%O2	0.00e+0	
CO	303C2R1	2.95e+3 ppmv 7%O2	0.00e+0	
CO	303C2R2	1.61e+3 ppmv 7%O2	0.00e+0	
CO	303C2R3	1.56e+3 ppmv 7%O2	0.00e+0	
CO	303C3R1	2.70e+3 ppmv 7%O2	2.27e+3 lbs/hr	CE
CO	303C3R2	2.26e+3 ppmv 7%O2	1.99e+3 lbs/hr	CE
CO	303C3R3	3.14e+3 ppmv 7%O2	2.72e+3 lbs/hr	CE
THC	303C1R4	9.90e+1 ppmv 7%O2	0.00e+0	
THC	303C1R5	7.60e+1 ppmv 7%O2	0.00e+0	
THC	303C1R6	8.70e+1 ppmv 7%O2	0.00e+0	
THC	303C2R1	3.80e+1 ppmv 7%O2	0.00e+0	
THC	303C2R2	3.60e+1 ppmv 7%O2	0.00e+0	
THC	303C2R3	3.30e+1 ppmv 7%O2	0.00e+0	
THC	303C3R1	5.70e+1 ppmv 7%O2	7.52e+1 lbs/hr	CE
THC	303C3R2	5.50e+1 ppmv 7%O2	7.62e+1 lbs/hr	CE
THC	303C3R3	6.70e+1 ppmv 7%O2	9.13e+1 lbs/hr	CE

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	303C1R1	ND 1.67e+3 ng/dscm 7%O2	1.26e-3 lbs/hr	CC7%O2
1,1,1-Trichloroethane	303C1R2	ND 1.76e+3 ng/dscm 7%O2	1.31e-3 lbs/hr	CC7%O2
1,1,1-Trichloroethane	303C1R3	ND 1.79e+3 ng/dscm 7%O2	1.29e-3 lbs/hr	CC7%O2
1,1,2-Trichloroethane	303C1R1	ND 1.67e+3 ng/dscm 7%O2	1.26e-3 lbs/hr	CC7%O2
1,1,2-Trichloroethane	303C1R2	ND 1.76e+3 ng/dscm 7%O2	1.31e-3 lbs/hr	CC7%O2
1,1,2-Trichloroethane	303C1R3	ND 1.79e+3 ng/dscm 7%O2	1.29e-3 lbs/hr	CC7%O2
Tetrachloroethene	303C1R1	ND 1.67e+3 ng/dscm 7%O2	1.26e-3 lbs/hr	CC7%O2

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1. COMPANY: LONE STAR INDUSTRIES, INC.

2. STATE: MO

3. CITY: CAPE GIRARDEAU

EPA ID: MO981127319

REGION: 7

4. EP ID: 303 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: QC/FF

Tetrachloroethene	303C1R2	ND	1.76e+3	ng/dscm	7%O2	1.31e-3	lbs/hr	CC7%O2
Tetrachloroethene	303C1R3	ND	1.79e+3	ng/dscm	7%O2	1.29e-3	lbs/hr	CC7%O2
Trichlorotrifluoromethane	303C1R1	ND	1.67e+3	ng/dscm	7%O2	1.26e-3	lbs/hr	CC7%O2
Trichlorotrifluoromethane	303C1R2	ND	1.76e+3	ng/dscm	7%O2	1.31e-3	lbs/hr	CC7%O2
Trichlorotrifluoromethane	303C1R3	ND	1.79e+3	ng/dscm	7%O2	1.29e-3	lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY

2. STATE: PA

3. CITY: WAMPUM

EPA PAD083965897

REGION: 3

4. EP ID: 305 DEVICE NAME: KILN NO. 1,2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	305C3R1	3.87e+0 ng/dscm 7%O2	1.06e-6 lbs/hr	CC7%O2
4D 2378	305C3R2	6.16e+0 ng/dscm 7%O2	1.65e-6 lbs/hr	CC7%O2
4D 2378	305C3R3	5.84e+0 ng/dscm 7%O2	1.55e-6 lbs/hr	CC7%O2
4D Other	305C3R1	1.72e+2 ng/dscm 7%O2	4.74e-5 lbs/hr	OCE
4D Other	305C3R2	3.80e+2 ng/dscm 7%O2	1.02e-4 lbs/hr	OCE
4D Other	305C3R3	2.11e+2 ng/dscm 7%O2	5.58e-5 lbs/hr	OCE
4D Total	305C3R1	1.76e+2 ng/dscm 7%O2	4.85e-5 lbs/hr	CC7%O2
4D Total	305C3R2	3.86e+2 ng/dscm 7%O2	1.04e-4 lbs/hr	CC7%O2
4D Total	305C3R3	2.16e+2 ng/dscm 7%O2	5.73e-5 lbs/hr	CC7%O2
4F 2378	305C3R1	2.51e+1 ng/dscm 7%O2	6.92e-6 lbs/hr	CC7%O2
4F 2378	305C3R2	3.52e+1 ng/dscm 7%O2	9.46e-6 lbs/hr	CC7%O2
4F 2378	305C3R3	4.14e+1 ng/dscm 7%O2	1.10e-5 lbs/hr	CC7%O2
4F Other	305C3R1	5.83e+2 ng/dscm 7%O2	1.61e-4 lbs/hr	OCE
4F Other	305C3R2	9.34e+2 ng/dscm 7%O2	2.51e-4 lbs/hr	OCE
4F Other	305C3R3	9.82e+2 ng/dscm 7%O2	2.60e-4 lbs/hr	OCE
4F Total	305C3R1	6.08e+2 ng/dscm 7%O2	1.68e-4 lbs/hr	CC7%O2
4F Total	305C3R2	9.70e+2 ng/dscm 7%O2	2.60e-4 lbs/hr	CC7%O2
4F Total	305C3R3	1.02e+3 ng/dscm 7%O2	2.71e-4 lbs/hr	CC7%O2
5D 12378	305C3R1	4.74e+0 ng/dscm 7%O2	1.31e-6 lbs/hr	CC7%O2
5D 12378	305C3R2	9.53e+0 ng/dscm 7%O2	2.56e-6 lbs/hr	CC7%O2
5D 12378	305C3R3	7.08e+0 ng/dscm 7%O2	1.88e-6 lbs/hr	CC7%O2
5D Other	305C3R1	1.79e+2 ng/dscm 7%O2	4.94e-5 lbs/hr	OCE
5D Other	305C3R2	4.10e+2 ng/dscm 7%O2	1.10e-4 lbs/hr	OCE
5D Other	305C3R3	2.09e+2 ng/dscm 7%O2	5.54e-5 lbs/hr	OCE
5D Total	305C3R1	1.84e+2 ng/dscm 7%O2	5.07e-5 lbs/hr	CC7%O2
5D Total	305C3R2	4.19e+2 ng/dscm 7%O2	1.12e-4 lbs/hr	CC7%O2
5D Total	305C3R3	2.16e+2 ng/dscm 7%O2	5.73e-5 lbs/hr	CC7%O2
5F 12378	305C3R1	1.57e+1 ng/dscm 7%O2	4.32e-6 lbs/hr	CC7%O2
5F 12378	305C3R2	3.06e+1 ng/dscm 7%O2	8.22e-6 lbs/hr	CC7%O2
5F 12378	305C3R3	3.10e+1 ng/dscm 7%O2	8.22e-6 lbs/hr	CC7%O2
5F 23478	305C3R1	2.83e+1 ng/dscm 7%O2	7.78e-6 lbs/hr	CC7%O2
5F 23478	305C3R2	6.11e+1 ng/dscm 7%O2	1.64e-5 lbs/hr	CC7%O2
5F 23478	305C3R3	6.16e+1 ng/dscm 7%O2	1.63e-5 lbs/hr	CC7%O2
5F Other	305C3R1	2.28e+2 ng/dscm 7%O2	6.29e-5 lbs/hr	OCE
5F Other	305C3R2	4.67e+2 ng/dscm 7%O2	1.25e-4 lbs/hr	OCE
5F Other	305C3R3	4.73e+2 ng/dscm 7%O2	1.25e-4 lbs/hr	OCE
5F Total	305C3R1	2.72e+2 ng/dscm 7%O2	7.50e-5 lbs/hr	CC7%O2
5F Total	305C3R2	5.59e+2 ng/dscm 7%O2	1.50e-4 lbs/hr	CC7%O2
5F Total	305C3R3	5.66e+2 ng/dscm 7%O2	1.50e-4 lbs/hr	CC7%O2
6D 123478	305C3R1	4.99e+0 ng/dscm 7%O2	1.37e-6 lbs/hr	CC7%O2
6D 123478	305C3R2	9.86e+0 ng/dscm 7%O2	2.65e-6 lbs/hr	CC7%O2
6D 123478	305C3R3	5.93e+0 ng/dscm 7%O2	1.57e-6 lbs/hr	CC7%O2
6D 123678	305C3R1	5.65e+0 ng/dscm 7%O2	1.56e-6 lbs/hr	CC7%O2
6D 123678	305C3R2	1.20e+1 ng/dscm 7%O2	3.22e-6 lbs/hr	CC7%O2
6D 123678	305C3R3	6.68e+0 ng/dscm 7%O2	1.77e-6 lbs/hr	CC7%O2
6D 123789	305C3R1	5.12e+0 ng/dscm 7%O2	1.41e-6 lbs/hr	CC7%O2
6D 123789	305C3R2	1.93e+1 ng/dscm 7%O2	5.18e-6 lbs/hr	CC7%O2
6D 123789	305C3R3	1.17e+1 ng/dscm 7%O2	3.11e-6 lbs/hr	CC7%O2
6D Other	305C3R1	1.60e+2 ng/dscm 7%O2	4.42e-5 lbs/hr	OCE
6D Other	305C3R2	4.19e+2 ng/dscm 7%O2	1.12e-4 lbs/hr	OCE
6D Other	305C3R3	1.75e+2 ng/dscm 7%O2	4.65e-5 lbs/hr	OCE
6D Total	305C3R1	1.76e+2 ng/dscm 7%O2	4.85e-5 lbs/hr	CC7%O2
6D Total	305C3R2	4.60e+2 ng/dscm 7%O2	1.23e-4 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY

2. STATE: PA

3. CITY: WAMPUM

EPA ID: PAD083965897

REGION: 3

4. EP ID: 305 DEVICE NAME: KILN NO. 1,2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

6D Total	305C3R3	2.00e+2	ng/dscm 7%O2	5.29e-5	lbs/hr	CC7%O2
6F 123478	305C3R1	2.24e+1	ng/dscm 7%O2	6.17e-6	lbs/hr	CC7%O2
6F 123478	305C3R2	5.20e+1	ng/dscm 7%O2	1.40e-5	lbs/hr	CC7%O2
6F 123478	305C3R3	3.79e+1	ng/dscm 7%O2	1.00e-5	lbs/hr	CC7%O2
6F 123678	305C3R1	8.57e+0	ng/dscm 7%O2	2.36e-6	lbs/hr	CC7%O2
6F 123678	305C3R2	2.05e+1	ng/dscm 7%O2	5.49e-6	lbs/hr	CC7%O2
6F 123678	305C3R3	1.43e+1	ng/dscm 7%O2	3.79e-6	lbs/hr	CC7%O2
6F 123789	305C3R1	1.12e+0	ng/dscm 7%O2	3.09e-7	lbs/hr	CC7%O2
6F 123789	305C3R2	3.38e+0	ng/dscm 7%O2	9.06e-7	lbs/hr	CC7%O2
6F 123789	305C3R3	2.57e+0	ng/dscm 7%O2	6.81e-7	lbs/hr	CC7%O2
6F 234678	305C3R1	9.29e+0	ng/dscm 7%O2	2.56e-6	lbs/hr	CC7%O2
6F 234678	305C3R2	3.32e+1	ng/dscm 7%O2	8.91e-6	lbs/hr	CC7%O2
6F 234678	305C3R3	2.34e+1	ng/dscm 7%O2	6.20e-6	lbs/hr	CC7%O2
6F Other	305C3R1	5.47e+1	ng/dscm 7%O2	1.51e-5	lbs/hr	OCE
6F Other	305C3R2	1.37e+2	ng/dscm 7%O2	3.69e-5	lbs/hr	OCE
6F Other	305C3R3	1.05e+2	ng/dscm 7%O2	2.78e-5	lbs/hr	OCE
6F Total	305C3R1	9.61e+1	ng/dscm 7%O2	2.65e-5	lbs/hr	CC7%O2
6F Total	305C3R2	2.46e+2	ng/dscm 7%O2	6.61e-5	lbs/hr	CC7%O2
6F Total	305C3R3	1.83e+2	ng/dscm 7%O2	4.85e-5	lbs/hr	CC7%O2
7D 1234678	305C3R1	1.69e+1	ng/dscm 7%O2	4.65e-6	lbs/hr	CC7%O2
7D 1234678	305C3R2	3.97e+1	ng/dscm 7%O2	1.06e-5	lbs/hr	CC7%O2
7D 1234678	305C3R3	1.66e+1	ng/dscm 7%O2	4.41e-6	lbs/hr	CC7%O2
7D Other	305C3R1	2.05e+1	ng/dscm 7%O2	5.64e-6	lbs/hr	OCE
7D Other	305C3R2	5.07e+1	ng/dscm 7%O2	1.36e-5	lbs/hr	OCE
7D Other	305C3R3	2.16e+1	ng/dscm 7%O2	5.71e-6	lbs/hr	OCE
7D Total	305C3R1	3.74e+1	ng/dscm 7%O2	1.03e-5	lbs/hr	CC7%O2
7D Total	305C3R2	9.04e+1	ng/dscm 7%O2	2.43e-5	lbs/hr	CC7%O2
7D Total	305C3R3	3.82e+1	ng/dscm 7%O2	1.01e-5	lbs/hr	CC7%O2
7F 1234678	305C3R1	8.41e+0	ng/dscm 7%O2	2.31e-6	lbs/hr	CC7%O2
7F 1234678	305C3R2	2.05e+1	ng/dscm 7%O2	5.51e-6	lbs/hr	CC7%O2
7F 1234678	305C3R3	1.17e+1	ng/dscm 7%O2	3.09e-6	lbs/hr	CC7%O2
7F 1234789	305C3R1	2.71e+0	ng/dscm 7%O2	7.45e-7	lbs/hr	CC7%O2
7F 1234789	305C3R2	6.75e+0	ng/dscm 7%O2	1.81e-6	lbs/hr	CC7%O2
7F 1234789	305C3R3	3.85e+0	ng/dscm 7%O2	1.02e-6	lbs/hr	CC7%O2
7F Other	305C3R1	8.26e+0	ng/dscm 7%O2	2.28e-6	lbs/hr	OCE
7F Other	305C3R2	2.20e+1	ng/dscm 7%O2	5.90e-6	lbs/hr	OCE
7F Other	305C3R3	1.25e+1	ng/dscm 7%O2	3.30e-6	lbs/hr	OCE
7F Total	305C3R1	1.94e+1	ng/dscm 7%O2	5.34e-6	lbs/hr	CC7%O2
7F Total	305C3R2	4.93e+1	ng/dscm 7%O2	1.32e-5	lbs/hr	CC7%O2
7F Total	305C3R3	2.80e+1	ng/dscm 7%O2	7.41e-6	lbs/hr	CC7%O2
8D	305C3R1	7.36e+0	ng/dscm 7%O2	2.03e-6	lbs/hr	CC7%O2
8D	305C3R2	1.40e+1	ng/dscm 7%O2	3.75e-6	lbs/hr	CC7%O2
8D	305C3R3	5.76e+0	ng/dscm 7%O2	1.53e-6	lbs/hr	CC7%O2
8F	305C3R1	3.91e+0	ng/dscm 7%O2	1.08e-6	lbs/hr	CC7%O2
8F	305C3R2	7.90e+0	ng/dscm 7%O2	2.12e-6	lbs/hr	CC7%O2
8F	305C3R3	3.72e+0	ng/dscm 7%O2	9.85e-7	lbs/hr	CC7%O2
TEQ	305C3R1	2.97e+1	ng/dscm 7%O2	8.17e-6	lbs/hr	CCET
TEQ	305C3R2	6.23e+1	ng/dscm 7%O2	1.67e-5	lbs/hr	CCET
TEQ	305C3R3	5.65e+1	ng/dscm 7%O2	1.50e-5	lbs/hr	CCET
Total PCDD/PCDF	305C3R1	1.58e+3	ng/dscm 7%O2	4.35e-4	lbs/hr	CCET
Total PCDD/PCDF	305C3R2	3.20e+3	ng/dscm 7%O2	8.59e-4	lbs/hr	CCET
Total PCDD/PCDF	305C3R3	2.48e+3	ng/dscm 7%O2	6.57e-4	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	305C1R1	3.34e-1 ppmv 7%O2	1.60e-1 lbs/hr	CC7%O2
Chlorine	305C1R2	4.15e-1 ppmv 7%O2	2.10e-1 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 305 DEVICE NAME: KILN NO. 1,2

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

REGION: 3  
 APC SYSTEM: ESP

Chlorine	305C1R3	3.14e-1	ppmv 7%O2	1.40e-1	lbs/hr	CC7%O2
Chlorine	305C3R1	1.36e-1	ppmv 7%O2	1.10e-1	lbs/hr	CC7%O2
Chlorine	305C3R2	1.77e-1	ppmv 7%O2	1.40e-1	lbs/hr	CC7%O2
Chlorine	305C3R3	1.54e-1	ppmv 7%O2	1.20e-1	lbs/hr	CC7%O2
HCl	305C1R1	1.80e+2	ppmv 7%O2	4.44e+1	lbs/hr	7%O2
HCl	305C1R2	1.85e+2	ppmv 7%O2	4.92e+1	lbs/hr	7%O2
HCl	305C1R3	1.05e+2	ppmv 7%O2	2.41e+1	lbs/hr	7%O2
HCl	305C3R1	2.88e+1	ppmv 7%O2	1.20e+1	lbs/hr	CC7%O2
HCl	305C3R2	2.98e+1	ppmv 7%O2	1.21e+1	lbs/hr	CC7%O2
HCl	305C3R3	2.56e+1	ppmv 7%O2	1.03e+1	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	305C1R1	ND	1.23e+1 ug/dscm 7%O2	2.00e-3 lbs/hr	CC7%O2
Antimony	305C1R2	ND	1.16e+1 ug/dscm 7%O2	2.00e-3 lbs/hr	CC7%O2
Antimony	305C1R3	ND	1.32e+1 ug/dscm 7%O2	2.00e-3 lbs/hr	CC7%O2
Antimony	305C3R1	ND	1.16e+1 ug/dscm 7%O2	3.19e-3 lbs/hr	CC7%O2
Antimony	305C3R2	ND	1.09e+1 ug/dscm 7%O2	2.93e-3 lbs/hr	CC7%O2
Antimony	305C3R3	ND	1.10e+1 ug/dscm 7%O2	2.91e-3 lbs/hr	CC7%O2
Arsenic	305C1R1	ND	2.75e+0 ug/dscm 7%O2	4.49e-4 lbs/hr	CC7%O2
Arsenic	305C1R2	ND	2.13e+0 ug/dscm 7%O2	3.67e-4 lbs/hr	CC7%O2
Arsenic	305C1R3	ND	3.03e+0 ug/dscm 7%O2	4.60e-4 lbs/hr	CC7%O2
Arsenic	305C3R1	ND	4.61e+0 ug/dscm 7%O2	1.27e-3 lbs/hr	CC7%O2
Arsenic	305C3R2	ND	4.36e+0 ug/dscm 7%O2	1.17e-3 lbs/hr	CC7%O2
Arsenic	305C3R3	ND	4.38e+0 ug/dscm 7%O2	1.16e-3 lbs/hr	CC7%O2
Barium	305C1R1	ND	4.91e+1 ug/dscm 7%O2	8.00e-3 lbs/hr	CC7%O2
Barium	305C1R2	ND	2.33e+1 ug/dscm 7%O2	4.00e-3 lbs/hr	CC7%O2
Barium	305C1R3	ND	2.64e+1 ug/dscm 7%O2	4.00e-3 lbs/hr	CC7%O2
Barium	305C3R1	ND	2.64e+1 ug/dscm 7%O2	7.26e-3 lbs/hr	CC7%O2
Barium	305C3R2	ND	3.04e+1 ug/dscm 7%O2	8.15e-3 lbs/hr	CC7%O2
Barium	305C3R3	ND	6.04e+1 ug/dscm 7%O2	1.60e-2 lbs/hr	CC7%O2
Beryllium	305C1R1	ND	2.99e+0 ug/dscm 7%O2	4.88e-4 lbs/hr	CC7%O2
Beryllium	305C1R2	ND	2.63e+0 ug/dscm 7%O2	4.53e-4 lbs/hr	CC7%O2
Beryllium	305C1R3	ND	3.09e+0 ug/dscm 7%O2	4.69e-4 lbs/hr	CC7%O2
Beryllium	305C3R1	ND	5.77e-1 ug/dscm 7%O2	1.59e-4 lbs/hr	CC7%O2
Beryllium	305C3R2	ND	5.48e-1 ug/dscm 7%O2	1.47e-4 lbs/hr	CC7%O2
Beryllium	305C3R3	ND	5.47e-1 ug/dscm 7%O2	1.45e-4 lbs/hr	CC7%O2
Cadmium	305C1R1	ND	1.53e+2 ug/dscm 7%O2	2.50e-2 lbs/hr	CC7%O2
Cadmium	305C1R2	ND	5.76e+2 ug/dscm 7%O2	9.90e-2 lbs/hr	CC7%O2
Cadmium	305C1R3	ND	7.91e+1 ug/dscm 7%O2	1.20e-2 lbs/hr	CC7%O2
Cadmium	305C3R1	ND	2.31e+0 ug/dscm 7%O2	6.37e-4 lbs/hr	CC7%O2
Cadmium	305C3R2	ND	2.18e+0 ug/dscm 7%O2	5.86e-4 lbs/hr	CC7%O2
Cadmium	305C3R3	ND	2.20e+0 ug/dscm 7%O2	5.82e-4 lbs/hr	CC7%O2
Chromium	305C1R1	ND	2.45e+1 ug/dscm 7%O2	4.00e-3 lbs/hr	CC7%O2
Chromium	305C1R2	ND	1.74e+1 ug/dscm 7%O2	3.00e-3 lbs/hr	CC7%O2
Chromium	305C1R3	ND	1.98e+1 ug/dscm 7%O2	3.00e-3 lbs/hr	CC7%O2
Chromium	305C3R1	ND	3.52e+0 ug/dscm 7%O2	9.68e-4 lbs/hr	CC7%O2
Chromium	305C3R2	ND	4.10e+0 ug/dscm 7%O2	1.10e-3 lbs/hr	CC7%O2
Chromium	305C3R3	ND	4.68e+0 ug/dscm 7%O2	1.24e-3 lbs/hr	CC7%O2
Chromium (Hex)	305C3R1	ND	3.12e-1 ug/dscm 7%O2	8.60e-5 lbs/hr	CC7%O2
Chromium (Hex)	305C3R2	ND	1.25e-1 ug/dscm 7%O2	3.35e-5 lbs/hr	CC7%O2
Chromium (Hex)	305C3R3	ND	8.30e-2 ug/dscm 7%O2	2.20e-5 lbs/hr	CC7%O2
Lead	305C1R1	ND	1.09e+3 ug/dscm 7%O2	1.78e-1 lbs/hr	CC7%O2
Lead	305C1R2	ND	1.12e+3 ug/dscm 7%O2	1.93e-1 lbs/hr	CC7%O2
Lead	305C1R3	ND	9.43e+2 ug/dscm 7%O2	1.43e-1 lbs/hr	CC7%O2
Lead	305C3R1	ND	6.28e+2 ug/dscm 7%O2	1.73e-1 lbs/hr	CC7%O2
Lead	305C3R2	ND	9.06e+2 ug/dscm 7%O2	2.43e-1 lbs/hr	CC7%O2
Lead	305C3R3	ND	1.15e+3 ug/dscm 7%O2	3.05e-1 lbs/hr	CC7%O2
Mercury	305C1R1	ND	1.84e+1 ug/dscm 7%O2	3.00e-3 lbs/hr	CC7%O2
Mercury	305C1R2	ND	1.74e+1 ug/dscm 7%O2	3.00e-3 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY

2. STATE: PA

3. CITY: WAMPUM

EPA ID: PAD083965897

REGION: 3

4. EP ID: 305 DEVICE NAME: KILN NO. 1,2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Mercury	305C1R3		1.32e+1	ug/dscm	7%O2	2.00e-3	lbs/hr	CC7%O2
Mercury	305C3R1		4.03e+0	ug/dscm	7%O2	1.11e-3	lbs/hr	CC7%O2
Mercury	305C3R2		6.93e+0	ug/dscm	7%O2	1.86e-3	lbs/hr	CC7%O2
Mercury	305C3R3		4.04e+0	ug/dscm	7%O2	1.07e-3	lbs/hr	CC7%O2
Silver	305C1R1	ND	1.23e+1	ug/dscm	7%O2	2.00e-3	lbs/hr	CC7%O2
Silver	305C1R2	ND	1.16e+1	ug/dscm	7%O2	2.00e-3	lbs/hr	CC7%O2
Silver	305C1R3	ND	1.32e+1	ug/dscm	7%O2	2.00e-3	lbs/hr	CC7%O2
Silver	305C3R1	ND	1.16e+1	ug/dscm	7%O2	3.19e-3	lbs/hr	CC7%O2
Silver	305C3R2	ND	1.09e+1	ug/dscm	7%O2	2.93e-3	lbs/hr	CC7%O2
Silver	305C3R3	ND	1.10e+1	ug/dscm	7%O2	2.91e-3	lbs/hr	CC7%O2
Thallium	305C1R1	ND	5.52e+1	ug/dscm	7%O2	9.00e-3	lbs/hr	CC7%O2
Thallium	305C1R2	ND	5.81e+1	ug/dscm	7%O2	1.00e-2	lbs/hr	CC7%O2
Thallium	305C1R3	ND	5.93e+1	ug/dscm	7%O2	9.00e-3	lbs/hr	CC7%O2
Thallium	305C3R1		2.11e+0	ug/dscm	7%O2	5.80e-4	lbs/hr	CC7%O2
Thallium	305C3R2	ND	1.08e+1	ug/dscm	7%O2	2.90e-3	lbs/hr	CC7%O2
Thallium	305C3R3		1.04e+1	ug/dscm	7%O2	2.76e-3	lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Particulate	305C1R1	7.15e-2	gr/dscf 7%O2	2.67e+1	lbs/hr	CC7%O2
Particulate	305C1R2	6.63e-2	gr/dscf 7%O2	2.61e+1	lbs/hr	CC7%O2
Particulate	305C1R3	5.27e-2	gr/dscf 7%O2	1.83e+1	lbs/hr	CC7%O2
Particulate	305C2R1	8.64e-2	gr/dscf 7%O2	5.85e+1	lbs/hr	CC7%O2
Particulate	305C2R2	7.90e-2	gr/dscf 7%O2	5.50e+1	lbs/hr	CC7%O2
Particulate	305C2R3	7.55e-2	gr/dscf 7%O2	5.77e+1	lbs/hr	CC7%O2
Particulate	305C3R1	7.32e-2	gr/dscf 7%O2	4.61e+1	lbs/hr	CC7%O2
Particulate	305C3R2	7.22e-2	gr/dscf 7%O2	4.43e+1	lbs/hr	CC7%O2
Particulate	305C3R3	7.53e-2	gr/dscf 7%O2	4.57e+1	lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
CO	305C3R1	2.56e+3	ppmv 7%O2	8.17e+2	lbs/hr	CC7%O2
CO	305C3R2	4.14e+3	ppmv 7%O2	1.29e+3	lbs/hr	CC7%O2
CO	305C3R3	5.19e+3	ppmv 7%O2	1.60e+3	lbs/hr	CC7%O2
THC	305C3R1	2.13e+1	ppmv 7%O2	1.07e+1	lbs/hr	CC7%O2
THC	305C3R2	2.39e+1	ppmv 7%O2	1.17e+1	lbs/hr	CC7%O2
THC	305C3R3	2.23e+1	ppmv 7%O2	1.08e+1	lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT



SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

REGION: 3  
 APC SYSTEM: ESP

5. Type: CONTROLLED

6. Description: EMISSIONS Process Group: DRY KILN Location: STACK Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	335C1R1	5.04e+0 ng/dscm 7%O2	8.93e-7 lbs/hr	CC7%O2
4D 2378	335C1R2	7.66e+0 ng/dscm 7%O2	1.31e-6 lbs/hr	CC7%O2
4D 2378	335C1R3	7.45e+0 ng/dscm 7%O2	1.31e-6 lbs/hr	CC7%O2
4D Other	335C1R1	8.88e+1 ng/dscm 7%O2	1.57e-5 lbs/hr	OCE
4D Other	335C1R2	9.20e+1 ng/dscm 7%O2	1.57e-5 lbs/hr	OCE
4D Other	335C1R3	1.43e+2 ng/dscm 7%O2	2.51e-5 lbs/hr	OCE
4D Total	335C1R1	9.38e+1 ng/dscm 7%O2	1.66e-5 lbs/hr	CC7%O2
4D Total	335C1R2	9.96e+1 ng/dscm 7%O2	1.70e-5 lbs/hr	CC7%O2
4D Total	335C1R3	1.50e+2 ng/dscm 7%O2	2.65e-5 lbs/hr	CC7%O2
4F 2378	335C1R1	3.22e+1 ng/dscm 7%O2	5.71e-6 lbs/hr	CC7%O2
4F 2378	335C1R2	4.68e+1 ng/dscm 7%O2	7.98e-6 lbs/hr	CC7%O2
4F 2378	335C1R3	4.28e+1 ng/dscm 7%O2	7.54e-6 lbs/hr	CC7%O2
4F Other	335C1R1	8.01e+2 ng/dscm 7%O2	1.42e-4 lbs/hr	OCE
4F Other	335C1R2	1.05e+3 ng/dscm 7%O2	1.79e-4 lbs/hr	OCE
4F Other	335C1R3	1.07e+3 ng/dscm 7%O2	1.89e-4 lbs/hr	OCE
4F Total	335C1R1	8.33e+2 ng/dscm 7%O2	1.48e-4 lbs/hr	CC7%O2
4F Total	335C1R2	1.10e+3 ng/dscm 7%O2	1.87e-4 lbs/hr	CC7%O2
4F Total	335C1R3	1.12e+3 ng/dscm 7%O2	1.96e-4 lbs/hr	CC7%O2
5D 12378	335C1R1	2.15e+0 ng/dscm 7%O2	3.81e-7 lbs/hr	CC7%O2
5D 12378	335C1R2	ND 3.21e-1 ng/dscm 7%O2	5.47e-8 lbs/hr	CC7%O2
5D 12378	335C1R3	6.69e+0 ng/dscm 7%O2	1.18e-6 lbs/hr	CC7%O2
5D Other	335C1R1	4.01e+1 ng/dscm 7%O2	7.11e-6 lbs/hr	OCE
5D Other	335C1R2	1.19e+2 ng/dscm 7%O2	2.03e-5 lbs/hr	OCE
5D Other	335C1R3	1.08e+2 ng/dscm 7%O2	1.91e-5 lbs/hr	OCE
5D Total	335C1R1	4.23e+1 ng/dscm 7%O2	7.50e-6 lbs/hr	CC7%O2
5D Total	335C1R2	1.19e+2 ng/dscm 7%O2	2.03e-5 lbs/hr	CC7%O2
5D Total	335C1R3	1.15e+2 ng/dscm 7%O2	2.02e-5 lbs/hr	CC7%O2
5F 12378	335C1R1	ND 1.34e+1 ng/dscm 7%O2	2.38e-6 lbs/hr	CC7%O2
5F 12378	335C1R2	0.00e+0	0.00e+0	
5F 12378	335C1R3	3.77e+1 ng/dscm 7%O2	6.64e-6 lbs/hr	CC7%O2
5F 23478	335C1R1	ND 1.98e+1 ng/dscm 7%O2	3.51e-6 lbs/hr	CC7%O2
5F 23478	335C1R2	0.00e+0	0.00e+0	
5F 23478	335C1R3	4.84e+1 ng/dscm 7%O2	8.51e-6 lbs/hr	CC7%O2
5F Other	335C1R1	-3.31e+1 ng/dscm 7%O2	-5.87e-6 lbs/hr	OCE
5F Other	335C1R2	0.00e+0	0.00e+0	OCE
5F Other	335C1R3	4.03e+2 ng/dscm 7%O2	7.08e-5 lbs/hr	OCE
5F Total	335C1R1	9.21e-2 ng/dscm 7%O2	1.63e-8 lbs/hr	CC7%O2
5F Total	335C1R2	0.00e+0	0.00e+0	
5F Total	335C1R3	4.89e+2 ng/dscm 7%O2	8.60e-5 lbs/hr	CC7%O2
6D 123478	335C1R1	3.02e+0 ng/dscm 7%O2	5.36e-7 lbs/hr	CC7%O2
6D 123478	335C1R2	7.36e+0 ng/dscm 7%O2	1.25e-6 lbs/hr	CC7%O2
6D 123478	335C1R3	6.80e+0 ng/dscm 7%O2	1.20e-6 lbs/hr	CC7%O2
6D 123678	335C1R1	1.82e+0 ng/dscm 7%O2	3.22e-7 lbs/hr	CC7%O2
6D 123678	335C1R2	4.45e+0 ng/dscm 7%O2	7.58e-7 lbs/hr	CC7%O2
6D 123678	335C1R3	5.05e+0 ng/dscm 7%O2	8.88e-7 lbs/hr	CC7%O2
6D 123789	335C1R1	4.32e+0 ng/dscm 7%O2	7.65e-7 lbs/hr	CC7%O2
6D 123789	335C1R2	1.09e+1 ng/dscm 7%O2	1.87e-6 lbs/hr	CC7%O2
6D 123789	335C1R3	1.08e+1 ng/dscm 7%O2	1.89e-6 lbs/hr	CC7%O2
6D Other	335C1R1	4.04e+1 ng/dscm 7%O2	7.15e-6 lbs/hr	OCE
6D Other	335C1R2	7.36e+1 ng/dscm 7%O2	1.25e-5 lbs/hr	OCE
6D Other	335C1R3	1.03e+2 ng/dscm 7%O2	1.81e-5 lbs/hr	OCE
6D Total	335C1R1	4.95e+1 ng/dscm 7%O2	8.77e-6 lbs/hr	CC7%O2
6D Total	335C1R2	9.64e+1 ng/dscm 7%O2	1.64e-5 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 3

6D Total	335C1R3		1.25e+2	ng/dscm	7%O2	2.20e-5	lbs/hr	CC7%O2
6F 123478	335C1R1	ND	2.15e+1	ng/dscm	7%O2	3.81e-6	lbs/hr	CC7%O2
6F 123478	335C1R2		3.82e+1	ng/dscm	7%O2	6.50e-6	lbs/hr	CC7%O2
6F 123478	335C1R3		3.85e+1	ng/dscm	7%O2	6.77e-6	lbs/hr	CC7%O2
6F 123678	335C1R1	ND	7.30e+0	ng/dscm	7%O2	1.29e-6	lbs/hr	CC7%O2
6F 123678	335C1R2		1.33e+1	ng/dscm	7%O2	2.27e-6	lbs/hr	CC7%O2
6F 123678	335C1R3		1.25e+1	ng/dscm	7%O2	2.20e-6	lbs/hr	CC7%O2
6F 123789	335C1R1	ND	7.48e-1	ng/dscm	7%O2	1.32e-7	lbs/hr	CC7%O2
6F 123789	335C1R2	ND	1.22e+0	ng/dscm	7%O2	2.08e-7	lbs/hr	CC7%O2
6F 123789	335C1R3	ND	1.32e+0	ng/dscm	7%O2	2.31e-7	lbs/hr	CC7%O2
6F 234678	335C1R1	ND	1.02e+1	ng/dscm	7%O2	1.81e-6	lbs/hr	CC7%O2
6F 234678	335C1R2		1.63e+1	ng/dscm	7%O2	2.78e-6	lbs/hr	CC7%O2
6F 234678	335C1R3		1.73e+1	ng/dscm	7%O2	3.04e-6	lbs/hr	CC7%O2
6F Other	335C1R1		4.23e+0	ng/dscm	7%O2	7.49e-7	lbs/hr	OCE
6F Other	335C1R2		7.33e+1	ng/dscm	7%O2	1.25e-5	lbs/hr	OCE
6F Other	335C1R3		8.07e+1	ng/dscm	7%O2	1.42e-5	lbs/hr	OCE
6F Total	335C1R1		4.40e+1	ng/dscm	7%O2	7.80e-6	lbs/hr	CC7%O2
6F Total	335C1R2		1.42e+2	ng/dscm	7%O2	2.43e-5	lbs/hr	CC7%O2
6F Total	335C1R3		1.50e+2	ng/dscm	7%O2	2.65e-5	lbs/hr	CC7%O2
7D 1234678	335C1R1		3.94e+0	ng/dscm	7%O2	6.99e-7	lbs/hr	CC7%O2
7D 1234678	335C1R2		4.31e+0	ng/dscm	7%O2	7.34e-7	lbs/hr	CC7%O2
7D 1234678	335C1R3		6.50e+0	ng/dscm	7%O2	1.14e-6	lbs/hr	CC7%O2
7D Other	335C1R1		4.28e+0	ng/dscm	7%O2	7.58e-7	lbs/hr	OCE
7D Other	335C1R2		5.30e+0	ng/dscm	7%O2	9.04e-7	lbs/hr	OCE
7D Other	335C1R3		7.65e+0	ng/dscm	7%O2	1.35e-6	lbs/hr	OCE
7D Total	335C1R1		8.22e+0	ng/dscm	7%O2	1.46e-6	lbs/hr	CC7%O2
7D Total	335C1R2		9.61e+0	ng/dscm	7%O2	1.64e-6	lbs/hr	CC7%O2
7D Total	335C1R3		1.42e+1	ng/dscm	7%O2	2.49e-6	lbs/hr	CC7%O2
7F 1234678	335C1R1		7.21e+0	ng/dscm	7%O2	1.28e-6	lbs/hr	CC7%O2
7F 1234678	335C1R2		7.78e+0	ng/dscm	7%O2	1.32e-6	lbs/hr	CC7%O2
7F 1234678	335C1R3		6.85e+0	ng/dscm	7%O2	1.21e-6	lbs/hr	CC7%O2
7F 1234789	335C1R1		1.27e+0	ng/dscm	7%O2	2.25e-7	lbs/hr	CC7%O2
7F 1234789	335C1R2		1.16e+0	ng/dscm	7%O2	1.98e-7	lbs/hr	CC7%O2
7F 1234789	335C1R3		1.09e+0	ng/dscm	7%O2	1.92e-7	lbs/hr	CC7%O2
7F Other	335C1R1		1.38e+0	ng/dscm	7%O2	2.45e-7	lbs/hr	OCE
7F Other	335C1R2		-6.52e+0	ng/dscm	7%O2	-1.11e-6	lbs/hr	OCE
7F Other	335C1R3		-7.10e+0	ng/dscm	7%O2	-1.25e-6	lbs/hr	OCE
7F Total	335C1R1		9.86e+0	ng/dscm	7%O2	1.75e-6	lbs/hr	CC7%O2
7F Total	335C1R2		2.42e+0	ng/dscm	7%O2	4.12e-7	lbs/hr	CC7%O2
7F Total	335C1R3		8.47e-1	ng/dscm	7%O2	1.49e-7	lbs/hr	CC7%O2
8D	335C1R1		4.45e+0	ng/dscm	7%O2	7.89e-7	lbs/hr	CC7%O2
8D	335C1R2		2.77e+0	ng/dscm	7%O2	4.72e-7	lbs/hr	CC7%O2
8D	335C1R3		3.76e+0	ng/dscm	7%O2	6.61e-7	lbs/hr	CC7%O2
8F	335C1R1		1.21e+0	ng/dscm	7%O2	2.14e-7	lbs/hr	CC7%O2
8F	335C1R2		1.49e+0	ng/dscm	7%O2	2.54e-7	lbs/hr	CC7%O2
8F	335C1R3	ND	1.85e+0	ng/dscm	7%O2	3.26e-7	lbs/hr	CC7%O2
TEQ	335C1R1		2.49e+1	ng/dscm	7%O2	4.42e-6	lbs/hr	CCET
TEQ	335C1R2		2.18e+1	ng/dscm	7%O2	3.72e-6	lbs/hr	CCET
TEQ	335C1R3		5.05e+1	ng/dscm	7%O2	8.89e-6	lbs/hr	CCET
Total PCDD/PCDF	335C1R1		1.09e+3	ng/dscm	7%O2	1.93e-4	lbs/hr	CCET
Total PCDD/PCDF	335C1R2		1.57e+3	ng/dscm	7%O2	2.68e-4	lbs/hr	CCET
Total PCDD/PCDF	335C1R3		2.17e+3	ng/dscm	7%O2	3.81e-4	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	335C1R1	4.03e-1 ppmv 7%O2	2.10e-1 lbs/hr	CC7%O2
Chlorine	335C1R2	6.38e-1 ppmv 7%O2	3.20e-1 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 3

Chlorine	335C1R3	2.70e-1	ppmv 7%O2	1.40e-1	lbs/hr	CC7%O2
HCl	335C1R1	1.02e+2	ppmv 7%O2	2.73e+1	lbs/hr	CC7%O2
HCl	335C1R2	1.11e+2	ppmv 7%O2	2.86e+1	lbs/hr	CC7%O2
HCl	335C1R3	1.50e+2	ppmv 7%O2	4.00e+1	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	335C1R1	ND	5.76e+0 ug/dscm 7%O2	1.02e-3 lbs/hr	CC7%O2
Antimony	335C1R2	ND	5.71e+0 ug/dscm 7%O2	9.73e-4 lbs/hr	CC7%O2
Antimony	335C1R3	ND	5.59e+0 ug/dscm 7%O2	9.83e-4 lbs/hr	CC7%O2
Arsenic	335C1R1	ND	2.30e+0 ug/dscm 7%O2	4.08e-4 lbs/hr	CC7%O2
Arsenic	335C1R2	ND	2.28e+0 ug/dscm 7%O2	3.89e-4 lbs/hr	CC7%O2
Arsenic	335C1R3	ND	2.23e+0 ug/dscm 7%O2	3.93e-4 lbs/hr	CC7%O2
Barium	335C1R1	ND	5.64e+1 ug/dscm 7%O2	1.00e-2 lbs/hr	CC7%O2
Barium	335C1R2	ND	1.18e+1 ug/dscm 7%O2	2.01e-3 lbs/hr	CC7%O2
Barium	335C1R3	ND	1.48e+1 ug/dscm 7%O2	2.60e-3 lbs/hr	CC7%O2
Beryllium	335C1R1	ND	2.88e-1 ug/dscm 7%O2	5.10e-5 lbs/hr	CC7%O2
Beryllium	335C1R2	ND	2.86e-1 ug/dscm 7%O2	4.87e-5 lbs/hr	CC7%O2
Beryllium	335C1R3	ND	2.80e-1 ug/dscm 7%O2	4.92e-5 lbs/hr	CC7%O2
Cadmium	335C1R1	ND	1.15e+0 ug/dscm 7%O2	2.04e-4 lbs/hr	CC7%O2
Cadmium	335C1R2	ND	1.14e+0 ug/dscm 7%O2	1.95e-4 lbs/hr	CC7%O2
Cadmium	335C1R3	ND	1.12e+0 ug/dscm 7%O2	1.97e-4 lbs/hr	CC7%O2
Chromium	335C1R1	ND	2.16e+0 ug/dscm 7%O2	3.82e-4 lbs/hr	CC7%O2
Chromium	335C1R2	ND	2.43e+0 ug/dscm 7%O2	4.14e-4 lbs/hr	CC7%O2
Chromium	335C1R3	ND	3.06e+0 ug/dscm 7%O2	5.38e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R1	ND	5.48e+0 ug/dscm 7%O2	9.71e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R2	ND	5.36e+0 ug/dscm 7%O2	9.13e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R3	ND	1.19e+1 ug/dscm 7%O2	2.09e-3 lbs/hr	CC7%O2
Lead	335C1R1	ND	6.94e+2 ug/dscm 7%O2	1.23e-1 lbs/hr	CC7%O2
Lead	335C1R2	ND	6.28e+2 ug/dscm 7%O2	1.07e-1 lbs/hr	CC7%O2
Lead	335C1R3	ND	9.32e+2 ug/dscm 7%O2	1.64e-1 lbs/hr	CC7%O2
Mercury	335C1R1	ND	3.92e+1 ug/dscm 7%O2	6.94e-3 lbs/hr	CC7%O2
Mercury	335C1R2	ND	9.98e+1 ug/dscm 7%O2	1.70e-2 lbs/hr	CC7%O2
Mercury	335C1R3	ND	4.03e+1 ug/dscm 7%O2	7.09e-3 lbs/hr	CC7%O2
Silver	335C1R1	ND	5.76e+0 ug/dscm 7%O2	1.02e-3 lbs/hr	CC7%O2
Silver	335C1R2	ND	5.71e+0 ug/dscm 7%O2	9.73e-4 lbs/hr	CC7%O2
Silver	335C1R3	ND	5.59e+0 ug/dscm 7%O2	9.83e-4 lbs/hr	CC7%O2
Thallium	335C1R1	ND	1.02e+2 ug/dscm 7%O2	1.80e-2 lbs/hr	CC7%O2
Thallium	335C1R2	ND	1.82e+2 ug/dscm 7%O2	3.10e-2 lbs/hr	CC7%O2
Thallium	335C1R3	ND	5.68e+1 ug/dscm 7%O2	1.00e-2 lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Particulate	335C1R1	2.03e-2	gr/dscf 7%O2	8.22e+0 lbs/hr	CC7%O2
Particulate	335C1R2	3.27e-2	gr/dscf 7%O2	1.28e+1 lbs/hr	CC7%O2
Particulate	335C1R3	1.69e-2	gr/dscf 7%O2	6.79e+0 lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
CO	335C1R1	1.53e+2	ppmv 7%O2	3.15e+1 lbs/hr	CC7%O2
CO	335C1R2	1.31e+2	ppmv 7%O2	2.60e+1 lbs/hr	CC7%O2
CO	335C1R3	1.94e+2	ppmv 7%O2	3.96e+1 lbs/hr	CC7%O2
THC	335C1R1	7.94e+0	ppmv 7%O2	2.57e+0 lbs/hr	CC7%O2
THC	335C1R2	1.78e+1	ppmv 7%O2	5.54e+0 lbs/hr	CC7%O2
THC	335C1R3	1.78e+1	ppmv 7%O2	5.71e+0 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY

2. STATE: PA

3. CITY: WAMPUM

EPA ID: PAD083965897

REGION: 3

4. EP ID: 335 DEVICE NAME: KILN NO. 3

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

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US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

REGION: 3  
 APC SYSTEM: ESP

5. Type: CONTROLLED

6. Description: EMISSIONS Process Group: DRY KILN Location: STACK Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	335C1R1	5.04e+0 ng/dscm 7%O2	8.93e-7 lbs/hr	CC7%O2
4D 2378	335C1R2	7.66e+0 ng/dscm 7%O2	1.31e-6 lbs/hr	CC7%O2
4D 2378	335C1R3	7.45e+0 ng/dscm 7%O2	1.31e-6 lbs/hr	CC7%O2
4D Other	335C1R1	8.88e+1 ng/dscm 7%O2	1.57e-5 lbs/hr	OCE
4D Other	335C1R2	9.20e+1 ng/dscm 7%O2	1.57e-5 lbs/hr	OCE
4D Other	335C1R3	1.43e+2 ng/dscm 7%O2	2.51e-5 lbs/hr	OCE
4D Total	335C1R1	9.38e+1 ng/dscm 7%O2	1.66e-5 lbs/hr	CC7%O2
4D Total	335C1R2	9.96e+1 ng/dscm 7%O2	1.70e-5 lbs/hr	CC7%O2
4D Total	335C1R3	1.50e+2 ng/dscm 7%O2	2.65e-5 lbs/hr	CC7%O2
4F 2378	335C1R1	3.22e+1 ng/dscm 7%O2	5.71e-6 lbs/hr	CC7%O2
4F 2378	335C1R2	4.68e+1 ng/dscm 7%O2	7.98e-6 lbs/hr	CC7%O2
4F 2378	335C1R3	4.28e+1 ng/dscm 7%O2	7.54e-6 lbs/hr	CC7%O2
4F Other	335C1R1	8.01e+2 ng/dscm 7%O2	1.42e-4 lbs/hr	OCE
4F Other	335C1R2	1.05e+3 ng/dscm 7%O2	1.79e-4 lbs/hr	OCE
4F Other	335C1R3	1.07e+3 ng/dscm 7%O2	1.89e-4 lbs/hr	OCE
4F Total	335C1R1	8.33e+2 ng/dscm 7%O2	1.48e-4 lbs/hr	CC7%O2
4F Total	335C1R2	1.10e+3 ng/dscm 7%O2	1.87e-4 lbs/hr	CC7%O2
4F Total	335C1R3	1.12e+3 ng/dscm 7%O2	1.96e-4 lbs/hr	CC7%O2
5D 12378	335C1R1	2.15e+0 ng/dscm 7%O2	3.81e-7 lbs/hr	CC7%O2
5D 12378	335C1R2	ND 3.21e-1 ng/dscm 7%O2	5.47e-8 lbs/hr	CC7%O2
5D 12378	335C1R3	6.69e+0 ng/dscm 7%O2	1.18e-6 lbs/hr	CC7%O2
5D Other	335C1R1	4.01e+1 ng/dscm 7%O2	7.11e-6 lbs/hr	OCE
5D Other	335C1R2	1.19e+2 ng/dscm 7%O2	2.03e-5 lbs/hr	OCE
5D Other	335C1R3	1.08e+2 ng/dscm 7%O2	1.91e-5 lbs/hr	OCE
5D Total	335C1R1	4.23e+1 ng/dscm 7%O2	7.50e-6 lbs/hr	CC7%O2
5D Total	335C1R2	1.19e+2 ng/dscm 7%O2	2.03e-5 lbs/hr	CC7%O2
5D Total	335C1R3	1.15e+2 ng/dscm 7%O2	2.02e-5 lbs/hr	CC7%O2
5F 12378	335C1R1	ND 1.34e+1 ng/dscm 7%O2	2.38e-6 lbs/hr	CC7%O2
5F 12378	335C1R2	0.00e+0	0.00e+0	
5F 12378	335C1R3	3.77e+1 ng/dscm 7%O2	6.64e-6 lbs/hr	CC7%O2
5F 23478	335C1R1	ND 1.98e+1 ng/dscm 7%O2	3.51e-6 lbs/hr	CC7%O2
5F 23478	335C1R2	0.00e+0	0.00e+0	
5F 23478	335C1R3	4.84e+1 ng/dscm 7%O2	8.51e-6 lbs/hr	CC7%O2
5F Other	335C1R1	-3.31e+1 ng/dscm 7%O2	-5.87e-6 lbs/hr	OCE
5F Other	335C1R2	0.00e+0	0.00e+0	OCE
5F Other	335C1R3	4.03e+2 ng/dscm 7%O2	7.08e-5 lbs/hr	OCE
5F Total	335C1R1	9.21e-2 ng/dscm 7%O2	1.63e-8 lbs/hr	CC7%O2
5F Total	335C1R2	0.00e+0	0.00e+0	
5F Total	335C1R3	4.89e+2 ng/dscm 7%O2	8.60e-5 lbs/hr	CC7%O2
6D 123478	335C1R1	3.02e+0 ng/dscm 7%O2	5.36e-7 lbs/hr	CC7%O2
6D 123478	335C1R2	7.36e+0 ng/dscm 7%O2	1.25e-6 lbs/hr	CC7%O2
6D 123478	335C1R3	6.80e+0 ng/dscm 7%O2	1.20e-6 lbs/hr	CC7%O2
6D 123678	335C1R1	1.82e+0 ng/dscm 7%O2	3.22e-7 lbs/hr	CC7%O2
6D 123678	335C1R2	4.45e+0 ng/dscm 7%O2	7.58e-7 lbs/hr	CC7%O2
6D 123678	335C1R3	5.05e+0 ng/dscm 7%O2	8.88e-7 lbs/hr	CC7%O2
6D 123789	335C1R1	4.32e+0 ng/dscm 7%O2	7.65e-7 lbs/hr	CC7%O2
6D 123789	335C1R2	1.09e+1 ng/dscm 7%O2	1.87e-6 lbs/hr	CC7%O2
6D 123789	335C1R3	1.08e+1 ng/dscm 7%O2	1.89e-6 lbs/hr	CC7%O2
6D Other	335C1R1	4.04e+1 ng/dscm 7%O2	7.15e-6 lbs/hr	OCE
6D Other	335C1R2	7.36e+1 ng/dscm 7%O2	1.25e-5 lbs/hr	OCE
6D Other	335C1R3	1.03e+2 ng/dscm 7%O2	1.81e-5 lbs/hr	OCE
6D Total	335C1R1	4.95e+1 ng/dscm 7%O2	8.77e-6 lbs/hr	CC7%O2
6D Total	335C1R2	9.64e+1 ng/dscm 7%O2	1.64e-5 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

REGION: 3  
 APC SYSTEM: ESP

6D Total	335C1R3		1.25e+2	ng/dscm	7%O2	2.20e-5	lbs/hr	CC7%O2
6F 123478	335C1R1	ND	2.15e+1	ng/dscm	7%O2	3.81e-6	lbs/hr	CC7%O2
6F 123478	335C1R2		3.82e+1	ng/dscm	7%O2	6.50e-6	lbs/hr	CC7%O2
6F 123478	335C1R3		3.85e+1	ng/dscm	7%O2	6.77e-6	lbs/hr	CC7%O2
6F 123678	335C1R1	ND	7.30e+0	ng/dscm	7%O2	1.29e-6	lbs/hr	CC7%O2
6F 123678	335C1R2		1.33e+1	ng/dscm	7%O2	2.27e-6	lbs/hr	CC7%O2
6F 123678	335C1R3		1.25e+1	ng/dscm	7%O2	2.20e-6	lbs/hr	CC7%O2
6F 123789	335C1R1	ND	7.48e-1	ng/dscm	7%O2	1.32e-7	lbs/hr	CC7%O2
6F 123789	335C1R2	ND	1.22e+0	ng/dscm	7%O2	2.08e-7	lbs/hr	CC7%O2
6F 123789	335C1R3	ND	1.32e+0	ng/dscm	7%O2	2.31e-7	lbs/hr	CC7%O2
6F 234678	335C1R1	ND	1.02e+1	ng/dscm	7%O2	1.81e-6	lbs/hr	CC7%O2
6F 234678	335C1R2		1.63e+1	ng/dscm	7%O2	2.78e-6	lbs/hr	CC7%O2
6F 234678	335C1R3		1.73e+1	ng/dscm	7%O2	3.04e-6	lbs/hr	CC7%O2
6F Other	335C1R1		4.23e+0	ng/dscm	7%O2	7.49e-7	lbs/hr	OCE
6F Other	335C1R2		7.33e+1	ng/dscm	7%O2	1.25e-5	lbs/hr	OCE
6F Other	335C1R3		8.07e+1	ng/dscm	7%O2	1.42e-5	lbs/hr	OCE
6F Total	335C1R1		4.40e+1	ng/dscm	7%O2	7.80e-6	lbs/hr	CC7%O2
6F Total	335C1R2		1.42e+2	ng/dscm	7%O2	2.43e-5	lbs/hr	CC7%O2
6F Total	335C1R3		1.50e+2	ng/dscm	7%O2	2.65e-5	lbs/hr	CC7%O2
7D 1234678	335C1R1		3.94e+0	ng/dscm	7%O2	6.99e-7	lbs/hr	CC7%O2
7D 1234678	335C1R2		4.31e+0	ng/dscm	7%O2	7.34e-7	lbs/hr	CC7%O2
7D 1234678	335C1R3		6.50e+0	ng/dscm	7%O2	1.14e-6	lbs/hr	CC7%O2
7D Other	335C1R1		4.28e+0	ng/dscm	7%O2	7.58e-7	lbs/hr	OCE
7D Other	335C1R2		5.30e+0	ng/dscm	7%O2	9.04e-7	lbs/hr	OCE
7D Other	335C1R3		7.65e+0	ng/dscm	7%O2	1.35e-6	lbs/hr	OCE
7D Total	335C1R1		8.22e+0	ng/dscm	7%O2	1.46e-6	lbs/hr	CC7%O2
7D Total	335C1R2		9.61e+0	ng/dscm	7%O2	1.64e-6	lbs/hr	CC7%O2
7D Total	335C1R3		1.42e+1	ng/dscm	7%O2	2.49e-6	lbs/hr	CC7%O2
7F 1234678	335C1R1		7.21e+0	ng/dscm	7%O2	1.28e-6	lbs/hr	CC7%O2
7F 1234678	335C1R2		7.78e+0	ng/dscm	7%O2	1.32e-6	lbs/hr	CC7%O2
7F 1234678	335C1R3		6.85e+0	ng/dscm	7%O2	1.21e-6	lbs/hr	CC7%O2
7F 1234789	335C1R1		1.27e+0	ng/dscm	7%O2	2.25e-7	lbs/hr	CC7%O2
7F 1234789	335C1R2		1.16e+0	ng/dscm	7%O2	1.98e-7	lbs/hr	CC7%O2
7F 1234789	335C1R3		1.09e+0	ng/dscm	7%O2	1.92e-7	lbs/hr	CC7%O2
7F Other	335C1R1		1.38e+0	ng/dscm	7%O2	2.45e-7	lbs/hr	OCE
7F Other	335C1R2		-6.52e+0	ng/dscm	7%O2	-1.11e-6	lbs/hr	OCE
7F Other	335C1R3		-7.10e+0	ng/dscm	7%O2	-1.25e-6	lbs/hr	OCE
7F Total	335C1R1		9.86e+0	ng/dscm	7%O2	1.75e-6	lbs/hr	CC7%O2
7F Total	335C1R2		2.42e+0	ng/dscm	7%O2	4.12e-7	lbs/hr	CC7%O2
7F Total	335C1R3		8.47e-1	ng/dscm	7%O2	1.49e-7	lbs/hr	CC7%O2
8D	335C1R1		4.45e+0	ng/dscm	7%O2	7.89e-7	lbs/hr	CC7%O2
8D	335C1R2		2.77e+0	ng/dscm	7%O2	4.72e-7	lbs/hr	CC7%O2
8D	335C1R3		3.76e+0	ng/dscm	7%O2	6.61e-7	lbs/hr	CC7%O2
8F	335C1R1		1.21e+0	ng/dscm	7%O2	2.14e-7	lbs/hr	CC7%O2
8F	335C1R2		1.49e+0	ng/dscm	7%O2	2.54e-7	lbs/hr	CC7%O2
8F	335C1R3	ND	1.85e+0	ng/dscm	7%O2	3.26e-7	lbs/hr	CC7%O2
TEQ	335C1R1		2.49e+1	ng/dscm	7%O2	4.42e-6	lbs/hr	CCET
TEQ	335C1R2		2.18e+1	ng/dscm	7%O2	3.72e-6	lbs/hr	CCET
TEQ	335C1R3		5.05e+1	ng/dscm	7%O2	8.89e-6	lbs/hr	CCET
Total PCDD/PCDF	335C1R1		1.09e+3	ng/dscm	7%O2	1.93e-4	lbs/hr	CCET
Total PCDD/PCDF	335C1R2		1.57e+3	ng/dscm	7%O2	2.68e-4	lbs/hr	CCET
Total PCDD/PCDF	335C1R3		2.17e+3	ng/dscm	7%O2	3.81e-4	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	335C1R1	4.03e-1 ppmv 7%O2	2.10e-1 lbs/hr	CC7%O2
Chlorine	335C1R2	6.38e-1 ppmv 7%O2	3.20e-1 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY  
 2. STATE: PA  
 3. CITY: WAMPUM  
 4. EP ID: 335 DEVICE NAME: KILN NO. 3

EPA ID: PAD083965897  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

REGION: 3

Chlorine	335C1R3	2.70e-1	ppmv 7%O2	1.40e-1	lbs/hr	CC7%O2
HCl	335C1R1	1.02e+2	ppmv 7%O2	2.73e+1	lbs/hr	CC7%O2
HCl	335C1R2	1.11e+2	ppmv 7%O2	2.86e+1	lbs/hr	CC7%O2
HCl	335C1R3	1.50e+2	ppmv 7%O2	4.00e+1	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Antimony	335C1R1	ND	5.76e+0 ug/dscm 7%O2	1.02e-3 lbs/hr	CC7%O2
Antimony	335C1R2	ND	5.71e+0 ug/dscm 7%O2	9.73e-4 lbs/hr	CC7%O2
Antimony	335C1R3	ND	5.59e+0 ug/dscm 7%O2	9.83e-4 lbs/hr	CC7%O2
Arsenic	335C1R1	ND	2.30e+0 ug/dscm 7%O2	4.08e-4 lbs/hr	CC7%O2
Arsenic	335C1R2	ND	2.28e+0 ug/dscm 7%O2	3.89e-4 lbs/hr	CC7%O2
Arsenic	335C1R3	ND	2.23e+0 ug/dscm 7%O2	3.93e-4 lbs/hr	CC7%O2
Barium	335C1R1	ND	5.64e+1 ug/dscm 7%O2	1.00e-2 lbs/hr	CC7%O2
Barium	335C1R2	ND	1.18e+1 ug/dscm 7%O2	2.01e-3 lbs/hr	CC7%O2
Barium	335C1R3	ND	1.48e+1 ug/dscm 7%O2	2.60e-3 lbs/hr	CC7%O2
Beryllium	335C1R1	ND	2.88e-1 ug/dscm 7%O2	5.10e-5 lbs/hr	CC7%O2
Beryllium	335C1R2	ND	2.86e-1 ug/dscm 7%O2	4.87e-5 lbs/hr	CC7%O2
Beryllium	335C1R3	ND	2.80e-1 ug/dscm 7%O2	4.92e-5 lbs/hr	CC7%O2
Cadmium	335C1R1	ND	1.15e+0 ug/dscm 7%O2	2.04e-4 lbs/hr	CC7%O2
Cadmium	335C1R2	ND	1.14e+0 ug/dscm 7%O2	1.95e-4 lbs/hr	CC7%O2
Cadmium	335C1R3	ND	1.12e+0 ug/dscm 7%O2	1.97e-4 lbs/hr	CC7%O2
Chromium	335C1R1	ND	2.16e+0 ug/dscm 7%O2	3.82e-4 lbs/hr	CC7%O2
Chromium	335C1R2	ND	2.43e+0 ug/dscm 7%O2	4.14e-4 lbs/hr	CC7%O2
Chromium	335C1R3	ND	3.06e+0 ug/dscm 7%O2	5.38e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R1	ND	5.48e+0 ug/dscm 7%O2	9.71e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R2	ND	5.36e+0 ug/dscm 7%O2	9.13e-4 lbs/hr	CC7%O2
Chromium (Hex)	335C1R3	ND	1.19e+1 ug/dscm 7%O2	2.09e-3 lbs/hr	CC7%O2
Lead	335C1R1	ND	6.94e+2 ug/dscm 7%O2	1.23e-1 lbs/hr	CC7%O2
Lead	335C1R2	ND	6.28e+2 ug/dscm 7%O2	1.07e-1 lbs/hr	CC7%O2
Lead	335C1R3	ND	9.32e+2 ug/dscm 7%O2	1.64e-1 lbs/hr	CC7%O2
Mercury	335C1R1	ND	3.92e+1 ug/dscm 7%O2	6.94e-3 lbs/hr	CC7%O2
Mercury	335C1R2	ND	9.98e+1 ug/dscm 7%O2	1.70e-2 lbs/hr	CC7%O2
Mercury	335C1R3	ND	4.03e+1 ug/dscm 7%O2	7.09e-3 lbs/hr	CC7%O2
Silver	335C1R1	ND	5.76e+0 ug/dscm 7%O2	1.02e-3 lbs/hr	CC7%O2
Silver	335C1R2	ND	5.71e+0 ug/dscm 7%O2	9.73e-4 lbs/hr	CC7%O2
Silver	335C1R3	ND	5.59e+0 ug/dscm 7%O2	9.83e-4 lbs/hr	CC7%O2
Thallium	335C1R1	ND	1.02e+2 ug/dscm 7%O2	1.80e-2 lbs/hr	CC7%O2
Thallium	335C1R2	ND	1.82e+2 ug/dscm 7%O2	3.10e-2 lbs/hr	CC7%O2
Thallium	335C1R3	ND	5.68e+1 ug/dscm 7%O2	1.00e-2 lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Particulate	335C1R1	2.03e-2	gr/dscf 7%O2	8.22e+0 lbs/hr	CC7%O2
Particulate	335C1R2	3.27e-2	gr/dscf 7%O2	1.28e+1 lbs/hr	CC7%O2
Particulate	335C1R3	1.69e-2	gr/dscf 7%O2	6.79e+0 lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
CO	335C1R1	1.53e+2	ppmv 7%O2	3.15e+1 lbs/hr	CC7%O2
CO	335C1R2	1.31e+2	ppmv 7%O2	2.60e+1 lbs/hr	CC7%O2
CO	335C1R3	1.94e+2	ppmv 7%O2	3.96e+1 lbs/hr	CC7%O2
THC	335C1R1	7.94e+0	ppmv 7%O2	2.57e+0 lbs/hr	CC7%O2
THC	335C1R2	1.78e+1	ppmv 7%O2	5.54e+0 lbs/hr	CC7%O2
THC	335C1R3	1.78e+1	ppmv 7%O2	5.71e+0 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: MEDUSA CEMENT COMPANY

2. STATE: PA

3. CITY: WAMPUM

EPA ID: PAD083965897

REGION: 3

4. EP ID: 335 DEVICE NAME: KILN NO. 3

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

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US EPA ARCHIVE DOCUMENT



SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NATIONAL CEMENT PLANT

2. STATE: CA

3. CITY: LEBEC

EPA ID: CAD982444887

REGION: 9

4. EP ID: 306 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: MC/FF

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate		Calc	
4D 2378	306C1R4	ND	5.00e-3	ng/dscm	7%O2	1.95e-9	lbs/hr	CE
4D 2378	306C1R5		3.00e-3	ng/dscm	7%O2	1.22e-9	lbs/hr	CE
4D 2378	306C1R6	ND	4.00e-3	ng/dscm	7%O2	1.64e-9	lbs/hr	CE
4D Other	306C1R4		6.84e-1	ng/dscm	7%O2	2.67e-7	lbs/hr	CCE
4D Other	306C1R5		6.46e-1	ng/dscm	7%O2	2.63e-7	lbs/hr	CCE
4D Other	306C1R6		1.13e+0	ng/dscm	7%O2	4.62e-7	lbs/hr	CCE
4D Total	306C1R4		6.89e-1	ng/dscm	7%O2	2.69e-7	lbs/hr	CE
4D Total	306C1R5		6.49e-1	ng/dscm	7%O2	2.65e-7	lbs/hr	CE
4D Total	306C1R6		1.13e+0	ng/dscm	7%O2	4.64e-7	lbs/hr	CE
4F 2378	306C1R4		1.70e-1	ng/dscm	7%O2	6.64e-8	lbs/hr	CE
4F 2378	306C1R5		2.06e-1	ng/dscm	7%O2	8.40e-8	lbs/hr	CE
4F 2378	306C1R6		2.09e-1	ng/dscm	7%O2	8.55e-8	lbs/hr	CE
4F Other	306C1R4		1.02e+0	ng/dscm	7%O2	3.98e-7	lbs/hr	CCE
4F Other	306C1R5		1.01e+0	ng/dscm	7%O2	4.11e-7	lbs/hr	CCE
4F Other	306C1R6		1.20e+0	ng/dscm	7%O2	4.92e-7	lbs/hr	CCE
4F Total	306C1R4		1.19e+0	ng/dscm	7%O2	4.64e-7	lbs/hr	CE
4F Total	306C1R5		1.21e+0	ng/dscm	7%O2	4.95e-7	lbs/hr	CE
4F Total	306C1R6		1.41e+0	ng/dscm	7%O2	5.77e-7	lbs/hr	CE
5D 12378	306C1R4	ND	3.00e-2	ng/dscm	7%O2	1.17e-8	lbs/hr	CE
5D 12378	306C1R5	ND	1.70e-2	ng/dscm	7%O2	6.93e-9	lbs/hr	CE
5D 12378	306C1R6	ND	6.00e-3	ng/dscm	7%O2	2.45e-9	lbs/hr	CE
5D Other	306C1R4		1.82e+0	ng/dscm	7%O2	7.12e-7	lbs/hr	CCE
5D Other	306C1R5		6.73e-1	ng/dscm	7%O2	2.74e-7	lbs/hr	CCE
5D Other	306C1R6		7.94e-1	ng/dscm	7%O2	3.25e-7	lbs/hr	CCE
5D Total	306C1R4		1.85e+0	ng/dscm	7%O2	7.23e-7	lbs/hr	CE
5D Total	306C1R5		6.90e-1	ng/dscm	7%O2	2.81e-7	lbs/hr	CE
5D Total	306C1R6		8.00e-1	ng/dscm	7%O2	3.27e-7	lbs/hr	CE
5F 12378	306C1R4		3.00e-2	ng/dscm	7%O2	1.17e-8	lbs/hr	CE
5F 12378	306C1R5		5.70e-2	ng/dscm	7%O2	2.32e-8	lbs/hr	CE
5F 12378	306C1R6		1.50e-2	ng/dscm	7%O2	6.14e-9	lbs/hr	CE
5F 23478	306C1R4		1.50e-2	ng/dscm	7%O2	5.86e-9	lbs/hr	CE
5F 23478	306C1R5		1.40e-2	ng/dscm	7%O2	5.71e-9	lbs/hr	CE
5F 23478	306C1R6		1.50e-2	ng/dscm	7%O2	6.14e-9	lbs/hr	CE
5F Other	306C1R4		1.36e-1	ng/dscm	7%O2	5.31e-8	lbs/hr	CCE
5F Other	306C1R5		2.61e-1	ng/dscm	7%O2	1.06e-7	lbs/hr	CCE
5F Other	306C1R6		2.43e-1	ng/dscm	7%O2	9.94e-8	lbs/hr	CCE
5F Total	306C1R4		1.81e-1	ng/dscm	7%O2	7.07e-8	lbs/hr	CE
5F Total	306C1R5		3.32e-1	ng/dscm	7%O2	1.35e-7	lbs/hr	CE
5F Total	306C1R6		2.73e-1	ng/dscm	7%O2	1.12e-7	lbs/hr	CE
6D 123478	306C1R4		1.90e-2	ng/dscm	7%O2	7.42e-9	lbs/hr	CE
6D 123478	306C1R5		2.60e-2	ng/dscm	7%O2	1.06e-8	lbs/hr	CE
6D 123478	306C1R6		2.30e-2	ng/dscm	7%O2	9.41e-9	lbs/hr	CE
6D 123678	306C1R4		1.60e-2	ng/dscm	7%O2	6.25e-9	lbs/hr	CE
6D 123678	306C1R5		2.10e-2	ng/dscm	7%O2	8.56e-9	lbs/hr	CE
6D 123678	306C1R6		1.70e-2	ng/dscm	7%O2	6.96e-9	lbs/hr	CE
6D 123789	306C1R4		1.80e-2	ng/dscm	7%O2	7.03e-9	lbs/hr	CE
6D 123789	306C1R5		2.90e-2	ng/dscm	7%O2	1.18e-8	lbs/hr	CE
6D 123789	306C1R6		2.90e-2	ng/dscm	7%O2	1.19e-8	lbs/hr	CE
6D Other	306C1R4		2.25e+0	ng/dscm	7%O2	8.78e-7	lbs/hr	CCE
6D Other	306C1R5		3.34e+0	ng/dscm	7%O2	1.36e-6	lbs/hr	CCE
6D Other	306C1R6		1.95e+0	ng/dscm	7%O2	7.97e-7	lbs/hr	CCE
6D Total	306C1R4		2.30e+0	ng/dscm	7%O2	8.98e-7	lbs/hr	CE
6D Total	306C1R5		3.42e+0	ng/dscm	7%O2	1.39e-6	lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NATIONAL CEMENT PLANT  
 2. STATE: CA  
 3. CITY: LEBEC  
 4. EP ID: 306 DEVICE NAME: KILN NO. 1

EPA CAD982444887  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: MC/FF

REGION: 9

6D Total	306C1R6		2.02e+0	ng/dscm	7%O2	8.25e-7	lbs/hr	CE
6F 123478	306C1R4		1.10e-2	ng/dscm	7%O2	4.30e-9	lbs/hr	CE
6F 123478	306C1R5		3.20e-2	ng/dscm	7%O2	1.30e-8	lbs/hr	CE
6F 123478	306C1R6		1.50e-2	ng/dscm	7%O2	6.14e-9	lbs/hr	CE
6F 123678	306C1R4		5.00e-3	ng/dscm	7%O2	1.95e-9	lbs/hr	CE
6F 123678	306C1R5		1.10e-2	ng/dscm	7%O2	4.48e-9	lbs/hr	CE
6F 123678	306C1R6		5.00e-3	ng/dscm	7%O2	2.05e-9	lbs/hr	CE
6F 123789	306C1R4		2.00e-3	ng/dscm	7%O2	7.81e-10	lbs/hr	CE
6F 123789	306C1R5	ND	3.00e-3	ng/dscm	7%O2	1.22e-9	lbs/hr	CE
6F 123789	306C1R6	ND	2.00e-3	ng/dscm	7%O2	8.18e-10	lbs/hr	CE
6F 234678	306C1R4		2.00e-3	ng/dscm	7%O2	7.81e-10	lbs/hr	CE
6F 234678	306C1R5		1.20e-2	ng/dscm	7%O2	4.89e-9	lbs/hr	CE
6F 234678	306C1R6		7.00e-3	ng/dscm	7%O2	2.86e-9	lbs/hr	CE
6F Other	306C1R4		1.10e-2	ng/dscm	7%O2	4.30e-9	lbs/hr	CCE
6F Other	306C1R5		8.50e-2	ng/dscm	7%O2	3.47e-8	lbs/hr	CCE
6F Other	306C1R6		2.20e-2	ng/dscm	7%O2	9.00e-9	lbs/hr	CCE
6F Total	306C1R4		3.10e-2	ng/dscm	7%O2	1.21e-8	lbs/hr	CE
6F Total	306C1R5		1.43e-1	ng/dscm	7%O2	5.83e-8	lbs/hr	CE
6F Total	306C1R6		5.10e-2	ng/dscm	7%O2	2.09e-8	lbs/hr	CE
7D 1234678	306C1R4		9.50e-2	ng/dscm	7%O2	3.71e-8	lbs/hr	CE
7D 1234678	306C1R5		1.64e-1	ng/dscm	7%O2	6.69e-8	lbs/hr	CE
7D 1234678	306C1R6		1.78e-1	ng/dscm	7%O2	7.28e-8	lbs/hr	CE
7D Other	306C1R4		9.70e-2	ng/dscm	7%O2	3.79e-8	lbs/hr	CCE
7D Other	306C1R5		1.91e-1	ng/dscm	7%O2	7.79e-8	lbs/hr	CCE
7D Other	306C1R6		1.27e-1	ng/dscm	7%O2	5.20e-8	lbs/hr	CCE
7D Total	306C1R4		1.92e-1	ng/dscm	7%O2	7.50e-8	lbs/hr	CE
7D Total	306C1R5		3.55e-1	ng/dscm	7%O2	1.45e-7	lbs/hr	CE
7D Total	306C1R6		3.05e-1	ng/dscm	7%O2	1.25e-7	lbs/hr	CE
7F 1234678	306C1R4	ND	1.00e-2	ng/dscm	7%O2	3.91e-9	lbs/hr	CE
7F 1234678	306C1R5	ND	2.30e-2	ng/dscm	7%O2	9.38e-9	lbs/hr	CE
7F 1234678	306C1R6	ND	9.00e-3	ng/dscm	7%O2	3.68e-9	lbs/hr	CE
7F 1234789	306C1R4	ND	5.00e-3	ng/dscm	7%O2	1.95e-9	lbs/hr	CE
7F 1234789	306C1R5	ND	3.00e-3	ng/dscm	7%O2	1.22e-9	lbs/hr	CE
7F 1234789	306C1R6	ND	2.00e-3	ng/dscm	7%O2	8.18e-10	lbs/hr	CE
7F Other	306C1R4		-5.00e-3	ng/dscm	7%O2	-1.95e-9	lbs/hr	CCE
7F Other	306C1R5		1.69e-21	ng/dscm	7%O2	0.00e+0	lbs/hr	CCE
7F Other	306C1R6		-8.47e-22	ng/dscm	7%O2	-6.06e-28	lbs/hr	CCE
7F Total	306C1R4	ND	1.00e-2	ng/dscm	7%O2	3.91e-9	lbs/hr	CE
7F Total	306C1R5	ND	2.60e-2	ng/dscm	7%O2	1.06e-8	lbs/hr	CE
7F Total	306C1R6	ND	1.10e-2	ng/dscm	7%O2	4.50e-9	lbs/hr	CE
8D	306C1R4		7.00e-2	ng/dscm	7%O2	2.73e-8	lbs/hr	CE
8D	306C1R5		8.10e-2	ng/dscm	7%O2	3.30e-8	lbs/hr	CE
8D	306C1R6		8.50e-2	ng/dscm	7%O2	3.48e-8	lbs/hr	CE
8F	306C1R4		1.33e-1	ng/dscm	7%O2	5.20e-8	lbs/hr	CE
8F	306C1R5		3.00e-3	ng/dscm	7%O2	1.22e-9	lbs/hr	CE
8F	306C1R6		1.47e-1	ng/dscm	7%O2	6.01e-8	lbs/hr	CE
TEQ	306C1R4		5.46e-2	ng/dscm	7%O2	2.13e-8	lbs/hr	CCET
TEQ	306C1R5		5.73e-2	ng/dscm	7%O2	2.34e-8	lbs/hr	CCET
TEQ	306C1R6		4.81e-2	ng/dscm	7%O2	1.97e-8	lbs/hr	CCET
Total PCDD/PCDF	306C1R4		6.65e+0	ng/dscm	7%O2	2.60e-6	lbs/hr	CCET
Total PCDD/PCDF	306C1R5		6.91e+0	ng/dscm	7%O2	2.82e-6	lbs/hr	CCET
Total PCDD/PCDF	306C1R6		6.23e+0	ng/dscm	7%O2	2.55e-6	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	306C1R1	ND	1.72e-1 ppmv	7%O2	2.00e-1 lbs/hr	CC7%O2
Chlorine	306C1R2	ND	1.70e-1 ppmv	7%O2	2.00e-1 lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NATIONAL CEMENT PLANT  
 2. STATE: CA  
 3. CITY: LEBEC  
 4. EP ID: 306 DEVICE NAME: KILN NO. 1

EPA CAD982444887  
 SYSTEM TYPE: CEMENT KILN

APC SYSTEM: MC/FF

REGION: 9

Chlorine	306C1R3	ND	1.60e-1	ppmv 7%O2	2.00e-1	lbs/hr	CC7%O2
Chlorine	306C1R4	ND	1.74e-1	ppmv 7%O2	2.00e-1	lbs/hr	CC7%O2
Chlorine	306C1R5	ND	1.67e-1	ppmv 7%O2	2.00e-1	lbs/hr	CC7%O2
Chlorine	306C1R6	ND	1.66e-1	ppmv 7%O2	2.00e-1	lbs/hr	CC7%O2
HCl	306C1R1		1.97e+0	ppmv 7%O2	1.18e+0	lbs/hr	CC7%O2
HCl	306C1R2		3.52e+0	ppmv 7%O2	2.14e+0	lbs/hr	CC7%O2
HCl	306C1R3		2.04e+0	ppmv 7%O2	1.31e+0	lbs/hr	CC7%O2
HCl	306C1R4		2.00e+0	ppmv 7%O2	1.18e+0	lbs/hr	CC7%O2
HCl	306C1R5		3.48e+0	ppmv 7%O2	2.14e+0	lbs/hr	CC7%O2
HCl	306C1R6		2.12e+0	ppmv 7%O2	1.31e+0	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc		
Antimony	306C1R1	5.46e+0	ug/dscm 7%O2	2.16e-3	lbs/hr	CC7%O2	
Antimony	306C1R2	5.28e+0	ug/dscm 7%O2	2.12e-3	lbs/hr	CC7%O2	
Antimony	306C1R3	4.78e+0	ug/dscm 7%O2	2.03e-3	lbs/hr	CC7%O2	
Antimony	306C1R4	5.80e+0	ug/dscm 7%O2	2.27e-3	lbs/hr	CE	
Antimony	306C1R5	5.00e+0	ug/dscm 7%O2	2.04e-3	lbs/hr	CE	
Antimony	306C1R6	5.20e+0	ug/dscm 7%O2	2.13e-3	lbs/hr	CE	
Arsenic	306C1R1	3.01e+0	ug/dscm 7%O2	1.19e-3	lbs/hr	CC7%O2	
Arsenic	306C1R2	4.84e+0	ug/dscm 7%O2	1.94e-3	lbs/hr	CC7%O2	
Arsenic	306C1R3	3.90e+0	ug/dscm 7%O2	1.65e-3	lbs/hr	CC7%O2	
Arsenic	306C1R4	3.20e+0	ug/dscm 7%O2	1.25e-3	lbs/hr	CE	
Arsenic	306C1R5	4.50e+0	ug/dscm 7%O2	1.83e-3	lbs/hr	CE	
Arsenic	306C1R6	4.20e+0	ug/dscm 7%O2	1.72e-3	lbs/hr	CE	
Barium	306C1R1	1.85e+1	ug/dscm 7%O2	7.32e-3	lbs/hr	CC7%O2	
Barium	306C1R2	3.09e+1	ug/dscm 7%O2	1.24e-2	lbs/hr	CC7%O2	
Barium	306C1R3	2.10e+1	ug/dscm 7%O2	8.88e-3	lbs/hr	CC7%O2	
Barium	306C1R4	1.95e+1	ug/dscm 7%O2	7.62e-3	lbs/hr	CE	
Barium	306C1R5	2.91e+1	ug/dscm 7%O2	1.19e-2	lbs/hr	CE	
Barium	306C1R6	2.27e+1	ug/dscm 7%O2	9.29e-3	lbs/hr	CE	
Beryllium	306C1R1	1.67e-1	ug/dscm 7%O2	6.61e-5	lbs/hr	CC7%O2	
Beryllium	306C1R2	1.65e-1	ug/dscm 7%O2	6.61e-5	lbs/hr	CC7%O2	
Beryllium	306C1R3	1.56e-1	ug/dscm 7%O2	6.61e-5	lbs/hr	CC7%O2	
Beryllium	306C1R4	1.90e-1	ug/dscm 7%O2	7.42e-5	lbs/hr	CE	
Beryllium	306C1R5	1.70e-1	ug/dscm 7%O2	6.93e-5	lbs/hr	CE	
Beryllium	306C1R6	1.70e-1	ug/dscm 7%O2	6.96e-5	lbs/hr	CE	
Cadmium	306C1R1	1.84e+0	ug/dscm 7%O2	7.28e-4	lbs/hr	CC7%O2	
Cadmium	306C1R2	3.24e+0	ug/dscm 7%O2	1.30e-3	lbs/hr	CC7%O2	
Cadmium	306C1R3	2.81e+0	ug/dscm 7%O2	1.19e-3	lbs/hr	CC7%O2	
Cadmium	306C1R4	1.90e+0	ug/dscm 7%O2	7.42e-4	lbs/hr	CE	
Cadmium	306C1R5	3.10e+0	ug/dscm 7%O2	1.26e-3	lbs/hr	CE	
Cadmium	306C1R6	3.00e+0	ug/dscm 7%O2	1.23e-3	lbs/hr	CE	
Chromium	306C1R1	3.90e+0	ug/dscm 7%O2	1.54e-3	lbs/hr	CC7%O2	
Chromium	306C1R2	4.45e+0	ug/dscm 7%O2	1.79e-3	lbs/hr	CC7%O2	
Chromium	306C1R3	3.33e+0	ug/dscm 7%O2	1.41e-3	lbs/hr	CC7%O2	
Chromium	306C1R4	4.10e+0	ug/dscm 7%O2	1.60e-3	lbs/hr	CE	
Chromium	306C1R5	4.20e+0	ug/dscm 7%O2	1.71e-3	lbs/hr	CE	
Chromium	306C1R6	3.60e+0	ug/dscm 7%O2	1.47e-3	lbs/hr	CE	
Chromium (Hex)	306C1R1	ND	1.37e+0	ug/dscm 7%O2	5.90e-4	lbs/hr	
Chromium (Hex)	306C1R2		1.35e+0	ug/dscm 7%O2	5.90e-4	lbs/hr	
Chromium (Hex)	306C1R3		2.29e+0	ug/dscm 7%O2	9.60e-4	lbs/hr	
Chromium (Hex)	306C1R4	ND	1.37e+0	ug/dscm 7%O2	5.35e-4	lbs/hr	CE
Chromium (Hex)	306C1R5		1.35e+0	ug/dscm 7%O2	5.50e-4	lbs/hr	CE
Chromium (Hex)	306C1R6		2.29e+0	ug/dscm 7%O2	9.37e-4	lbs/hr	CE
Lead	306C1R1		8.41e+0	ug/dscm 7%O2	3.33e-3	lbs/hr	CC7%O2
Lead	306C1R2		2.05e+1	ug/dscm 7%O2	8.22e-3	lbs/hr	CC7%O2
Lead	306C1R3		1.27e+1	ug/dscm 7%O2	5.40e-3	lbs/hr	CC7%O2
Lead	306C1R4		8.90e+0	ug/dscm 7%O2	3.48e-3	lbs/hr	CE
Lead	306C1R5		1.93e+1	ug/dscm 7%O2	7.87e-3	lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NATIONAL CEMENT PLANT

2. STATE: CA

3. CITY: LEBEC

EPA CAD982444887

REGION: 9

4. EP ID: 306 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: MC/FF

Lead	306C1R6		1.38e+1	ug/dscm	7%O2	5.65e-3	lbs/hr	CE
Mercury	306C1R1		1.05e+3	ug/dscm	7%O2	4.15e-1	lbs/hr	CC7%O2
Mercury	306C1R2		3.59e+3	ug/dscm	7%O2	1.44e+0	lbs/hr	CC7%O2
Mercury	306C1R3		4.22e+3	ug/dscm	7%O2	1.79e+0	lbs/hr	CC7%O2
Mercury	306C1R4		1.11e+3	ug/dscm	7%O2	4.32e-1	lbs/hr	CE
Mercury	306C1R5		3.38e+3	ug/dscm	7%O2	1.38e+0	lbs/hr	CE
Mercury	306C1R6		4.57e+3	ug/dscm	7%O2	1.87e+0	lbs/hr	CE
Selenium	306C1R4	ND	2.98e+1	ug/dscm	7%O2	1.16e-2	lbs/hr	CE
Selenium	306C1R5		9.90e+0	ug/dscm	7%O2	4.04e-3	lbs/hr	CE
Selenium	306C1R6	ND	2.85e+1	ug/dscm	7%O2	1.17e-2	lbs/hr	CE
Silver	306C1R1		9.36e+0	ug/dscm	7%O2	3.70e-3	lbs/hr	CC7%O2
Silver	306C1R2		8.52e+0	ug/dscm	7%O2	3.42e-3	lbs/hr	CC7%O2
Silver	306C1R3		2.24e+0	ug/dscm	7%O2	9.48e-4	lbs/hr	CC7%O2
Silver	306C1R4		9.90e+0	ug/dscm	7%O2	3.87e-3	lbs/hr	CE
Silver	306C1R5		8.00e+0	ug/dscm	7%O2	3.26e-3	lbs/hr	CE
Silver	306C1R6		2.40e+0	ug/dscm	7%O2	9.82e-4	lbs/hr	CE
Thallium	306C1R1	ND	1.17e+0	ug/dscm	7%O2	4.63e-4	lbs/hr	CC7%O2
Thallium	306C1R2		1.17e+1	ug/dscm	7%O2	4.67e-3	lbs/hr	CC7%O2
Thallium	306C1R3	ND	2.65e+0	ug/dscm	7%O2	1.12e-3	lbs/hr	CC7%O2
Thallium	306C1R4	ND	1.30e+0	ug/dscm	7%O2	5.08e-4	lbs/hr	CE
Thallium	306C1R5		1.10e+1	ug/dscm	7%O2	4.48e-3	lbs/hr	CE
Thallium	306C1R6		2.80e+0	ug/dscm	7%O2	1.15e-3	lbs/hr	CE

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	306C1R1	1.31e-2 gr/dscf 7%O2	1.03e+1 lbs/hr	
Particulate	306C1R2	2.28e-2 gr/dscf 7%O2	1.86e+1 lbs/hr	
Particulate	306C1R3	1.60e-2 gr/dscf 7%O2	1.32e+1 lbs/hr	
Particulate	306C1R4	1.15e-2 gr/dscf 7%O2	1.03e+1 lbs/hr	CC7%O2
Particulate	306C1R5	1.99e-2 gr/dscf 7%O2	1.86e+1 lbs/hr	CC7%O2
Particulate	306C1R6	1.41e-2 gr/dscf 7%O2	1.32e+1 lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
CO	306C1R1	1.07e+1 ppmv 7%O2	4.93e+0 lbs/hr	CE
CO	306C1R2	7.90e+0 ppmv 7%O2	3.68e+0 lbs/hr	CE
CO	306C1R3	2.22e+1 ppmv 7%O2	1.09e+1 lbs/hr	CE
CO(MHRA)	306C1R1	4.71e+1 ppmv 7%O2	2.17e+1 lbs/hr	CE
CO(MHRA)	306C1R2	1.11e+1 ppmv 7%O2	5.18e+0 lbs/hr	CE
CO(MHRA)	306C1R3	6.35e+1 ppmv 7%O2	3.13e+1 lbs/hr	CE

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	306C1R4	1.83e+4 ng/dscm 7%O2	7.13e-3 lbs/hr	CE
1,1,1-Trichloroethane	306C1R5	2.71e+3 ng/dscm 7%O2	1.11e-3 lbs/hr	CE
1,1,1-Trichloroethane	306C1R6	5.04e+3 ng/dscm 7%O2	2.06e-3 lbs/hr	CE
Carbon Tetrachloride	306C1R4	ND 5.74e+1 ng/dscm 7%O2	2.24e-5 lbs/hr	CE
Carbon Tetrachloride	306C1R5	ND 5.74e+1 ng/dscm 7%O2	2.34e-5 lbs/hr	CE
Carbon Tetrachloride	306C1R6	ND 5.74e+1 ng/dscm 7%O2	2.35e-5 lbs/hr	CE
Methylene Chloride	306C1R4	5.57e+3 ng/dscm 7%O2	2.17e-3 lbs/hr	CE
Methylene Chloride	306C1R5	1.62e+3 ng/dscm 7%O2	6.61e-4 lbs/hr	CE
Methylene Chloride	306C1R6	1.34e+3 ng/dscm 7%O2	5.48e-4 lbs/hr	CE
Tetrachloroethene	306C1R4	5.99e+2 ng/dscm 7%O2	2.34e-4 lbs/hr	CE
Tetrachloroethene	306C1R5	5.02e+2 ng/dscm 7%O2	2.05e-4 lbs/hr	CE
Tetrachloroethene	306C1R6	5.57e+2 ng/dscm 7%O2	2.28e-4 lbs/hr	CE
Toluene	306C1R4	7.48e+4 ng/dscm 7%O2	2.92e-2 lbs/hr	CE

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NATIONAL CEMENT PLANT

2. STATE: CA

3. CITY: LEBEC

EPA ID: CAD982444887

REGION: 9

4. EP ID: 306 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: MC/FF

Toluene	306C1R5	5.61e+4	ng/dscm	7%O2	2.29e-2	lbs/hr	CE
Toluene	306C1R6	4.61e+4	ng/dscm	7%O2	1.89e-2	lbs/hr	CE

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NORTH TEXAS CEMENT COMPANY  
 2. STATE: TX  
 3. CITY: MIDLOTHIAN  
 4. EP ID: 308 DEVICE NAME: KILN NO. 2

EPA TXD007926496  
 SYSTEM TYPE: CEMENT KILN

REGION: 6  
 APC SYSTEM: ESP

5. Type: CONTROLLED

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

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	308C1R1	7.67e-1 ppmv 7%O2	5.14e-1 lbs/hr	CC7%O2
Chlorine	308C1R2	8.42e-1 ppmv 7%O2	5.40e-1 lbs/hr	CC7%O2
Chlorine	308C1R3	7.39e-1 ppmv 7%O2	4.65e-1 lbs/hr	CC7%O2
HCl	308C1R1	4.51e+0 ppmv 7%O2	1.56e+0 lbs/hr	CC7%O2
HCl	308C1R2	4.65e+0 ppmv 7%O2	1.54e+0 lbs/hr	CC7%O2
HCl	308C1R3	2.94e+0 ppmv 7%O2	9.55e-1 lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Arsenic	308C1R1	7.26e-1 ug/dscm 7%O2	1.65e-4 lbs/hr	CC7%O2
Arsenic	308C1R2	5.66e-1 ug/dscm 7%O2	1.23e-4 lbs/hr	CC7%O2
Arsenic	308C1R3	3.88e-1 ug/dscm 7%O2	8.31e-5 lbs/hr	CC7%O2
Beryllium	308C1R1	8.71e-2 ug/dscm 7%O2	1.98e-5 lbs/hr	CC7%O2
Beryllium	308C1R2	1.11e-1 ug/dscm 7%O2	2.43e-5 lbs/hr	CC7%O2
Beryllium	308C1R3	8.55e-2 ug/dscm 7%O2	1.83e-5 lbs/hr	CC7%O2
Cadmium	308C1R1	4.62e+0 ug/dscm 7%O2	1.05e-3 lbs/hr	CC7%O2
Cadmium	308C1R2	6.06e+0 ug/dscm 7%O2	1.32e-3 lbs/hr	CC7%O2
Cadmium	308C1R3	4.97e+0 ug/dscm 7%O2	1.06e-3 lbs/hr	CC7%O2
Chromium	308C1R1	6.84e+0 ug/dscm 7%O2	1.56e-3 lbs/hr	CC7%O2
Chromium	308C1R2	5.83e+0 ug/dscm 7%O2	1.27e-3 lbs/hr	CC7%O2
Chromium	308C1R3	4.05e+0 ug/dscm 7%O2	8.66e-4 lbs/hr	CC7%O2
Chromium (Hex)	308C1R1	2.39e+0 ug/dscm 7%O2	5.45e-4 lbs/hr	CC7%O2
Chromium (Hex)	308C1R2	1.65e+0 ug/dscm 7%O2	3.59e-4 lbs/hr	CC7%O2
Chromium (Hex)	308C1R3	8.96e-1 ug/dscm 7%O2	1.92e-4 lbs/hr	CC7%O2
Lead	308C1R1	8.52e+1 ug/dscm 7%O2	1.94e-2 lbs/hr	CC7%O2
Lead	308C1R2	1.01e+2 ug/dscm 7%O2	2.20e-2 lbs/hr	CC7%O2
Lead	308C1R3	7.80e+1 ug/dscm 7%O2	1.67e-2 lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	308C1R1	2.20e-2 gr/dscf 7%O2	1.15e+1 lbs/hr	CE
Particulate	308C1R2	2.40e-2 gr/dscf 7%O2	1.20e+1 lbs/hr	CE
Particulate	308C1R3	1.60e-2 gr/dscf 7%O2	7.85e+0 lbs/hr	CE

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,2,4-Trichlorobenzene	308C1R1	1.10e+3 ng/dscm 7%O2	2.50e-4 lbs/hr	CC7%O2
1,2,4-Trichlorobenzene	308C1R2	3.06e+3 ng/dscm 7%O2	6.67e-4 lbs/hr	CC7%O2
1,2,4-Trichlorobenzene	308C1R3	3.74e+3 ng/dscm 7%O2	8.00e-4 lbs/hr	CC7%O2

7. Category: VOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,1,1-Trichloroethane	308C1R1	ND 1.84e+4 ng/dscm 7%O2	4.20e-3 lbs/hr	CC7%O2
1,1,1-Trichloroethane	308C1R2	4.40e+3 ng/dscm 7%O2	9.60e-4 lbs/hr	CC7%O2
1,1,1-Trichloroethane	308C1R3	ND 5.43e+3 ng/dscm 7%O2	1.16e-3 lbs/hr	CC7%O2
Carbon Tetrachloride	308C1R1	ND 8.19e+2 ng/dscm 7%O2	1.87e-4 lbs/hr	CC7%O2
Carbon Tetrachloride	308C1R2	ND 8.40e+2 ng/dscm 7%O2	1.83e-4 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: NORTH TEXAS CEMENT COMPANY

2. STATE: TX

3. CITY: MIDLOTHIAN

EPA TXD007926496

REGION: 6

4. EP ID: 308 DEVICE NAME: KILN NO. 2

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

Carbon Tetrachloride	308C1R3	ND	8.72e+2	ng/dscm	7%O2	1.87e-4	lbs/hr	CC7%O2
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US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	317C2R1	8.56e-2 ng/dscm 7%O2	3.62e-8 lbs/hr	CE7%O2
4D 2378	317C2R2	9.30e-2 ng/dscm 7%O2	4.12e-8 lbs/hr	CE7%O2
4D 2378	317C2R3	7.31e-2 ng/dscm 7%O2	3.10e-8 lbs/hr	CE7%O2
4D 2378	317C3R2	9.63e-2 ng/dscm 7%O2	4.10e-8 lbs/hr	CE7%O2
4D Other	317C2R1	2.01e+0 ng/dscm 7%O2	8.50e-7 lbs/hr	CE7%O2
4D Other	317C2R2	1.81e+0 ng/dscm 7%O2	8.04e-7 lbs/hr	CE7%O2
4D Other	317C2R3	1.60e+0 ng/dscm 7%O2	6.78e-7 lbs/hr	CE7%O2
4D Other	317C3R2	1.73e+0 ng/dscm 7%O2	7.37e-7 lbs/hr	CE7%O2
4D Total	317C2R1	2.10e+0 ng/dscm 7%O2	8.87e-7 lbs/hr	OCE
4D Total	317C2R2	1.91e+0 ng/dscm 7%O2	8.45e-7 lbs/hr	OCE
4D Total	317C2R3	1.67e+0 ng/dscm 7%O2	7.09e-7 lbs/hr	OCE
4D Total	317C3R2	1.83e+0 ng/dscm 7%O2	7.78e-7 lbs/hr	OCE
4F 2378	317C2R1	2.82e+0 ng/dscm 7%O2	1.19e-6 lbs/hr	CE7%O2
4F 2378	317C2R2	2.47e+0 ng/dscm 7%O2	1.10e-6 lbs/hr	CE7%O2
4F 2378	317C2R3	2.73e+0 ng/dscm 7%O2	1.16e-6 lbs/hr	CE7%O2
4F 2378	317C3R2	2.15e+0 ng/dscm 7%O2	9.16e-7 lbs/hr	CE7%O2
4F Other	317C2R1	8.86e+1 ng/dscm 7%O2	3.74e-5 lbs/hr	CE7%O2
4F Other	317C2R2	8.25e+1 ng/dscm 7%O2	3.65e-5 lbs/hr	CE7%O2
4F Other	317C2R3	9.14e+1 ng/dscm 7%O2	3.88e-5 lbs/hr	CE7%O2
4F Other	317C3R2	6.22e+1 ng/dscm 7%O2	2.65e-5 lbs/hr	CE7%O2
4F Total	317C2R1	9.14e+1 ng/dscm 7%O2	3.86e-5 lbs/hr	OCE
4F Total	317C2R2	8.49e+1 ng/dscm 7%O2	3.76e-5 lbs/hr	OCE
4F Total	317C2R3	9.42e+1 ng/dscm 7%O2	4.00e-5 lbs/hr	OCE
4F Total	317C3R2	6.44e+1 ng/dscm 7%O2	2.74e-5 lbs/hr	OCE
5D 12378	317C2R1	1.66e-1 ng/dscm 7%O2	7.00e-8 lbs/hr	CE7%O2
5D 12378	317C2R2	1.48e-1 ng/dscm 7%O2	6.56e-8 lbs/hr	CE7%O2
5D 12378	317C2R3	1.35e-1 ng/dscm 7%O2	5.72e-8 lbs/hr	CE7%O2
5D 12378	317C3R2	2.10e-1 ng/dscm 7%O2	8.94e-8 lbs/hr	CE7%O2
5D Other	317C2R1	1.48e+0 ng/dscm 7%O2	6.24e-7 lbs/hr	CE7%O2
5D Other	317C2R2	1.39e+0 ng/dscm 7%O2	6.15e-7 lbs/hr	CE7%O2
5D Other	317C2R3	1.97e+0 ng/dscm 7%O2	8.36e-7 lbs/hr	CE7%O2
5D Other	317C3R2	2.26e+0 ng/dscm 7%O2	9.61e-7 lbs/hr	CE7%O2
5D Total	317C2R1	1.64e+0 ng/dscm 7%O2	6.94e-7 lbs/hr	OCE
5D Total	317C2R2	1.53e+0 ng/dscm 7%O2	6.80e-7 lbs/hr	OCE
5D Total	317C2R3	2.10e+0 ng/dscm 7%O2	8.93e-7 lbs/hr	OCE
5D Total	317C3R2	2.47e+0 ng/dscm 7%O2	1.05e-6 lbs/hr	OCE
5F 12378	317C2R1	7.25e-1 ng/dscm 7%O2	3.06e-7 lbs/hr	CE7%O2
5F 12378	317C2R2	6.21e-1 ng/dscm 7%O2	2.75e-7 lbs/hr	CE7%O2
5F 12378	317C2R3	6.96e-1 ng/dscm 7%O2	2.95e-7 lbs/hr	CE7%O2
5F 12378	317C3R2	8.07e-1 ng/dscm 7%O2	3.44e-7 lbs/hr	CE7%O2
5F 23478	317C2R1	1.01e+0 ng/dscm 7%O2	4.29e-7 lbs/hr	CE7%O2
5F 23478	317C2R2	9.69e-1 ng/dscm 7%O2	4.29e-7 lbs/hr	CE7%O2
5F 23478	317C2R3	1.15e+0 ng/dscm 7%O2	4.87e-7 lbs/hr	CE7%O2
5F 23478	317C3R2	1.32e+0 ng/dscm 7%O2	5.61e-7 lbs/hr	CE7%O2
5F Other	317C2R1	1.27e+1 ng/dscm 7%O2	5.36e-6 lbs/hr	CE7%O2
5F Other	317C2R2	1.32e+1 ng/dscm 7%O2	5.85e-6 lbs/hr	CE7%O2
5F Other	317C2R3	1.50e+1 ng/dscm 7%O2	6.35e-6 lbs/hr	CE7%O2
5F Other	317C3R2	1.48e+1 ng/dscm 7%O2	6.31e-6 lbs/hr	CE7%O2
5F Total	317C2R1	1.44e+1 ng/dscm 7%O2	6.10e-6 lbs/hr	OCE
5F Total	317C2R2	1.48e+1 ng/dscm 7%O2	6.56e-6 lbs/hr	OCE
5F Total	317C2R3	1.68e+1 ng/dscm 7%O2	7.14e-6 lbs/hr	OCE
5F Total	317C3R2	1.69e+1 ng/dscm 7%O2	7.21e-6 lbs/hr	OCE
6D 123478	317C2R1	1.11e-1 ng/dscm 7%O2	4.69e-8 lbs/hr	CE7%O2
6D 123478	317C2R2	1.17e-1 ng/dscm 7%O2	5.20e-8 lbs/hr	CE7%O2



SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

6D 123478	317C2R3	1.00e-1	ng/dscm 7%O2	4.25e-8	lbs/hr	CE7%O2
6D 123478	317C3R2	1.66e-1	ng/dscm 7%O2	7.04e-8	lbs/hr	CE7%O2
6D 123678	317C2R1	9.98e-2	ng/dscm 7%O2	4.22e-8	lbs/hr	CE7%O2
6D 123678	317C2R2	1.01e-1	ng/dscm 7%O2	4.49e-8	lbs/hr	CE7%O2
6D 123678	317C2R3	8.09e-2	ng/dscm 7%O2	3.44e-8	lbs/hr	CE7%O2
6D 123678	317C3R2	1.54e-1	ng/dscm 7%O2	6.57e-8	lbs/hr	CE7%O2
6D 123789	317C2R1	2.48e-1	ng/dscm 7%O2	1.05e-7	lbs/hr	CE7%O2
6D 123789	317C2R2	1.41e-1	ng/dscm 7%O2	6.24e-8	lbs/hr	CE7%O2
6D 123789	317C2R3	1.58e-1	ng/dscm 7%O2	6.73e-8	lbs/hr	CE7%O2
6D 123789	317C3R2	3.45e-1	ng/dscm 7%O2	1.47e-7	lbs/hr	CE7%O2
6D Other	317C2R1	1.29e+0	ng/dscm 7%O2	5.44e-7	lbs/hr	CE7%O2
6D Other	317C2R2	1.64e+0	ng/dscm 7%O2	7.26e-7	lbs/hr	CE7%O2
6D Other	317C2R3	1.38e+0	ng/dscm 7%O2	5.85e-7	lbs/hr	CE7%O2
6D Other	317C3R2	1.72e+0	ng/dscm 7%O2	7.33e-7	lbs/hr	CE7%O2
6D Total	317C2R1	1.75e+0	ng/dscm 7%O2	7.38e-7	lbs/hr	OCE
6D Total	317C2R2	2.00e+0	ng/dscm 7%O2	8.85e-7	lbs/hr	OCE
6D Total	317C2R3	1.72e+0	ng/dscm 7%O2	7.29e-7	lbs/hr	OCE
6D Total	317C3R2	2.39e+0	ng/dscm 7%O2	1.02e-6	lbs/hr	OCE
6F 123478	317C2R1	6.06e-1	ng/dscm 7%O2	2.56e-7	lbs/hr	CE7%O2
6F 123478	317C2R2	4.55e-1	ng/dscm 7%O2	2.02e-7	lbs/hr	CE7%O2
6F 123478	317C2R3	5.36e-1	ng/dscm 7%O2	2.28e-7	lbs/hr	CECE7%
6F 123478	317C3R2	6.23e-1	ng/dscm 7%O2	2.65e-7	lbs/hr	CE7%O2
6F 123678	317C2R1	2.29e-1	ng/dscm 7%O2	9.68e-8	lbs/hr	CE7%O2
6F 123678	317C2R2	1.65e-1	ng/dscm 7%O2	7.31e-8	lbs/hr	CE7%O2
6F 123678	317C2R3	1.80e-1	ng/dscm 7%O2	7.65e-8	lbs/hr	CE7%O2
6F 123678	317C3R2	2.23e-1	ng/dscm 7%O2	9.49e-8	lbs/hr	CE7%O2
6F 123789	317C2R1	2.80e-2	ng/dscm 7%O2	1.18e-8	lbs/hr	CE7%O2
6F 123789	317C2R2	2.41e-2	ng/dscm 7%O2	1.07e-8	lbs/hr	CE7%O2
6F 123789	317C2R3	1.81e-2	ng/dscm 7%O2	7.69e-9	lbs/hr	CE7%O2
6F 123789	317C3R2	4.13e-2	ng/dscm 7%O2	1.76e-8	lbs/hr	CE7%O2
6F 234678	317C2R1	2.08e-1	ng/dscm 7%O2	8.79e-8	lbs/hr	CE7%O2
6F 234678	317C2R2	1.81e-1	ng/dscm 7%O2	8.03e-8	lbs/hr	CE7%O2
6F 234678	317C2R3	2.38e-1	ng/dscm 7%O2	1.01e-7	lbs/hr	CE7%O2
6F 234678	317C3R2	3.15e-1	ng/dscm 7%O2	1.34e-7	lbs/hr	CE7%O2
6F Other	317C2R1	1.45e+0	ng/dscm 7%O2	6.13e-7	lbs/hr	CE7%O2
6F Other	317C2R2	1.22e+0	ng/dscm 7%O2	5.41e-7	lbs/hr	CE7%O2
6F Other	317C2R3	1.30e+0	ng/dscm 7%O2	5.51e-7	lbs/hr	CE7%O2
6F Other	317C3R2	1.42e+0	ng/dscm 7%O2	6.03e-7	lbs/hr	CE7%O2
6F Total	317C2R1	2.52e+0	ng/dscm 7%O2	1.07e-6	lbs/hr	OCE
6F Total	317C2R2	2.05e+0	ng/dscm 7%O2	9.06e-7	lbs/hr	OCE
6F Total	317C2R3	2.27e+0	ng/dscm 7%O2	9.64e-7	lbs/hr	OCE
6F Total	317C3R2	2.62e+0	ng/dscm 7%O2	1.11e-6	lbs/hr	OCE
7D 1234678	317C2R1	5.21e-1	ng/dscm 7%O2	2.20e-7	lbs/hr	CE7%O2
7D 1234678	317C2R2	6.02e-1	ng/dscm 7%O2	2.67e-7	lbs/hr	CE7%O2
7D 1234678	317C2R3	4.42e-1	ng/dscm 7%O2	1.88e-7	lbs/hr	CE7%O2
7D 1234678	317C3R2	8.70e-1	ng/dscm 7%O2	3.70e-7	lbs/hr	CE7%O2
7D Other	317C2R1	5.83e-1	ng/dscm 7%O2	2.46e-7	lbs/hr	CE7%O2
7D Other	317C2R2	6.80e-1	ng/dscm 7%O2	3.01e-7	lbs/hr	CE7%O2
7D Other	317C2R3	5.51e-1	ng/dscm 7%O2	2.34e-7	lbs/hr	CE7%O2
7D Other	317C3R2	7.97e-1	ng/dscm 7%O2	3.39e-7	lbs/hr	CE7%O2
7D Total	317C2R1	1.10e+0	ng/dscm 7%O2	4.66e-7	lbs/hr	OCE
7D Total	317C2R2	1.28e+0	ng/dscm 7%O2	5.68e-7	lbs/hr	OCE
7D Total	317C2R3	9.93e-1	ng/dscm 7%O2	4.22e-7	lbs/hr	OCE
7D Total	317C3R2	1.67e+0	ng/dscm 7%O2	7.10e-7	lbs/hr	OCE
7F 1234678	317C2R1	3.37e-1	ng/dscm 7%O2	1.43e-7	lbs/hr	CE7%O2
7F 1234678	317C2R2	2.56e-1	ng/dscm 7%O2	1.13e-7	lbs/hr	CE7%O2
7F 1234678	317C2R3	1.99e-1	ng/dscm 7%O2	8.44e-8	lbs/hr	CE7%O2
7F 1234678	317C3R2	4.30e-1	ng/dscm 7%O2	1.83e-7	lbs/hr	CE7%O2
7F 1234789	317C2R1	1.06e-1	ng/dscm 7%O2	4.48e-8	lbs/hr	CE7%O2
7F 1234789	317C2R2	9.41e-2	ng/dscm 7%O2	4.17e-8	lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

7F 1234789	317C2R3	5.32e-2	ng/dscm 7%O2	2.26e-8	lbs/hr	CE7%O2
7F 1234789	317C3R2	1.82e-1	ng/dscm 7%O2	7.74e-8	lbs/hr	CE7%O2
7F Other	317C2R1	2.59e-1	ng/dscm 7%O2	1.10e-7	lbs/hr	CE7%O2
7F Other	317C2R2	2.14e-1	ng/dscm 7%O2	9.48e-8	lbs/hr	CE7%O2
7F Other	317C2R3	1.57e-1	ng/dscm 7%O2	6.67e-8	lbs/hr	CE7%O2
7F Other	317C3R2	3.43e-1	ng/dscm 7%O2	1.46e-7	lbs/hr	CE7%O2
7F Total	317C2R1	7.03e-1	ng/dscm 7%O2	2.97e-7	lbs/hr	OCE
7F Total	317C2R2	5.64e-1	ng/dscm 7%O2	2.50e-7	lbs/hr	OCE
7F Total	317C2R3	4.09e-1	ng/dscm 7%O2	1.74e-7	lbs/hr	OCE
7F Total	317C3R2	9.54e-1	ng/dscm 7%O2	4.06e-7	lbs/hr	OCE
8D	317C2R1	1.18e+0	ng/dscm 7%O2	4.97e-7	lbs/hr	CE7%O2
8D	317C2R2	1.31e+0	ng/dscm 7%O2	5.82e-7	lbs/hr	CE7%O2
8D	317C2R3	1.10e+0	ng/dscm 7%O2	4.66e-7	lbs/hr	CE7%O2
8D	317C3R2	1.83e+0	ng/dscm 7%O2	7.78e-7	lbs/hr	CE7%O2
8F	317C2R1	3.12e-1	ng/dscm 7%O2	1.32e-7	lbs/hr	CE7%O2
8F	317C2R2	2.95e-1	ng/dscm 7%O2	1.31e-7	lbs/hr	CE7%O2
8F	317C2R3	1.61e-1	ng/dscm 7%O2	6.83e-8	lbs/hr	CE7%O2
8F	317C3R2	4.77e-1	ng/dscm 7%O2	2.03e-7	lbs/hr	CE7%O2
TEQ	317C2R1	1.16e+0	ng/dscm 7%O2	4.89e-7	lbs/hr	CCET
TEQ	317C2R2	1.06e+0	ng/dscm 7%O2	4.69e-7	lbs/hr	CCET
TEQ	317C2R3	1.16e+0	ng/dscm 7%O2	4.93e-7	lbs/hr	CCET
TEQ	317C3R2	1.32e+0	ng/dscm 7%O2	5.62e-7	lbs/hr	CCET
Total PCDD/PCDF	317C2R1	1.17e+2	ng/dscm 7%O2	4.95e-5	lbs/hr	CCET
Total PCDD/PCDF	317C2R2	1.11e+2	ng/dscm 7%O2	4.90e-5	lbs/hr	CCET
Total PCDD/PCDF	317C2R3	1.21e+2	ng/dscm 7%O2	5.16e-5	lbs/hr	CCET
Total PCDD/PCDF	317C3R2	9.56e+1	ng/dscm 7%O2	4.07e-5	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc	
Chlorine	317C1R1	ND	4.68e-2	ppmv 7%O2	6.39e-2	lbs/hr	CC7%O2
Chlorine	317C1R2	ND	4.99e-2	ppmv 7%O2	6.21e-2	lbs/hr	CC7%O2
Chlorine	317C1R3		1.83e-1	ppmv 7%O2	2.40e-1	lbs/hr	CC7%O2
Chlorine	317C2R1	ND	4.96e-2	ppmv 7%O2	6.16e-2	lbs/hr	CC7%O2
Chlorine	317C2R2	ND	4.72e-2	ppmv 7%O2	6.14e-2	lbs/hr	CC7%O2
Chlorine	317C2R3	ND	3.24e-2	ppmv 7%O2	4.04e-2	lbs/hr	CC7%O2
Chlorine	317C3R1	ND	4.82e-2	ppmv 7%O2	6.09e-2	lbs/hr	CC7%O2
Chlorine	317C3R2	ND	4.81e-2	ppmv 7%O2	6.02e-2	lbs/hr	CC7%O2
Chlorine	317C3R3	ND	4.94e-2	ppmv 7%O2	6.18e-2	lbs/hr	CC7%O2
HCl	317C1R1		3.45e+0	ppmv 7%O2	2.42e+0	lbs/hr	CC7%O2
HCl	317C1R2		2.77e+0	ppmv 7%O2	1.77e+0	lbs/hr	CC7%O2
HCl	317C1R3		1.79e+0	ppmv 7%O2	1.21e+0	lbs/hr	CC7%O2
HCl	317C2R1		5.55e+0	ppmv 7%O2	3.54e+0	lbs/hr	CC7%O2
HCl	317C2R2		2.11e+0	ppmv 7%O2	1.41e+0	lbs/hr	CC7%O2
HCl	317C2R3		3.34e+0	ppmv 7%O2	2.14e+0	lbs/hr	CC7%O2
HCl	317C3R1		5.88e+0	ppmv 7%O2	3.82e+0	lbs/hr	CC7%O2
HCl	317C3R2		7.19e+0	ppmv 7%O2	4.62e+0	lbs/hr	CC7%O2
HCl	317C3R3		7.69e+0	ppmv 7%O2	4.94e+0	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc	
Arsenic	317C1R1		1.10e+0	ug/dscm 7%O2	5.12e-4	lbs/hr	CC7%O2
Arsenic	317C1R2	ND	9.88e-1	ug/dscm 7%O2	4.18e-4	lbs/hr	CC7%O2
Arsenic	317C1R3		9.79e-1	ug/dscm 7%O2	4.37e-4	lbs/hr	CC7%O2
Arsenic	317C2R1	ND	9.79e-1	ug/dscm 7%O2	4.13e-4	lbs/hr	CC7%O2
Arsenic	317C2R2	ND	9.31e-1	ug/dscm 7%O2	4.12e-4	lbs/hr	CC7%O2
Arsenic	317C2R3	ND	9.83e-1	ug/dscm 7%O2	4.17e-4	lbs/hr	CC7%O2
Arsenic	317C3R1	ND	9.63e-1	ug/dscm 7%O2	4.14e-4	lbs/hr	CC7%O2
Arsenic	317C3R2	ND	9.57e-1	ug/dscm 7%O2	4.07e-4	lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Arsenic	317C3R3	ND	9.62e-1	ug/dscm 7%O2	4.09e-4	lbs/hr	CC7%O2
Beryllium	317C1R1	ND	9.04e-2	ug/dscm 7%O2	4.20e-5	lbs/hr	CC7%O2
Beryllium	317C1R2	ND	9.88e-2	ug/dscm 7%O2	4.18e-5	lbs/hr	CC7%O2
Beryllium	317C1R3	ND	9.41e-2	ug/dscm 7%O2	4.20e-5	lbs/hr	CC7%O2
Beryllium	317C2R1	ND	9.79e-2	ug/dscm 7%O2	4.13e-5	lbs/hr	CC7%O2
Beryllium	317C2R2	ND	9.31e-2	ug/dscm 7%O2	4.12e-5	lbs/hr	CC7%O2
Beryllium	317C2R3	ND	9.83e-2	ug/dscm 7%O2	4.17e-5	lbs/hr	CC7%O2
Beryllium	317C3R1	ND	9.61e-2	ug/dscm 7%O2	4.13e-5	lbs/hr	CC7%O2
Beryllium	317C3R2	ND	9.74e-2	ug/dscm 7%O2	4.14e-5	lbs/hr	CC7%O2
Beryllium	317C3R3	ND	9.62e-2	ug/dscm 7%O2	4.09e-5	lbs/hr	CC7%O2
Cadmium	317C1R1	ND	9.04e+0	ug/dscm 7%O2	4.20e-3	lbs/hr	CC7%O2
Cadmium	317C1R2	ND	9.88e+0	ug/dscm 7%O2	4.18e-3	lbs/hr	CC7%O2
Cadmium	317C1R3	ND	9.41e+0	ug/dscm 7%O2	4.20e-3	lbs/hr	CC7%O2
Cadmium	317C2R1	ND	9.79e+0	ug/dscm 7%O2	4.13e-3	lbs/hr	CC7%O2
Cadmium	317C2R2	ND	9.31e+0	ug/dscm 7%O2	4.12e-3	lbs/hr	CC7%O2
Cadmium	317C2R3	ND	9.83e+0	ug/dscm 7%O2	4.17e-3	lbs/hr	CC7%O2
Cadmium	317C3R1	ND	9.63e+0	ug/dscm 7%O2	4.14e-3	lbs/hr	CC7%O2
Cadmium	317C3R2	ND	9.57e+0	ug/dscm 7%O2	4.07e-3	lbs/hr	CC7%O2
Cadmium	317C3R3	ND	9.62e+0	ug/dscm 7%O2	4.09e-3	lbs/hr	CC7%O2
Chromium	317C1R1	ND	1.81e+1	ug/dscm 7%O2	8.39e-3	lbs/hr	CC7%O2
Chromium	317C1R2	ND	1.98e+1	ug/dscm 7%O2	8.36e-3	lbs/hr	CC7%O2
Chromium	317C1R3	ND	1.88e+1	ug/dscm 7%O2	8.39e-3	lbs/hr	CC7%O2
Chromium	317C2R1	ND	1.95e+1	ug/dscm 7%O2	8.25e-3	lbs/hr	CC7%O2
Chromium	317C2R2	ND	1.86e+1	ug/dscm 7%O2	8.24e-3	lbs/hr	CC7%O2
Chromium	317C2R3	ND	1.97e+1	ug/dscm 7%O2	8.35e-3	lbs/hr	CC7%O2
Chromium	317C3R1	ND	1.92e+1	ug/dscm 7%O2	8.27e-3	lbs/hr	CC7%O2
Chromium	317C3R2	ND	1.91e+1	ug/dscm 7%O2	8.14e-3	lbs/hr	CC7%O2
Chromium	317C3R3	ND	1.92e+1	ug/dscm 7%O2	8.17e-3	lbs/hr	CC7%O2
Chromium (Hex)	317C1R1	ND	1.04e+0	ug/dscm 7%O2	4.84e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C1R2		2.12e+0	ug/dscm 7%O2	8.99e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C1R3		1.63e+0	ug/dscm 7%O2	7.28e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C2R1	ND	1.89e+0	ug/dscm 7%O2	7.98e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C2R2		2.04e+0	ug/dscm 7%O2	9.04e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C2R3		1.99e+0	ug/dscm 7%O2	8.45e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C3R1		2.84e+0	ug/dscm 7%O2	1.22e-3	lbs/hr	CC7%O2
Chromium (Hex)	317C3R2		2.03e+0	ug/dscm 7%O2	8.63e-4	lbs/hr	CC7%O2
Chromium (Hex)	317C3R3		1.66e+0	ug/dscm 7%O2	7.05e-4	lbs/hr	CC7%O2
Lead	317C1R1	ND	1.81e+1	ug/dscm 7%O2	8.39e-3	lbs/hr	CC7%O2
Lead	317C1R2	ND	1.98e+1	ug/dscm 7%O2	8.36e-3	lbs/hr	CC7%O2
Lead	317C1R3	ND	1.88e+1	ug/dscm 7%O2	8.39e-3	lbs/hr	CC7%O2
Lead	317C2R1	ND	1.95e+1	ug/dscm 7%O2	8.25e-3	lbs/hr	CC7%O2
Lead	317C2R2	ND	1.86e+1	ug/dscm 7%O2	8.24e-3	lbs/hr	CC7%O2
Lead	317C2R3	ND	1.97e+1	ug/dscm 7%O2	8.35e-3	lbs/hr	CC7%O2
Lead	317C3R1	ND	1.92e+1	ug/dscm 7%O2	8.27e-3	lbs/hr	CC7%O2
Lead	317C3R2	ND	1.91e+1	ug/dscm 7%O2	8.14e-3	lbs/hr	CC7%O2
Lead	317C3R3	ND	1.92e+1	ug/dscm 7%O2	8.17e-3	lbs/hr	CC7%O2

7. Category: PAH

Analysis:

8. Substance	9. Run ID		Concentration	Mass Rate	Calc
Acenaphthene	317C2R1	E	8.08e+2 ng/dscm 7%O2	3.41e-4 lbs/hr	CE7%O2
Acenaphthene	317C2R2	E	6.78e+2 ng/dscm 7%O2	3.00e-4 lbs/hr	CE7%O2
Acenaphthene	317C2R3	E	7.44e+2 ng/dscm 7%O2	3.16e-4 lbs/hr	CE7%O2
Acenaphthene	317C3R2	E	7.05e+2 ng/dscm 7%O2	3.00e-4 lbs/hr	CE7%O2
Acenaphthylene	317C2R1	E	1.68e+3 ng/dscm 7%O2	7.11e-4 lbs/hr	CE7%O2
Acenaphthylene	317C2R2	E	1.41e+3 ng/dscm 7%O2	6.24e-4 lbs/hr	CE7%O2
Acenaphthylene	317C2R3	E	1.36e+3 ng/dscm 7%O2	5.80e-4 lbs/hr	CE7%O2
Acenaphthylene	317C3R2	E	1.76e+3 ng/dscm 7%O2	7.50e-4 lbs/hr	CE7%O2
Anthracene	317C2R1	ND	1.30e+2 ng/dscm 7%O2	5.51e-5 lbs/hr	CE7%O2
Anthracene	317C2R2	ND	1.14e+2 ng/dscm 7%O2	5.05e-5 lbs/hr	CE7%O2
Anthracene	317C2R3	ND	1.15e+2 ng/dscm 7%O2	4.88e-5 lbs/hr	CE7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Anthracene	317C3R2	ND	1.19e+2	ng/dscm	7%O2	5.05e-5	lbs/hr	CE7%O2
Benzo(a)anthracene	317C2R1	ND	6.20e+1	ng/dscm	7%O2	2.62e-5	lbs/hr	CE7%O2
Benzo(a)anthracene	317C2R2	ND	5.40e+1	ng/dscm	7%O2	2.39e-5	lbs/hr	CE7%O2
Benzo(a)anthracene	317C2R3	ND	6.04e+1	ng/dscm	7%O2	2.56e-5	lbs/hr	CE7%O2
Benzo(a)anthracene	317C3R2	ND	5.62e+1	ng/dscm	7%O2	2.39e-5	lbs/hr	CE7%O2
Benzo(a)pyrene	317C2R1	ND	5.58e+1	ng/dscm	7%O2	2.36e-5	lbs/hr	CE7%O2
Benzo(a)pyrene	317C2R2	ND	4.79e+1	ng/dscm	7%O2	2.12e-5	lbs/hr	CE7%O2
Benzo(a)pyrene	317C2R3	ND	5.45e+1	ng/dscm	7%O2	2.31e-5	lbs/hr	CE7%O2
Benzo(a)pyrene	317C3R2	ND	5.00e+1	ng/dscm	7%O2	2.13e-5	lbs/hr	CE7%O2
Benzo(b)fluoranthene	317C2R1	ND	4.96e+1	ng/dscm	7%O2	2.09e-5	lbs/hr	CE7%O2
Benzo(b)fluoranthene	317C2R2	ND	4.20e+1	ng/dscm	7%O2	1.86e-5	lbs/hr	CE7%O2
Benzo(b)fluoranthene	317C2R3	ND	4.83e+1	ng/dscm	7%O2	2.05e-5	lbs/hr	CE7%O2
Benzo(b)fluoranthene	317C3R2	ND	5.00e+1	ng/dscm	7%O2	2.13e-5	lbs/hr	CE7%O2
Benzo(e)pyrene	317C2R1	ND	4.34e+1	ng/dscm	7%O2	1.83e-5	lbs/hr	CE7%O2
Benzo(e)pyrene	317C2R2	ND	3.59e+1	ng/dscm	7%O2	1.59e-5	lbs/hr	CE7%O2
Benzo(e)pyrene	317C2R3	ND	4.22e+1	ng/dscm	7%O2	1.79e-5	lbs/hr	CE7%O2
Benzo(e)pyrene	317C3R2	ND	4.38e+1	ng/dscm	7%O2	1.86e-5	lbs/hr	CE7%O2
Benzo(g,h,i)perylene	317C2R1	ND	7.44e+1	ng/dscm	7%O2	3.14e-5	lbs/hr	CE7%O2
Benzo(g,h,i)perylene	317C2R2	ND	5.99e+1	ng/dscm	7%O2	2.66e-5	lbs/hr	CE7%O2
Benzo(g,h,i)perylene	317C2R3	ND	6.65e+1	ng/dscm	7%O2	2.82e-5	lbs/hr	CE7%O2
Benzo(g,h,i)perylene	317C3R2	ND	6.88e+1	ng/dscm	7%O2	2.93e-5	lbs/hr	CE7%O2
Benzo(k)fluoranthene	317C2R1	ND	4.96e+1	ng/dscm	7%O2	2.09e-5	lbs/hr	CE7%O2
Benzo(k)fluoranthene	317C2R2	ND	4.20e+1	ng/dscm	7%O2	1.86e-5	lbs/hr	CE7%O2
Benzo(k)fluoranthene	317C2R3	ND	4.22e+1	ng/dscm	7%O2	1.79e-5	lbs/hr	CE7%O2
Benzo(k)fluoranthene	317C3R2	ND	4.38e+1	ng/dscm	7%O2	1.86e-5	lbs/hr	CE7%O2
Chrysene	317C2R1	ND	6.82e+1	ng/dscm	7%O2	2.88e-5	lbs/hr	CE7%O2
Chrysene	317C2R2	ND	5.99e+1	ng/dscm	7%O2	2.66e-5	lbs/hr	CE7%O2
Chrysene	317C2R3	ND	6.04e+1	ng/dscm	7%O2	2.56e-5	lbs/hr	CE7%O2
Chrysene	317C3R2	ND	6.25e+1	ng/dscm	7%O2	2.66e-5	lbs/hr	CE7%O2
Dibenz(a,h)anthracene	317C2R1	ND	7.44e+1	ng/dscm	7%O2	3.14e-5	lbs/hr	CE7%O2
Dibenz(a,h)anthracene	317C2R2	ND	6.58e+1	ng/dscm	7%O2	2.92e-5	lbs/hr	CE7%O2
Dibenz(a,h)anthracene	317C2R3	ND	7.24e+1	ng/dscm	7%O2	3.07e-5	lbs/hr	CE7%O2
Dibenz(a,h)anthracene	317C3R2	ND	7.50e+1	ng/dscm	7%O2	3.19e-5	lbs/hr	CE7%O2
Fluoranthene	317C2R1	E	1.15e+3	ng/dscm	7%O2	4.85e-4	lbs/hr	CE7%O2
Fluoranthene	317C2R2	E	8.33e+2	ng/dscm	7%O2	3.69e-4	lbs/hr	CE7%O2
Fluoranthene	317C2R3	E	8.27e+2	ng/dscm	7%O2	3.51e-4	lbs/hr	CE7%O2
Fluoranthene	317C3R2	E	9.88e+2	ng/dscm	7%O2	4.20e-4	lbs/hr	CE7%O2
Fluorene	317C2R1	E	1.16e+3	ng/dscm	7%O2	4.91e-4	lbs/hr	CE7%O2
Fluorene	317C2R2	ND	2.04e+2	ng/dscm	7%O2	9.03e-5	lbs/hr	CE7%O2
Fluorene	317C2R3	ND	1.93e+2	ng/dscm	7%O2	8.21e-5	lbs/hr	CE7%O2
Fluorene	317C3R2	ND	2.06e+2	ng/dscm	7%O2	8.78e-5	lbs/hr	CE7%O2
Indeno(1,2,3-cd)pyrene	317C2R1	ND	8.08e+1	ng/dscm	7%O2	3.41e-5	lbs/hr	CE7%O2
Indeno(1,2,3-cd)pyrene	317C2R2	ND	6.58e+1	ng/dscm	7%O2	2.92e-5	lbs/hr	CE7%O2
Indeno(1,2,3-cd)pyrene	317C2R3	ND	7.24e+1	ng/dscm	7%O2	3.07e-5	lbs/hr	CE7%O2
Indeno(1,2,3-cd)pyrene	317C3R2	ND	7.50e+1	ng/dscm	7%O2	3.19e-5	lbs/hr	CE7%O2
Naphthalene	317C2R1		5.23e+4	ng/dscm	7%O2	2.21e-2	lbs/hr	CE7%O2
Naphthalene	317C2R2		4.88e+4	ng/dscm	7%O2	2.16e-2	lbs/hr	CE7%O2
Naphthalene	317C2R3	ND	5.44e+4	ng/dscm	7%O2	2.31e-2	lbs/hr	CE7%O2
Naphthalene	317C3R2		4.70e+4	ng/dscm	7%O2	2.00e-2	lbs/hr	CE7%O2
Phenanthrene	317C2R1	E	6.96e+3	ng/dscm	7%O2	2.94e-3	lbs/hr	CE7%O2
Phenanthrene	317C2R2	E	5.57e+3	ng/dscm	7%O2	2.47e-3	lbs/hr	CE7%O2
Phenanthrene	317C2R3	E	5.92e+3	ng/dscm	7%O2	2.51e-3	lbs/hr	CE7%O2
Phenanthrene	317C3R2	E	5.87e+3	ng/dscm	7%O2	2.50e-3	lbs/hr	CE7%O2
Pyrene	317C2R1	ND	7.44e+1	ng/dscm	7%O2	3.14e-5	lbs/hr	CE7%O2
Pyrene	317C2R2	ND	6.58e+1	ng/dscm	7%O2	2.92e-5	lbs/hr	CE7%O2
Pyrene	317C2R3	ND	6.65e+1	ng/dscm	7%O2	2.82e-5	lbs/hr	CE7%O2
Pyrene	317C3R2	ND	6.88e+1	ng/dscm	7%O2	2.93e-5	lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	317C1R1	2.42e-3 gr/dscf 7%O2	2.57e+0 lbs/hr	CC7%O2
Particulate	317C1R2	1.95e-3 gr/dscf 7%O2	1.89e+0 lbs/hr	CC7%O2
Particulate	317C1R3	3.01e-3 gr/dscf 7%O2	3.08e+0 lbs/hr	CC7%O2
Particulate	317C2R1	2.66e-3 gr/dscf 7%O2	2.57e+0 lbs/hr	CC7%O2
Particulate	317C2R2	4.25e-3 gr/dscf 7%O2	4.31e+0 lbs/hr	CC7%O2
Particulate	317C2R3	2.64e-3 gr/dscf 7%O2	2.56e+0 lbs/hr	CC7%O2
Particulate	317C3R1	3.61e-3 gr/dscf 7%O2	3.55e+0 lbs/hr	CC7%O2
Particulate	317C3R2	1.39e-3 gr/dscf 7%O2	1.35e+0 lbs/hr	CC7%O2
Particulate	317C3R3	1.69e-3 gr/dscf 7%O2	1.64e+0 lbs/hr	CC7%O2

7. Category: SVOC

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
1,2,3,4-Tetrachlorobenzene	317C2R1	ND 9.62e+2 ng/dscm 7%O2	4.06e-4 lbs/hr	CE7%O2
1,2,3,4-Tetrachlorobenzene	317C2R2	ND 8.82e+2 ng/dscm 7%O2	3.91e-4 lbs/hr	CE7%O2
1,2,3,4-Tetrachlorobenzene	317C2R3	ND 8.75e+2 ng/dscm 7%O2	3.72e-4 lbs/hr	CE7%O2
1,2,3,4-Tetrachlorobenzene	317C3R2	ND 8.42e+2 ng/dscm 7%O2	3.59e-4 lbs/hr	CE7%O3
1,2,3,5-Tetrachlorobenzene	317C2R1	ND 1.14e+3 ng/dscm 7%O2	4.80e-4 lbs/hr	CE7%O2
1,2,3,5-Tetrachlorobenzene	317C2R2	ND 1.05e+3 ng/dscm 7%O2	4.65e-4 lbs/hr	CE7%O2
1,2,3,5-Tetrachlorobenzene	317C2R3	ND 1.01e+3 ng/dscm 7%O2	4.28e-4 lbs/hr	CE7%O2
1,2,3,5-Tetrachlorobenzene	317C3R2	ND 9.55e+2 ng/dscm 7%O2	4.07e-4 lbs/hr	CE7%O2
1,2,3-Trichlorobenzene	317C2R1	ND 1.01e+3 ng/dscm 7%O2	4.25e-4 lbs/hr	CE7%O2
1,2,3-Trichlorobenzene	317C2R2	ND 9.30e+2 ng/dscm 7%O2	4.12e-4 lbs/hr	CE7%O2
1,2,3-Trichlorobenzene	317C2R3	ND 8.95e+2 ng/dscm 7%O2	3.80e-4 lbs/hr	CE7%O2
1,2,3-Trichlorobenzene	317C3R2	ND 8.50e+2 ng/dscm 7%O2	3.62e-4 lbs/hr	CE7%O2
1,2,4,5-Tetrachlorobenzene	317C2R1	ND 7.39e+2 ng/dscm 7%O2	3.12e-4 lbs/hr	CE7%O2
1,2,4,5-Tetrachlorobenzene	317C2R2	ND 6.78e+2 ng/dscm 7%O2	3.00e-4 lbs/hr	CE7%O2
1,2,4,5-Tetrachlorobenzene	317C2R3	ND 6.72e+2 ng/dscm 7%O2	2.85e-4 lbs/hr	CE7%O2
1,2,4,5-Tetrachlorobenzene	317C3R2	ND 6.50e+2 ng/dscm 7%O2	2.77e-4 lbs/hr	CE7%O2
1,2,4-Trichlorobenzene	317C1R1	2.68e+3 ng/dscm 7%O2	1.25e-3 lbs/hr	CE7%O2
1,2,4-Trichlorobenzene	317C1R2	2.82e+3 ng/dscm 7%O2	1.20e-3 lbs/hr	CE7%O2
1,2,4-Trichlorobenzene	317C1R3	2.80e+3 ng/dscm 7%O2	1.25e-3 lbs/hr	CE7%O2
1,2,4-Trichlorobenzene	317C3R2	7.30e+3 ng/dscm 7%O2	3.11e-3 lbs/hr	CE7%O2
1,2-Dichlorobenzene	317C2R1	7.63e+3 ng/dscm 7%O2	3.22e-3 lbs/hr	CE7%O2
1,2-Dichlorobenzene	317C2R2	7.52e+3 ng/dscm 7%O2	3.33e-3 lbs/hr	CE7%O2
1,2-Dichlorobenzene	317C2R3	8.98e+3 ng/dscm 7%O2	3.81e-3 lbs/hr	CE7%O2
1,2-Dichlorobenzene	317C3R2	7.26e+3 ng/dscm 7%O2	3.09e-3 lbs/hr	CE7%O2
1,3,5-Trichlorobenzene	317C2R1	ND 9.62e+2 ng/dscm 7%O2	4.06e-4 lbs/hr	CE7%O2
1,3,5-Trichlorobenzene	317C2R2	ND 8.92e+2 ng/dscm 7%O2	3.95e-4 lbs/hr	CE7%O2
1,3,5-Trichlorobenzene	317C2R3	ND 8.58e+2 ng/dscm 7%O2	3.64e-4 lbs/hr	CE7%O2
1,3,5-Trichlorobenzene	317C3R2	ND 8.12e+2 ng/dscm 7%O2	3.46e-4 lbs/hr	CE7%O2
1,3-Dichlorobenzene	317C2R1	9.97e+3 ng/dscm 7%O2	4.21e-3 lbs/hr	CE7%O2
1,3-Dichlorobenzene	317C2R2	1.01e+4 ng/dscm 7%O2	4.49e-3 lbs/hr	CE7%O2
1,3-Dichlorobenzene	317C2R3	1.16e+4 ng/dscm 7%O2	4.95e-3 lbs/hr	CE7%O2
1,3-Dichlorobenzene	317C3R2	1.03e+4 ng/dscm 7%O2	4.40e-3 lbs/hr	CE7%O2
1,4-Dichlorobenzene	317C2R1	6.21e+3 ng/dscm 7%O2	2.62e-3 lbs/hr	CE7%O2
1,4-Dichlorobenzene	317C2R2	7.18e+3 ng/dscm 7%O2	3.18e-3 lbs/hr	CE7%O2
1,4-Dichlorobenzene	317C2R3	7.46e+3 ng/dscm 7%O2	3.17e-3 lbs/hr	CE7%O2
1,4-Dichlorobenzene	317C3R2	6.53e+3 ng/dscm 7%O2	2.78e-3 lbs/hr	CE7%O2
2,3,4,5-Tetrachlorophenol	317C2R1	ND 1.29e+3 ng/dscm 7%O2	5.43e-4 lbs/hr	CE7%O2
2,3,4,5-Tetrachlorophenol	317C2R2	ND 1.18e+3 ng/dscm 7%O2	5.23e-4 lbs/hr	CE7%O2
2,3,4,5-Tetrachlorophenol	317C2R3	ND 1.17e+3 ng/dscm 7%O2	4.95e-4 lbs/hr	CE7%O2
2,3,4,5-Tetrachlorophenol	317C3R2	ND 1.12e+3 ng/dscm 7%O2	4.79e-4 lbs/hr	CE7%O2
2,3,4-Trichlorophenol	317C2R1	ND 1.23e+3 ng/dscm 7%O2	5.19e-4 lbs/hr	CE7%O2
2,3,4-Trichlorophenol	317C2R2	ND 1.13e+3 ng/dscm 7%O2	4.99e-4 lbs/hr	CE7%O2
2,3,4-Trichlorophenol	317C2R3	ND 1.12e+3 ng/dscm 7%O2	4.75e-4 lbs/hr	CE7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

2,3,4-Trichlorophenol	317C3R2	ND	1.08e+3	ng/dscm	7%O2	4.60e-4	lbs/hr	CE7%O2
2,3,5,6-Tetrachlorophenol	317C2R1	ND	1.54e+3	ng/dscm	7%O2	6.51e-4	lbs/hr	CE7%O2
2,3,5,6-Tetrachlorophenol	317C2R2	ND	1.42e+3	ng/dscm	7%O2	6.27e-4	lbs/hr	CE7%O2
2,3,5,6-Tetrachlorophenol	317C2R3	ND	1.40e+3	ng/dscm	7%O2	5.95e-4	lbs/hr	CE7%O2
2,3,5,6-Tetrachlorophenol	317C3R2	ND	1.35e+3	ng/dscm	7%O2	5.75e-4	lbs/hr	CE7%O2
2,3,5-Trichlorophenol	317C2R1	ND	1.25e+3	ng/dscm	7%O2	5.29e-4	lbs/hr	CE7%O2
2,3,5-Trichlorophenol	317C2R2	ND	1.15e+3	ng/dscm	7%O2	5.10e-4	lbs/hr	CE7%O2
2,3,5-Trichlorophenol	317C2R3	ND	1.14e+3	ng/dscm	7%O2	4.85e-4	lbs/hr	CE7%O2
2,3,5-Trichlorophenol	317C3R2	ND	1.10e+3	ng/dscm	7%O2	4.68e-4	lbs/hr	CE7%O2
2,3,6-Trichlorophenol	317C2R1	ND	1.23e+3	ng/dscm	7%O2	5.22e-4	lbs/hr	CE7%O2
2,3,6-Trichlorophenol	317C2R2	ND	1.13e+3	ng/dscm	7%O2	4.99e-4	lbs/hr	CE7%O2
2,3,6-Trichlorophenol	317C2R3	ND	1.12e+3	ng/dscm	7%O2	4.75e-4	lbs/hr	CE7%O2
2,3,6-Trichlorophenol	317C3R2	ND	1.08e+3	ng/dscm	7%O2	4.60e-4	lbs/hr	CE7%O2
2,3-Dichlorophenol	317C2R1	ND	1.46e+3	ng/dscm	7%O2	6.16e-4	lbs/hr	CE7%O2
2,3-Dichlorophenol	317C2R2	ND	1.35e+3	ng/dscm	7%O2	5.98e-4	lbs/hr	CE7%O2
2,3-Dichlorophenol	317C2R3	ND	1.30e+3	ng/dscm	7%O2	5.52e-4	lbs/hr	CE7%O2
2,3-Dichlorophenol	317C3R2	ND	1.24e+3	ng/dscm	7%O2	5.27e-4	lbs/hr	CE7%O2
2,4,5-Trichlorophenol	317C2R1	ND	1.09e+3	ng/dscm	7%O2	4.59e-4	lbs/hr	CE7%O2
2,4,5-Trichlorophenol	317C2R2	ND	9.95e+2	ng/dscm	7%O2	4.41e-4	lbs/hr	CE7%O2
2,4,5-Trichlorophenol	317C2R3	ND	9.91e+2	ng/dscm	7%O2	4.21e-4	lbs/hr	CE7%O2
2,4,5-Trichlorophenol	317C3R2	ND	9.55e+2	ng/dscm	7%O2	4.07e-4	lbs/hr	CE7%O2
2,4,6-Trichlorophenol	317C2R1	ND	1.22e+3	ng/dscm	7%O2	5.17e-4	lbs/hr	CE7%O2
2,4,6-Trichlorophenol	317C2R2	ND	1.12e+3	ng/dscm	7%O2	4.96e-4	lbs/hr	CE7%O2
2,4,6-Trichlorophenol	317C2R3	ND	1.11e+3	ng/dscm	7%O2	4.72e-4	lbs/hr	CE7%O2
2,4,6-Trichlorophenol	317C3R2	ND	1.08e+3	ng/dscm	7%O2	4.58e-4	lbs/hr	CE7%O2
2,4-Dichlorophenol	317C2R1	ND	1.19e+3	ng/dscm	7%O2	5.03e-4	lbs/hr	CE7%O2
2,4-Dichlorophenol	317C2R2	ND	1.10e+3	ng/dscm	7%O2	4.86e-4	lbs/hr	CE7%O2
2,4-Dichlorophenol	317C2R3	ND	1.17e+3	ng/dscm	7%O2	4.99e-4	lbs/hr	CE7%O2
2,4-Dichlorophenol	317C3R2	ND	1.00e+3	ng/dscm	7%O2	4.28e-4	lbs/hr	CE7%O2
2,5-Dichlorophenol	317C2R1	ND	1.01e+3	ng/dscm	7%O2	4.28e-4	lbs/hr	CE7%O2
2,5-Dichlorophenol	317C2R2	ND	9.34e+2	ng/dscm	7%O2	4.14e-4	lbs/hr	CE7%O2
2,5-Dichlorophenol	317C2R3	ND	8.99e+2	ng/dscm	7%O2	3.82e-4	lbs/hr	CE7%O2
2,5-Dichlorophenol	317C3R2	ND	8.55e+2	ng/dscm	7%O2	3.64e-4	lbs/hr	CE7%O2
2,6-Dichlorophenol	317C2R1	ND	1.21e+3	ng/dscm	7%O2	5.11e-4	lbs/hr	CE7%O2
2,6-Dichlorophenol	317C2R2	ND	1.12e+3	ng/dscm	7%O2	4.94e-4	lbs/hr	CE7%O2
2,6-Dichlorophenol	317C2R3	ND	1.08e+3	ng/dscm	7%O2	4.57e-4	lbs/hr	CE7%O2
2,6-Dichlorophenol	317C3R2	ND	1.02e+3	ng/dscm	7%O2	4.36e-4	lbs/hr	CE7%O2
2-Chloronaphthalene	317C2R1	E	5.12e+3	ng/dscm	7%O2	2.16e-3	lbs/hr	CE7%O2
2-Chloronaphthalene	317C2R2	E	5.39e+3	ng/dscm	7%O2	2.39e-3	lbs/hr	CE7%O2
2-Chloronaphthalene	317C2R3	E	3.90e+3	ng/dscm	7%O2	1.66e-3	lbs/hr	CE7%O2
2-Chloronaphthalene	317C3R2	E	4.80e+3	ng/dscm	7%O2	2.04e-3	lbs/hr	CE7%O2
2-Chlorophenol	317C2R1	ND	1.09e+3	ng/dscm	7%O2	4.62e-4	lbs/hr	CE7%O2
2-Chlorophenol	317C2R2	ND	1.03e+3	ng/dscm	7%O2	4.55e-4	lbs/hr	CE7%O2
2-Chlorophenol	317C2R3	ND	1.02e+3	ng/dscm	7%O2	4.31e-4	lbs/hr	CE7%O2
2-Chlorophenol	317C3R2	ND	9.75e+2	ng/dscm	7%O2	4.15e-4	lbs/hr	CE7%O2
2-Methylnaphthalene	317C2R1		1.50e+4	ng/dscm	7%O2	6.36e-3	lbs/hr	CE7%O2
2-Methylnaphthalene	317C2R2		1.37e+4	ng/dscm	7%O2	6.08e-3	lbs/hr	CE7%O2
2-Methylnaphthalene	317C2R3	ND	1.43e+4	ng/dscm	7%O2	6.05e-3	lbs/hr	CE7%O2
2-Methylnaphthalene	317C3R2		1.31e+4	ng/dscm	7%O2	5.57e-3	lbs/hr	CE7%O2
3,4-Chlorophenol	317C2R1	ND	1.10e+3	ng/dscm	7%O2	4.66e-4	lbs/hr	CE7%O2
3,4-Chlorophenol	317C2R2	ND	1.02e+3	ng/dscm	7%O2	4.52e-4	lbs/hr	CE7%O2
3,4-Chlorophenol	317C2R3	ND	9.84e+2	ng/dscm	7%O2	4.18e-4	lbs/hr	CE7%O2
3,4-Chlorophenol	317C3R2	ND	9.38e+2	ng/dscm	7%O2	3.99e-4	lbs/hr	CE7%O2
3,4-Dichlorophenol	317C2R1	ND	9.80e+2	ng/dscm	7%O2	4.14e-4	lbs/hr	CE7%O2
3,4-Dichlorophenol	317C2R2	ND	8.99e+2	ng/dscm	7%O2	3.98e-4	lbs/hr	CE7%O2
3,4-Dichlorophenol	317C2R3	ND	8.88e+2	ng/dscm	7%O2	3.77e-4	lbs/hr	CE7%O2
3,4-Dichlorophenol	317C3R2	ND	8.62e+2	ng/dscm	7%O2	3.67e-4	lbs/hr	CE7%O2
3,5-Dichlorophenol	317C2R1	ND	8.88e+2	ng/dscm	7%O2	3.75e-4	lbs/hr	CE7%O2
3,5-Dichlorophenol	317C2R2	ND	8.09e+2	ng/dscm	7%O2	3.59e-4	lbs/hr	CE7%O2
3,5-Dichlorophenol	317C2R3	ND	8.03e+2	ng/dscm	7%O2	3.41e-4	lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA ID: KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

3,5-Dichlorophenol	317C3R2	ND	7.75e+2	ng/dscm	7%O2	3.30e-4	lbs/hr	CE7%O2
bis(2-ethylexyl) Phthalate	317C2R1		6.02e+3	ng/dscm	7%O2	2.54e-3	lbs/hr	CE7%O2
bis(2-ethylexyl) Phthalate	317C2R2		5.42e+3	ng/dscm	7%O2	2.40e-3	lbs/hr	CE7%O2
bis(2-ethylexyl) Phthalate	317C2R3		5.37e+3	ng/dscm	7%O2	2.28e-3	lbs/hr	CE7%O2
bis(2-ethylexyl) Phthalate	317C3R2		6.05e+3	ng/dscm	7%O2	2.57e-3	lbs/hr	CE7%O2
Butylbenzylphthalate	317C2R1		7.76e+2	ng/dscm	7%O2	3.28e-4	lbs/hr	CE7%O2
Butylbenzylphthalate	317C2R2		1.32e+2	ng/dscm	7%O2	5.84e-5	lbs/hr	CE7%O2
Butylbenzylphthalate	317C2R3		1.45e+2	ng/dscm	7%O2	6.16e-5	lbs/hr	CE7%O2
Butylbenzylphthalate	317C3R2		8.10e+3	ng/dscm	7%O2	3.45e-3	lbs/hr	CE7%O2
di-n-Butyl Phthalate	317C2R1		1.07e+4	ng/dscm	7%O2	4.53e-3	lbs/hr	CE7%O2
di-n-Butyl Phthalate	317C2R2		5.21e+3	ng/dscm	7%O2	2.31e-3	lbs/hr	CE7%O2
di-n-Butyl Phthalate	317C2R3		2.47e+3	ng/dscm	7%O2	1.05e-3	lbs/hr	CE7%O2
di-n-Butyl Phthalate	317C3R2		2.87e+3	ng/dscm	7%O2	1.22e-3	lbs/hr	CE7%O2
di-n-Octyl Phthalate	317C2R1	ND	4.34e+1	ng/dscm	7%O2	1.83e-5	lbs/hr	CE7%O2
di-n-Octyl Phthalate	317C2R2	ND	3.59e+1	ng/dscm	7%O2	1.59e-5	lbs/hr	CE7%O2
di-n-Octyl Phthalate	317C2R3		1.57e+3	ng/dscm	7%O2	6.67e-4	lbs/hr	CE7%O2
di-n-Octyl Phthalate	317C3R2	ND	4.38e+1	ng/dscm	7%O2	1.86e-5	lbs/hr	CE7%O2
Diethylphthalate	317C2R1		2.81e+3	ng/dscm	7%O2	1.19e-3	lbs/hr	CE7%O2
Diethylphthalate	317C2R2		3.42e+3	ng/dscm	7%O2	1.51e-3	lbs/hr	CE7%O2
Diethylphthalate	317C2R3		7.81e+3	ng/dscm	7%O2	3.32e-3	lbs/hr	CE7%O2
Diethylphthalate	317C3R2		1.30e+3	ng/dscm	7%O2	5.53e-4	lbs/hr	CE7%O2
Dimethylphthalate	317C2R1		1.27e+3	ng/dscm	7%O2	5.35e-4	lbs/hr	CE7%O2
Dimethylphthalate	317C2R2	ND	2.28e+2	ng/dscm	7%O2	1.01e-4	lbs/hr	CE7%O2
Dimethylphthalate	317C2R3		2.17e+2	ng/dscm	7%O2	9.23e-5	lbs/hr	CE7%O2
Dimethylphthalate	317C3R2	ND	2.38e+2	ng/dscm	7%O2	1.01e-4	lbs/hr	CE7%O2
Hexachlorobenzene	317C2R1	ND	1.51e+3	ng/dscm	7%O2	6.40e-4	lbs/hr	CE7%O2
Hexachlorobenzene	317C2R2	ND	1.40e+3	ng/dscm	7%O2	6.18e-4	lbs/hr	CE7%O2
Hexachlorobenzene	317C2R3	ND	1.41e+3	ng/dscm	7%O2	5.97e-4	lbs/hr	CE7%O2
Hexachlorobenzene	317C3R2	ND	1.36e+3	ng/dscm	7%O2	5.80e-4	lbs/hr	CE7%O2
Pentachlorobenzene	317C2R1	ND	1.24e+3	ng/dscm	7%O2	5.25e-4	lbs/hr	CE7%O2
Pentachlorobenzene	317C2R2	ND	1.14e+3	ng/dscm	7%O2	5.05e-4	lbs/hr	CE7%O2
Pentachlorobenzene	317C2R3	ND	1.13e+3	ng/dscm	7%O2	4.79e-4	lbs/hr	CE7%O2
Pentachlorobenzene	317C3R2	ND	1.09e+3	ng/dscm	7%O2	4.63e-4	lbs/hr	CE7%O2
Pentachlorophenol	317C2R1	ND	2.36e+3	ng/dscm	7%O2	9.99e-4	lbs/hr	CE7%O2
Pentachlorophenol	317C2R2	ND	2.18e+3	ng/dscm	7%O2	9.66e-4	lbs/hr	CE7%O2
Pentachlorophenol	317C2R3	ND	2.20e+3	ng/dscm	7%O2	9.34e-4	lbs/hr	CE7%O2
Pentachlorophenol	317C3R2	ND	2.13e+3	ng/dscm	7%O2	9.07e-4	lbs/hr	CE7%O2
Perylene	317C2R1	ND	9.94e+1	ng/dscm	7%O2	4.20e-5	lbs/hr	CE7%O2
Perylene	317C2R2	ND	8.40e+1	ng/dscm	7%O2	3.72e-5	lbs/hr	CE7%O2
Perylene	317C2R3	ND	9.67e+1	ng/dscm	7%O2	4.11e-5	lbs/hr	CE7%O2
Perylene	317C3R2	ND	1.00e+2	ng/dscm	7%O2	4.26e-5	lbs/hr	CE7%O2
Sulfur Hexafluoride	317C1R1	ND	5.75e+2	ng/dscm	7%O2	2.67e-4	lbs/hr	CC7%O2
Sulfur Hexafluoride	317C1R2	ND	6.99e+2	ng/dscm	7%O2	2.96e-4	lbs/hr	CC7%O2
Sulfur Hexafluoride	317C1R3	ND	6.70e+2	ng/dscm	7%O2	2.99e-4	lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
CO	317C1R1	2.82e+2 ppmv 7%O2	1.52e+2 lbs/hr	CE7%O2
CO	317C1R2	3.28e+2 ppmv 7%O2	1.61e+2 lbs/hr	CE7%O2
CO	317C1R3	3.40e+2 ppmv 7%O2	1.77e+2 lbs/hr	CE7%O2
CO	317C2R1	3.49e+2 ppmv 7%O2	1.71e+2 lbs/hr	CE7%O2
CO	317C2R2	3.32e+2 ppmv 7%O2	1.71e+2 lbs/hr	CE7%O2
CO	317C2R3	3.35e+2 ppmv 7%O2	1.65e+2 lbs/hr	CE7%O2
CO	317C3R1	3.56e+2 ppmv 7%O2	1.78e+2 lbs/hr	CE7%O2
CO	317C3R2	3.60e+2 ppmv 7%O2	1.78e+2 lbs/hr	CE7%O2
CO	317C3R3	3.32e+2 ppmv 7%O2	1.64e+2 lbs/hr	CE7%O2
THC	317C1R1	4.56e+1 ppmv 7%O2	3.87e+1 lbs/hr	CE7%O2
THC	317C1R2	5.78e+1 ppmv 7%O2	4.47e+1 lbs/hr	CE7%O2
THC	317C1R3	5.94e+1 ppmv 7%O2	4.84e+1 lbs/hr	CE7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: KY

3. CITY: KOSMOSDALE

EPA KYD024111981

REGION: 4

4. EP ID: 317 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

THC	317C2R1	5.58e+1	ppmv 7%O2	4.30e+1	lbs/hr	CE7%O2
THC	317C2R2	5.40e+1	ppmv 7%O2	4.37e+1	lbs/hr	CE7%O2
THC	317C2R3	5.47e+1	ppmv 7%O2	4.24e+1	lbs/hr	CE7%O2
THC	317C3R1	4.96e+1	ppmv 7%O2	3.89e+1	lbs/hr	CE7%O2
THC	317C3R2	5.65e+1	ppmv 7%O2	4.39e+1	lbs/hr	CE7%O2
THC	317C3R3	5.50e+1	ppmv 7%O2	4.27e+1	lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT



SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

EPA ID: OHD981195779

REGION: 5

4. EP ID: 315 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK-MAIN

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	315C1	1.29e-3 ng/dscm 7%O2	0.00e+0	
4D 2378	315C2	ND 0.00e+0	0.00e+0	
4D Other	315C1	1.73e-2 ng/dscm 7%O2	0.00e+0	
4D Other	315C2	1.45e-2 ng/dscm 7%O2	0.00e+0	
4D Total	315C1	1.86e-2 ng/dscm 7%O2	0.00e+0	CCE
4D Total	315C2	1.45e-2 ng/dscm 7%O2	0.00e+0	CCE
4F 2378	315C1	1.21e-2 ng/dscm 7%O2	0.00e+0	
4F 2378	315C2	8.97e-3 ng/dscm 7%O2	0.00e+0	
4F Other	315C1	2.23e-1 ng/dscm 7%O2	0.00e+0	
4F Other	315C2	1.90e-1 ng/dscm 7%O2	0.00e+0	
4F Total	315C1	2.35e-1 ng/dscm 7%O2	0.00e+0	CCE
4F Total	315C2	1.99e-1 ng/dscm 7%O2	0.00e+0	CCE
5D 12378	315C1	4.57e-3 ng/dscm 7%O2	0.00e+0	
5D 12378	315C2	ND 0.00e+0	0.00e+0	
5D Other	315C1	4.09e-2 ng/dscm 7%O2	0.00e+0	
5D Other	315C2	1.13e-2 ng/dscm 7%O2	0.00e+0	
5D Total	315C1	4.55e-2 ng/dscm 7%O2	0.00e+0	CCE
5D Total	315C2	1.13e-2 ng/dscm 7%O2	0.00e+0	CCE
5F 12378	315C1	2.53e-2 ng/dscm 7%O2	0.00e+0	
5F 12378	315C2	3.60e-3 ng/dscm 7%O2	0.00e+0	
5F 23478	315C1	2.34e-2 ng/dscm 7%O2	0.00e+0	
5F 23478	315C2	1.90e-2 ng/dscm 7%O2	0.00e+0	
5F Other	315C1	3.45e-1 ng/dscm 7%O2	0.00e+0	
5F Other	315C2	2.00e-1 ng/dscm 7%O2	0.00e+0	
5F Total	315C1	3.94e-1 ng/dscm 7%O2	0.00e+0	CCE
5F Total	315C2	2.23e-1 ng/dscm 7%O2	0.00e+0	CCE
6D 123478	315C1	ND 0.00e+0	0.00e+0	
6D 123478	315C2	3.51e-3 ng/dscm 7%O2	0.00e+0	
6D 123678	315C1	6.56e-3 ng/dscm 7%O2	0.00e+0	
6D 123678	315C2	2.10e-3 ng/dscm 7%O2	0.00e+0	
6D 123789	315C1	1.17e-2 ng/dscm 7%O2	0.00e+0	
6D 123789	315C2	5.87e-3 ng/dscm 7%O2	0.00e+0	
6D Other	315C1	7.39e-2 ng/dscm 7%O2	0.00e+0	
6D Other	315C2	4.87e-2 ng/dscm 7%O2	0.00e+0	
6D Total	315C1	9.22e-2 ng/dscm 7%O2	0.00e+0	CCE
6D Total	315C2	6.02e-2 ng/dscm 7%O2	0.00e+0	CCE
6F 123478	315C1	7.63e-2 ng/dscm 7%O2	0.00e+0	
6F 123478	315C2	5.06e-2 ng/dscm 7%O2	0.00e+0	
6F 123678	315C1	3.35e-2 ng/dscm 7%O2	0.00e+0	
6F 123678	315C2	2.43e-2 ng/dscm 7%O2	0.00e+0	
6F 123789	315C1	1.33e-3 ng/dscm 7%O2	0.00e+0	
6F 123789	315C2	8.10e-4 ng/dscm 7%O2	0.00e+0	
6F 234678	315C1	3.39e-2 ng/dscm 7%O2	0.00e+0	
6F 234678	315C2	3.14e-2 ng/dscm 7%O2	0.00e+0	
6F Other	315C1	1.89e-1 ng/dscm 7%O2	0.00e+0	
6F Other	315C2	9.33e-2 ng/dscm 7%O2	0.00e+0	
6F Total	315C1	3.34e-1 ng/dscm 7%O2	0.00e+0	CCE
6F Total	315C2	2.00e-1 ng/dscm 7%O2	0.00e+0	CCE
7D 1234678	315C1	1.07e-1 ng/dscm 7%O2	0.00e+0	
7D 1234678	315C2	8.32e-2 ng/dscm 7%O2	0.00e+0	
7D Other	315C1	7.03e-2 ng/dscm 7%O2	0.00e+0	

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

4. EP ID: 315 DEVICE NAME: KILN NO. 1

EPA ID: OHD981195779

REGION: 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

7D Other	315C2	6.65e-2	ng/dscm	7%O2	0.00e+0	
7D Total	315C1	1.77e-1	ng/dscm	7%O2	0.00e+0	CCE
7D Total	315C2	1.50e-1	ng/dscm	7%O2	0.00e+0	CCE
7F 1234678	315C1	9.82e-2	ng/dscm	7%O2	0.00e+0	
7F 1234678	315C2	8.55e-2	ng/dscm	7%O2	0.00e+0	
7F 1234789	315C1	1.31e-2	ng/dscm	7%O2	0.00e+0	
7F 1234789	315C2	6.03e-3	ng/dscm	7%O2	0.00e+0	
7F Other	315C1	4.45e-2	ng/dscm	7%O2	0.00e+0	
7F Other	315C2	5.27e-2	ng/dscm	7%O2	0.00e+0	
7F Total	315C1	1.56e-1	ng/dscm	7%O2	0.00e+0	CCE
7F Total	315C2	1.44e-1	ng/dscm	7%O2	0.00e+0	CCE
8D	315C1	5.76e-1	ng/dscm	7%O2	0.00e+0	
8D	315C2	3.99e-1	ng/dscm	7%O2	0.00e+0	
8F	315C1	7.65e-2	ng/dscm	7%O2	0.00e+0	
8F	315C2	7.92e-2	ng/dscm	7%O2	0.00e+0	
TEQ	315C1	3.69e-2	ng/dscm	7%O2	0.00e+0	CCET
TEQ	315C2	2.47e-2	ng/dscm	7%O2	0.00e+0	CCET
Total PCDD/PCDF	315C1	2.10e+0	ng/dscm	7%O2	0.00e+0	CCET
Total PCDD/PCDF	315C2	1.48e+0	ng/dscm	7%O2	0.00e+0	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc	
Chlorine	315C1R1	ND	2.38e-2	ppmv	7%O2	2.23e-2 lbs/hr	CC7%O2
Chlorine	315C1R2	ND	2.47e-2	ppmv	7%O2	2.30e-2 lbs/hr	CC7%O2
Chlorine	315C1R3	ND	2.53e-2	ppmv	7%O2	2.36e-2 lbs/hr	CC7%O2
Chlorine	315C2R1	ND	2.26e-2	ppmv	7%O2	2.29e-2 lbs/hr	CC7%O2
Chlorine	315C2R2	ND	2.48e-2	ppmv	7%O2	2.36e-2 lbs/hr	CC7%O2
Chlorine	315C2R3	ND	2.34e-2	ppmv	7%O2	2.37e-2 lbs/hr	CC7%O2
HCl	315C1R1		1.65e+0	ppmv	7%O2	7.95e-1 lbs/hr	CC7%O2
HCl	315C1R2		1.32e+0	ppmv	7%O2	6.30e-1 lbs/hr	CC7%O2
HCl	315C1R3		1.02e+0	ppmv	7%O2	4.90e-1 lbs/hr	CC7%O2
HCl	315C2R1		2.57e+0	ppmv	7%O2	1.34e+0 lbs/hr	CC7%O2
HCl	315C2R2		2.70e+0	ppmv	7%O2	1.32e+0 lbs/hr	CC7%O2
HCl	315C2R3		2.77e+0	ppmv	7%O2	1.44e+0 lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc	
Arsenic	315C1R1	ND	4.65e-1	ug/dscm	7%O2	1.48e-4 lbs/hr	CC7%O2
Arsenic	315C1R2		6.74e-1	ug/dscm	7%O2	2.13e-4 lbs/hr	CC7%O2
Arsenic	315C1R3	ND	5.04e-1	ug/dscm	7%O2	1.60e-4 lbs/hr	CC7%O2
Arsenic	315C2R1	ND	4.79e-1	ug/dscm	7%O2	1.65e-4 lbs/hr	CC7%O2
Arsenic	315C2R2	ND	4.80e-1	ug/dscm	7%O2	1.55e-4 lbs/hr	CC7%O2
Arsenic	315C2R3	ND	4.68e-1	ug/dscm	7%O2	1.61e-4 lbs/hr	CC7%O2
Beryllium	315C1R1	ND	4.65e-2	ug/dscm	7%O2	1.48e-5 lbs/hr	CC7%O2
Beryllium	315C1R2	ND	5.19e-2	ug/dscm	7%O2	1.64e-5 lbs/hr	CC7%O2
Beryllium	315C1R3	ND	5.04e-2	ug/dscm	7%O2	1.60e-5 lbs/hr	CC7%O2
Beryllium	315C2R1	ND	4.79e-2	ug/dscm	7%O2	1.65e-5 lbs/hr	CC7%O2
Beryllium	315C2R2	ND	4.80e-2	ug/dscm	7%O2	1.55e-5 lbs/hr	CC7%O2
Beryllium	315C2R3	ND	4.68e-2	ug/dscm	7%O2	1.61e-5 lbs/hr	CC7%O2
Cadmium	315C1R1	ND	4.65e+0	ug/dscm	7%O2	1.48e-3 lbs/hr	CC7%O2
Cadmium	315C1R2	ND	5.19e+0	ug/dscm	7%O2	1.64e-3 lbs/hr	CC7%O2
Cadmium	315C1R3	ND	5.04e+0	ug/dscm	7%O2	1.60e-3 lbs/hr	CC7%O2
Cadmium	315C2R1	ND	4.79e+0	ug/dscm	7%O2	1.65e-3 lbs/hr	CC7%O2
Cadmium	315C2R2	ND	1.70e+1	ug/dscm	7%O2	5.50e-3 lbs/hr	CC7%O2
Cadmium	315C2R3	ND	4.68e+0	ug/dscm	7%O2	1.61e-3 lbs/hr	CC7%O2
Chromium	315C1R1	ND	2.19e+0	ug/dscm	7%O2	6.98e-4 lbs/hr	CC7%O2
Chromium	315C1R2	ND	1.04e+1	ug/dscm	7%O2	3.27e-3 lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

EPA ID: OHD981195779

REGION: 5

4. EP ID: 315 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Chromium	315C1R3	ND	1.00e+1	ug/dscm	7%O2	3.19e-3	lbs/hr	CC7%O2
Chromium	315C2R1	ND	9.57e+0	ug/dscm	7%O2	3.30e-3	lbs/hr	CC7%O2
Chromium	315C2R2		9.60e+0	ug/dscm	7%O2	3.10e-3	lbs/hr	CC7%O2
Chromium	315C2R3	ND	9.33e+0	ug/dscm	7%O2	3.21e-3	lbs/hr	CC7%O2
Chromium (Hex)	315C1R1		2.19e+0	ug/dscm	7%O2	6.98e-4	lbs/hr	CC7%O2
Chromium (Hex)	315C1R2		2.15e+0	ug/dscm	7%O2	6.78e-4	lbs/hr	CC7%O2
Chromium (Hex)	315C1R3		1.82e+0	ug/dscm	7%O2	5.77e-4	lbs/hr	CC7%O2
Chromium (Hex)	315C2R1		2.56e+0	ug/dscm	7%O2	8.81e-4	lbs/hr	CC7%O2
Chromium (Hex)	315C2R2		1.30e+0	ug/dscm	7%O2	4.19e-4	lbs/hr	CC7%O2
Chromium (Hex)	315C2R3		2.33e+0	ug/dscm	7%O2	8.02e-4	lbs/hr	CC7%O2
Lead	315C1R1	ND	9.27e+0	ug/dscm	7%O2	2.95e-3	lbs/hr	CC7%O2
Lead	315C1R2		2.90e+1	ug/dscm	7%O2	9.16e-3	lbs/hr	CC7%O2
Lead	315C1R3	ND	1.00e+1	ug/dscm	7%O2	3.19e-3	lbs/hr	CC7%O2
Lead	315C2R1	ND	9.57e+0	ug/dscm	7%O2	3.30e-3	lbs/hr	CC7%O2
Lead	315C2R2	ND	9.60e+0	ug/dscm	7%O2	3.10e-3	lbs/hr	CC7%O2
Lead	315C2R3		9.33e+0	ug/dscm	7%O2	3.21e-3	lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	315C1R1	1.00e-3 gr/dscf 7%O2	7.32e-1 lbs/hr	CC7%O2
Particulate	315C1R2	8.81e-4 gr/dscf 7%O2	6.37e-1 lbs/hr	CC7%O2
Particulate	315C1R3	1.00e-3 gr/dscf 7%O2	7.28e-1 lbs/hr	CC7%O2
Particulate	315C2R1	1.16e-3 gr/dscf 7%O2	9.19e-1 lbs/hr	CC7%O2
Particulate	315C2R2	1.11e-3 gr/dscf 7%O2	8.22e-1 lbs/hr	CC7%O2
Particulate	315C2R3	4.75e-4 gr/dscf 7%O2	3.74e-1 lbs/hr	CC7%O2

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK-BYPASS

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
4D 2378	315C1	3.53e-3 ng/dscm 7%O2	0.00e+0	
4D 2378	315C2	ND 0.00e+0	0.00e+0	
4D Other	315C1	1.39e-1 ng/dscm 7%O2	0.00e+0	
4D Other	315C2	1.09e-1 ng/dscm 7%O2	0.00e+0	
4D Total	315C1	1.43e-1 ng/dscm 7%O2	0.00e+0	OCE
4D Total	315C2	1.09e-1 ng/dscm 7%O2	0.00e+0	OCE
4F 2378	315C1	1.11e-1 ng/dscm 7%O2	0.00e+0	
4F 2378	315C2	9.46e-2 ng/dscm 7%O2	0.00e+0	
4F Other	315C1	1.77e+0 ng/dscm 7%O2	0.00e+0	
4F Other	315C2	1.56e+0 ng/dscm 7%O2	0.00e+0	
4F Total	315C1	1.88e+0 ng/dscm 7%O2	0.00e+0	OCE
4F Total	315C2	1.65e+0 ng/dscm 7%O2	0.00e+0	OCE
5D 12378	315C1	4.30e-2 ng/dscm 7%O2	0.00e+0	
5D 12378	315C2	2.92e-2 ng/dscm 7%O2	0.00e+0	
5D Other	315C1	3.05e-1 ng/dscm 7%O2	0.00e+0	
5D Other	315C2	2.31e-1 ng/dscm 7%O2	0.00e+0	
5D Total	315C1	3.48e-1 ng/dscm 7%O2	0.00e+0	OCE
5D Total	315C2	2.60e-1 ng/dscm 7%O2	0.00e+0	OCE
5F 12378	315C1	1.53e-1 ng/dscm 7%O2	0.00e+0	
5F 12378	315C2	1.63e-1 ng/dscm 7%O2	0.00e+0	
5F 23478	315C1	1.93e-1 ng/dscm 7%O2	0.00e+0	
5F 23478	315C2	1.89e-1 ng/dscm 7%O2	0.00e+0	
5F Other	315C1	2.13e+0 ng/dscm 7%O2	0.00e+0	
5F Other	315C2	1.75e+0 ng/dscm 7%O2	0.00e+0	
5F Total	315C1	2.48e+0 ng/dscm 7%O2	0.00e+0	OCE
5F Total	315C2	2.10e+0 ng/dscm 7%O2	0.00e+0	OCE

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

4. EP ID: 315 DEVICE NAME: KILN NO. 1

EPA ID: OHD981195779

REGION: 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

6D 123478	315C1	4.93e-2	ng/dscm	7%O2	0.00e+0	
6D 123478	315C2	3.48e-2	ng/dscm	7%O2	0.00e+0	
6D 123678	315C1	4.52e-2	ng/dscm	7%O2	0.00e+0	
6D 123678	315C2	4.19e-2	ng/dscm	7%O2	0.00e+0	
6D 123789	315C1	1.29e-1	ng/dscm	7%O2	0.00e+0	
6D 123789	315C2	8.07e-2	ng/dscm	7%O2	0.00e+0	
6D Other	315C1	4.02e-1	ng/dscm	7%O2	0.00e+0	
6D Other	315C2	2.55e-1	ng/dscm	7%O2	0.00e+0	
6D Total	315C1	6.25e-1	ng/dscm	7%O2	0.00e+0	OCE
6D Total	315C2	4.12e-1	ng/dscm	7%O2	0.00e+0	OCE
6F 123478	315C1	4.59e-1	ng/dscm	7%O2	0.00e+0	
6F 123478	315C2	3.68e-1	ng/dscm	7%O2	0.00e+0	
6F 123678	315C1	2.36e-1	ng/dscm	7%O2	0.00e+0	
6F 123678	315C2	1.90e-1	ng/dscm	7%O2	0.00e+0	
6F 123789	315C1	1.28e-2	ng/dscm	7%O2	0.00e+0	
6F 123789	315C2	1.83e-2	ng/dscm	7%O2	0.00e+0	
6F 234678	315C1	2.29e-1	ng/dscm	7%O2	0.00e+0	
6F 234678	315C2	2.06e-1	ng/dscm	7%O2	0.00e+0	
6F Other	315C1	9.70e-1	ng/dscm	7%O2	0.00e+0	
6F Other	315C2	7.71e-1	ng/dscm	7%O2	0.00e+0	
6F Total	315C1	1.91e+0	ng/dscm	7%O2	0.00e+0	OCE
6F Total	315C2	1.55e+0	ng/dscm	7%O2	0.00e+0	OCE
7D 1234678	315C1	5.08e-1	ng/dscm	7%O2	0.00e+0	
7D 1234678	315C2	3.46e-1	ng/dscm	7%O2	0.00e+0	
7D Other	315C1	3.95e-1	ng/dscm	7%O2	0.00e+0	
7D Other	315C2	2.34e-1	ng/dscm	7%O2	0.00e+0	
7D Total	315C1	9.03e-1	ng/dscm	7%O2	0.00e+0	OCE
7D Total	315C2	5.80e-1	ng/dscm	7%O2	0.00e+0	OCE
7F 1234678	315C1	6.36e-1	ng/dscm	7%O2	0.00e+0	
7F 1234678	315C2	4.48e-1	ng/dscm	7%O2	0.00e+0	
7F 1234789	315C1	9.73e-2	ng/dscm	7%O2	0.00e+0	
7F 1234789	315C2	2.60e-2	ng/dscm	7%O2	0.00e+0	
7F Other	315C1	4.31e-1	ng/dscm	7%O2	0.00e+0	
7F Other	315C2	2.74e-1	ng/dscm	7%O2	0.00e+0	
7F Total	315C1	1.16e+0	ng/dscm	7%O2	0.00e+0	OCE
7F Total	315C2	7.48e-1	ng/dscm	7%O2	0.00e+0	OCE
8D	315C1	1.49e+0	ng/dscm	7%O2	0.00e+0	
8D	315C2	1.22e+0	ng/dscm	7%O2	0.00e+0	
8F	315C1	4.47e-1	ng/dscm	7%O2	0.00e+0	
8F	315C2	2.47e-1	ng/dscm	7%O2	0.00e+0	
TEQ	315C1	2.71e-1	ng/dscm	7%O2	0.00e+0	CCET
TEQ	315C2	2.30e-1	ng/dscm	7%O2	0.00e+0	CCET
Total PCDD/PCDF	315C1	1.14e+1	ng/dscm	7%O2	0.00e+0	CCET
Total PCDD/PCDF	315C2	8.89e+0	ng/dscm	7%O2	0.00e+0	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc	
Chlorine	315C1R1	ND	1.93e-1	ppmv	3.40e-2	lbs/hr	CC7%O2
Chlorine	315C1R2	ND	3.06e-1	ppmv	4.33e-2	lbs/hr	CC7%O2
Chlorine	315C1R3	ND	2.27e-1	ppmv	3.48e-2	lbs/hr	CC7%O2
Chlorine	315C2R1	ND	2.29e-1	ppmv	3.42e-2	lbs/hr	CC7%O2
Chlorine	315C2R2	ND	2.95e-1	ppmv	4.15e-2	lbs/hr	CC7%O2
Chlorine	315C2R3	ND	2.47e-1	ppmv	4.18e-2	lbs/hr	CC7%O2
HCl	315C1R1		7.73e-1	ppmv	7.01e-2	lbs/hr	CC7%O2
HCl	315C1R2		1.12e+0	ppmv	8.13e-2	lbs/hr	CC7%O2
HCl	315C1R3		1.76e-1	ppmv	1.39e-2	lbs/hr	CC7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

EPA ID: OHD981195779

REGION: 5

4. EP ID: 315 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

HCl	315C2R1	1.77e-1	ppmv 7%O2	1.36e-2	lbs/hr	CC7%O2
HCl	315C2R2	5.18e-1	ppmv 7%O2	3.75e-2	lbs/hr	CC7%O2
HCl	315C2R3	3.74e-1	ppmv 7%O2	3.26e-2	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Arsenic	315C1R1	ND	1.39e+0 ug/dscm 7%O2	8.34e-5 lbs/hr	CC7%O2
Arsenic	315C1R2	ND	1.79e+0 ug/dscm 7%O2	8.60e-5 lbs/hr	CC7%O2
Arsenic	315C1R3		1.85e+0 ug/dscm 7%O2	9.67e-5 lbs/hr	CC7%O2
Arsenic	315C2R1	ND	1.66e+0 ug/dscm 7%O2	8.40e-5 lbs/hr	CC7%O2
Arsenic	315C2R2	ND	1.75e+0 ug/dscm 7%O2	8.39e-5 lbs/hr	CC7%O2
Arsenic	315C2R3		2.19e+0 ug/dscm 7%O2	1.26e-4 lbs/hr	CC7%O2
Beryllium	315C1R1	ND	1.39e-1 ug/dscm 7%O2	8.34e-6 lbs/hr	CC7%O2
Beryllium	315C1R2	ND	1.79e-1 ug/dscm 7%O2	8.60e-6 lbs/hr	CC7%O2
Beryllium	315C1R3	ND	1.68e-1 ug/dscm 7%O2	8.79e-6 lbs/hr	CC7%O2
Beryllium	315C2R1	ND	1.66e-1 ug/dscm 7%O2	8.40e-6 lbs/hr	CC7%O2
Beryllium	315C2R2		1.75e-1 ug/dscm 7%O2	8.39e-6 lbs/hr	CC7%O2
Beryllium	315C2R3	ND	1.52e-1 ug/dscm 7%O2	8.74e-6 lbs/hr	CC7%O2
Cadmium	315C1R1	ND	1.39e+1 ug/dscm 7%O2	8.34e-4 lbs/hr	CC7%O2
Cadmium	315C1R2	ND	1.79e+1 ug/dscm 7%O2	8.60e-4 lbs/hr	CC7%O2
Cadmium	315C1R3	ND	1.68e+1 ug/dscm 7%O2	8.79e-4 lbs/hr	CC7%O2
Cadmium	315C2R1	ND	1.66e+1 ug/dscm 7%O2	8.40e-4 lbs/hr	CC7%O2
Cadmium	315C2R2		1.75e+1 ug/dscm 7%O2	8.39e-4 lbs/hr	CC7%O2
Cadmium	315C2R3	ND	1.52e+1 ug/dscm 7%O2	8.74e-4 lbs/hr	CC7%O2
Chromium	315C1R1	ND	2.79e+1 ug/dscm 7%O2	1.67e-3 lbs/hr	CC7%O2
Chromium	315C1R2	ND	3.57e+1 ug/dscm 7%O2	1.72e-3 lbs/hr	CC7%O2
Chromium	315C1R3	ND	3.37e+1 ug/dscm 7%O2	1.76e-3 lbs/hr	CC7%O2
Chromium	315C2R1	ND	3.31e+1 ug/dscm 7%O2	1.68e-3 lbs/hr	CC7%O2
Chromium	315C2R2	ND	3.51e+1 ug/dscm 7%O2	1.68e-3 lbs/hr	CC7%O2
Chromium	315C2R3	ND	3.04e+1 ug/dscm 7%O2	1.75e-3 lbs/hr	CC7%O2
Chromium (Hex)	315C1R1		4.65e+0 ug/dscm 7%O2	2.79e-4 lbs/hr	CC7%O2
Chromium (Hex)	315C1R2		5.21e+0 ug/dscm 7%O2	2.51e-4 lbs/hr	CC7%O2
Chromium (Hex)	315C1R3		1.70e+1 ug/dscm 7%O2	8.88e-4 lbs/hr	CC7%O2
Chromium (Hex)	315C2R1		7.55e+0 ug/dscm 7%O2	3.83e-4 lbs/hr	CC7%O2
Chromium (Hex)	315C2R2		1.64e+1 ug/dscm 7%O2	7.84e-4 lbs/hr	CC7%O2
Chromium (Hex)	315C2R3		4.74e+0 ug/dscm 7%O2	2.73e-4 lbs/hr	CC7%O2
Lead	315C1R1		8.07e+1 ug/dscm 7%O2	4.84e-3 lbs/hr	CC7%O2
Lead	315C1R2		1.20e+2 ug/dscm 7%O2	5.76e-3 lbs/hr	CC7%O2
Lead	315C1R3		5.73e+1 ug/dscm 7%O2	2.99e-3 lbs/hr	CC7%O2
Lead	315C2R1		7.63e+1 ug/dscm 7%O2	3.87e-3 lbs/hr	CC7%O2
Lead	315C2R2		1.30e+2 ug/dscm 7%O2	6.21e-3 lbs/hr	CC7%O2
Lead	315C2R3		7.90e+1 ug/dscm 7%O2	4.55e-3 lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
Particulate	315C1R1		2.55e-2 gr/dscf 7%O2	3.50e+0 lbs/hr	CC7%O2
Particulate	315C1R2		3.49e-2 gr/dscf 7%O2	3.85e+0 lbs/hr	CC7%O2
Particulate	315C1R3		4.49e-2 gr/dscf 7%O2	5.36e+0 lbs/hr	CC7%O2
Particulate	315C2R1		3.12e-2 gr/dscf 7%O2	3.62e+0 lbs/hr	CC7%O2
Particulate	315C2R2		3.35e-2 gr/dscf 7%O2	3.67e+0 lbs/hr	CC7%O2
Particulate	315C2R3		3.05e-2 gr/dscf 7%O2	4.02e+0 lbs/hr	CC7%O2

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc
CO	315C1R1		3.80e+1 ppmv 7%O2	2.65e+0 lbs/hr	CE
CO	315C1R2		5.20e+1 ppmv 7%O2	2.91e+0 lbs/hr	CE
CO	315C1R3		2.00e+1 ppmv 7%O2	1.21e+0 lbs/hr	CE

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: OH

3. CITY: FAIRBORN

4. EP ID: 315 DEVICE NAME: KILN NO. 1

EPA ID: OHD981195779

REGION: 5

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

CO	315C2R1	1.00e+0	ppmv 7%O2	5.90e-2	lbs/hr	CE
CO	315C2R2	1.00e+0	ppmv 7%O2	5.57e-2	lbs/hr	CE
CO	315C2R3	5.00e+0	ppmv 7%O2	3.35e-1	lbs/hr	CE
CO	315C3R1	5.10e+1	ppmv 7%O2	0.00e+0		
CO	315C3R2	3.90e+1	ppmv 7%O2	0.00e+0		
CO	315C3R3	1.70e+1	ppmv 7%O2	0.00e+0		
CO(MHRA)	315C1R1	4.20e+1	ppmv 7%O2	2.93e+0	lbs/hr	CE
CO(MHRA)	315C1R2	8.40e+1	ppmv 7%O2	4.70e+0	lbs/hr	CE
CO(MHRA)	315C1R3	2.30e+1	ppmv 7%O2	1.40e+0	lbs/hr	CE
CO(MHRA)	315C2R1	3.00e+0	ppmv 7%O2	1.77e-1	lbs/hr	CE
CO(MHRA)	315C2R2	5.00e+0	ppmv 7%O2	2.79e-1	lbs/hr	CE
CO(MHRA)	315C2R3	1.10e+1	ppmv 7%O2	7.37e-1	lbs/hr	CE
THC	315C1R1	2.10e+0	ppmv 7%O2	2.30e-1	lbs/hr	CE
THC	315C1R2	2.20e+0	ppmv 7%O2	1.94e-1	lbs/hr	CE
THC	315C1R3	2.10e+0	ppmv 7%O2	2.00e-1	lbs/hr	CE
THC	315C2R1	1.70e+0	ppmv 7%O2	1.58e-1	lbs/hr	CE
THC	315C2R2	1.90e+0	ppmv 7%O2	1.66e-1	lbs/hr	CE
THC	315C2R3	1.60e+0	ppmv 7%O2	1.68e-1	lbs/hr	CE
THC	315C3R1	2.00e+0	ppmv 7%O2	0.00e+0		
THC	315C3R2	2.10e+0	ppmv 7%O2	0.00e+0		
THC	315C3R3	1.90e+0	ppmv 7%O2	0.00e+0		
THC(MHRA)	315C1R1	2.70e+0	ppmv 7%O2	2.96e-1	lbs/hr	CE
THC(MHRA)	315C1R2	2.40e+0	ppmv 7%O2	2.11e-1	lbs/hr	CE
THC(MHRA)	315C1R3	2.70e+0	ppmv 7%O2	2.58e-1	lbs/hr	CE
THC(MHRA)	315C2R1	1.90e+0	ppmv 7%O2	1.76e-1	lbs/hr	CE
THC(MHRA)	315C2R2	2.00e+0	ppmv 7%O2	1.75e-1	lbs/hr	CE
THC(MHRA)	315C2R3	2.10e+0	ppmv 7%O2	2.21e-1	lbs/hr	CE

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5. Type: CONTROLLED

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK-MAIN

Phase: GAS

7. Category: Dioxin & Furan

Analysis:

8. Substance	9. Run ID	Concentration			Mass Rate	Calc
4D 2378	316C1R1	ND	6.28e-3	ng/dscm 7%O2	2.07e-9 lbs/hr	CE7%O2
4D 2378	316C1R2		1.13e-2	ng/dscm 7%O2	3.83e-9 lbs/hr	CE7%O2
4D 2378	316C1R3	ND	6.70e-3	ng/dscm 7%O2	2.23e-9 lbs/hr	CE7%O2
4D 2378	316C2R1	ND	4.15e-3	ng/dscm 7%O2	1.41e-9 lbs/hr	CE7%O2
4D 2378	316C2R2	ND	1.12e-3	ng/dscm 7%O2	3.62e-10 lbs/hr	CE
4D 2378	316C2R3	ND	1.86e-3	ng/dscm 7%O2	6.36e-10 lbs/hr	CE7%O2
4D Other	316C1R1		1.02e-1	ng/dscm 7%O2	3.37e-8 lbs/hr	CE7%O2
4D Other	316C1R2		4.12e+0	ng/dscm 7%O2	1.39e-6 lbs/hr	CE7%O2
4D Other	316C1R3		9.40e-2	ng/dscm 7%O2	3.13e-8 lbs/hr	CE7%O2
4D Other	316C2R1		6.29e-2	ng/dscm 7%O2	2.13e-8 lbs/hr	CE7%O2
4D Other	316C2R2		2.65e-2	ng/dscm 7%O2	8.55e-9 lbs/hr	CE
4D Other	316C2R3		1.49e-2	ng/dscm 7%O2	5.10e-9 lbs/hr	CE7%O2
4D Total	316C1R1		1.09e-1	ng/dscm 7%O2	3.58e-8 lbs/hr	OCE
4D Total	316C1R2		4.13e+0	ng/dscm 7%O2	1.40e-6 lbs/hr	OCE
4D Total	316C1R3		1.01e-1	ng/dscm 7%O2	3.35e-8 lbs/hr	OCE
4D Total	316C2R1		6.71e-2	ng/dscm 7%O2	2.28e-8 lbs/hr	OCE
4D Total	316C2R2		2.76e-2	ng/dscm 7%O2	8.92e-9 lbs/hr	OCE
4D Total	316C2R3		1.67e-2	ng/dscm 7%O2	5.74e-9 lbs/hr	OCE
4F 2378	316C1R1		3.61e-1	ng/dscm 7%O2	1.19e-7 lbs/hr	CE7%O2
4F 2378	316C1R2		5.55e-1	ng/dscm 7%O2	1.87e-7 lbs/hr	CE7%O2
4F 2378	316C1R3		3.80e-1	ng/dscm 7%O2	1.26e-7 lbs/hr	CE7%O2
4F 2378	316C2R1		3.36e-1	ng/dscm 7%O2	1.14e-7 lbs/hr	CE7%O2
4F 2378	316C2R2		1.26e-1	ng/dscm 7%O2	4.08e-8 lbs/hr	CE7%O2
4F 2378	316C2R3		1.21e-1	ng/dscm 7%O2	4.16e-8 lbs/hr	CE7%O2
4F Other	316C1R1		1.45e+1	ng/dscm 7%O2	4.76e-6 lbs/hr	CE7%O2
4F Other	316C1R2		2.26e+1	ng/dscm 7%O2	7.61e-6 lbs/hr	CE7%O2
4F Other	316C1R3		1.55e+1	ng/dscm 7%O2	5.15e-6 lbs/hr	CE7%O2
4F Other	316C2R1		1.26e+1	ng/dscm 7%O2	4.27e-6 lbs/hr	CE7%O2
4F Other	316C2R2		3.75e+0	ng/dscm 7%O2	1.21e-6 lbs/hr	CE7%O2
4F Other	316C2R3		5.16e+0	ng/dscm 7%O2	1.77e-6 lbs/hr	CE7%O2
4F Total	316C1R1		1.48e+1	ng/dscm 7%O2	4.88e-6 lbs/hr	OCE
4F Total	316C1R2		2.31e+1	ng/dscm 7%O2	7.80e-6 lbs/hr	OCE
4F Total	316C1R3		1.59e+1	ng/dscm 7%O2	5.28e-6 lbs/hr	OCE
4F Total	316C2R1		1.29e+1	ng/dscm 7%O2	4.38e-6 lbs/hr	OCE
4F Total	316C2R2		3.88e+0	ng/dscm 7%O2	1.25e-6 lbs/hr	OCE
4F Total	316C2R3		5.28e+0	ng/dscm 7%O2	1.81e-6 lbs/hr	OCE
5D 12378	316C1R1	ND	6.28e-3	ng/dscm 7%O2	2.07e-9 lbs/hr	CE7%O2
5D 12378	316C1R2		1.70e-1	ng/dscm 7%O2	5.72e-8 lbs/hr	CE7%O2
5D 12378	316C1R3	ND	6.10e-3	ng/dscm 7%O2	2.03e-9 lbs/hr	CE7%O2
5D 12378	316C2R1	ND	4.76e-3	ng/dscm 7%O2	1.61e-9 lbs/hr	CE7%O2
5D 12378	316C2R2	ND	3.12e-3	ng/dscm 7%O2	1.01e-9 lbs/hr	CE7%O2
5D 12378	316C2R3	ND	4.97e-3	ng/dscm 7%O2	1.70e-9 lbs/hr	CE7%O2
5D Other	316C1R1		1.57e-2	ng/dscm 7%O2	5.17e-9 lbs/hr	CE7%O2
5D Other	316C1R2		1.22e+1	ng/dscm 7%O2	4.13e-6 lbs/hr	CE7%O2
5D Other	316C1R3		2.01e-2	ng/dscm 7%O2	6.68e-9 lbs/hr	CE7%O2
5D Other	316C2R1		5.71e-2	ng/dscm 7%O2	1.94e-8 lbs/hr	CE7%O2
5D Other	316C2R2		8.72e-3	ng/dscm 7%O2	2.81e-9 lbs/hr	CE7%O2
5D Other	316C2R3	ND	6.20e-3	ng/dscm 7%O2	2.13e-9 lbs/hr	CE7%O2
5D Total	316C1R1		2.20e-2	ng/dscm 7%O2	7.24e-9 lbs/hr	OCE
5D Total	316C1R2		1.24e+1	ng/dscm 7%O2	4.19e-6 lbs/hr	OCE
5D Total	316C1R3		2.62e-2	ng/dscm 7%O2	8.71e-9 lbs/hr	OCE
5D Total	316C2R1		6.18e-2	ng/dscm 7%O2	2.10e-8 lbs/hr	OCE
5D Total	316C2R2		1.18e-2	ng/dscm 7%O2	3.82e-9 lbs/hr	OCE
5D Total	316C2R3		1.12e-2	ng/dscm 7%O2	3.83e-9 lbs/hr	OCE
5F 12378	316C1R1		7.10e-2	ng/dscm 7%O2	2.34e-8 lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

5F 12378	316C1R2	8.96e-1	ng/dscm	7%O2	3.02e-7	lbs/hr	CE7%O2	
5F 12378	316C1R3	6.77e-2	ng/dscm	7%O2	2.25e-8	lbs/hr	CE7%O2	
5F 12378	316C2R1	3.87e-2	ng/dscm	7%O2	1.31e-8	lbs/hr	CE7%O2	
5F 12378	316C2R2	2.37e-2	ng/dscm	7%O2	7.64e-9	lbs/hr	CE7%O2	
5F 12378	316C2R3	1.68e-2	ng/dscm	7%O2	5.75e-9	lbs/hr	CE7%O2	
5F 23478	316C1R1	7.60e-2	ng/dscm	7%O2	2.50e-8	lbs/hr	CE7%O2	
5F 23478	316C1R2	8.88e-1	ng/dscm	7%O2	3.00e-7	lbs/hr	CE7%O2	
5F 23478	316C1R3	6.64e-2	ng/dscm	7%O2	2.21e-8	lbs/hr	CE7%O2	
5F 23478	316C2R1	4.64e-2	ng/dscm	7%O2	1.57e-8	lbs/hr	CE7%O2	
5F 23478	316C2R2	1.68e-2	ng/dscm	7%O2	5.43e-9	lbs/hr	CE7%O2	
5F 23478	316C2R3	1.79e-2	ng/dscm	7%O2	6.14e-9	lbs/hr	CE7%O2	
5F Other	316C1R1	1.20e+0	ng/dscm	7%O2	3.96e-7	lbs/hr	CE7%O2	
5F Other	316C1R2	1.40e+1	ng/dscm	7%O2	4.74e-6	lbs/hr	CE7%O2	
5F Other	316C1R3	9.47e-1	ng/dscm	7%O2	3.15e-7	lbs/hr	CE7%O2	
5F Other	316C2R1	7.65e-1	ng/dscm	7%O2	2.59e-7	lbs/hr	CE7%O2	
5F Other	316C2R2	3.02e-1	ng/dscm	7%O2	9.74e-8	lbs/hr	CE7%O2	
5F Other	316C2R3	2.54e-1	ng/dscm	7%O2	8.71e-8	lbs/hr	CE7%O2	
5F Total	316C1R1	1.35e+0	ng/dscm	7%O2	4.44e-7	lbs/hr	OCE	
5F Total	316C1R2	1.58e+1	ng/dscm	7%O2	5.34e-6	lbs/hr	OCE	
5F Total	316C1R3	1.08e+0	ng/dscm	7%O2	3.60e-7	lbs/hr	OCE	
5F Total	316C2R1	8.50e-1	ng/dscm	7%O2	2.88e-7	lbs/hr	OCE	
5F Total	316C2R2	3.42e-1	ng/dscm	7%O2	1.10e-7	lbs/hr	OCE	
5F Total	316C2R3	2.89e-1	ng/dscm	7%O2	9.90e-8	lbs/hr	OCE	
6D 123478	316C1R1	ND	8.17e-3	ng/dscm	7%O2	2.69e-9	lbs/hr	CE7%O2
6D 123478	316C1R2	3.84e-1	ng/dscm	7%O2	1.30e-7	lbs/hr	CE7%O2	
6D 123478	316C1R3	ND	4.28e-3	ng/dscm	7%O2	1.42e-9	lbs/hr	CE7%O2
6D 123478	316C2R1	2.97e-3	ng/dscm	7%O2	1.01e-9	lbs/hr	CE7%O2	
6D 123478	316C2R2	ND	4.98e-3	ng/dscm	7%O2	1.61e-9	lbs/hr	CE7%O2
6D 123478	316C2R3	ND	6.20e-3	ng/dscm	7%O2	2.13e-9	lbs/hr	CE7%O2
6D 123678	316C1R1	6.28e-3	ng/dscm	7%O2	2.07e-9	lbs/hr	CE7%O2	
6D 123678	316C1R2	4.03e-1	ng/dscm	7%O2	1.36e-7	lbs/hr	CE7%O2	
6D 123678	316C1R3	4.28e-3	ng/dscm	7%O2	1.42e-9	lbs/hr	CE7%O2	
6D 123678	316C2R1	ND	4.15e-3	ng/dscm	7%O2	1.41e-9	lbs/hr	CE7%O2
6D 123678	316C2R2	3.12e-3	ng/dscm	7%O2	1.01e-9	lbs/hr	CE7%O2	
6D 123678	316C2R3	ND	3.09e-3	ng/dscm	7%O2	1.06e-9	lbs/hr	CE7%O2
6D 123789	316C1R1	1.19e-2	ng/dscm	7%O2	3.93e-9	lbs/hr	CE7%O2	
6D 123789	316C1R2	9.44e-1	ng/dscm	7%O2	3.19e-7	lbs/hr	CE7%O2	
6D 123789	316C1R3	7.93e-3	ng/dscm	7%O2	2.64e-9	lbs/hr	CE7%O2	
6D 123789	316C2R1	5.34e-3	ng/dscm	7%O2	1.81e-9	lbs/hr	CE7%O2	
6D 123789	316C2R2	ND	4.35e-3	ng/dscm	7%O2	1.40e-9	lbs/hr	CE7%O2
6D 123789	316C2R3	ND	4.97e-3	ng/dscm	7%O2	1.70e-9	lbs/hr	CE7%O2
6D Other	316C1R1	1.28e-1	ng/dscm	7%O2	4.22e-8	lbs/hr	CE7%O2	
6D Other	316C1R2	1.49e+1	ng/dscm	7%O2	5.04e-6	lbs/hr	CE7%O2	
6D Other	316C1R3	1.59e-2	ng/dscm	7%O2	5.28e-9	lbs/hr	CE7%O2	
6D Other	316C2R1	7.72e-2	ng/dscm	7%O2	2.62e-8	lbs/hr	CE7%O2	
6D Other	316C2R2	1.18e-2	ng/dscm	7%O2	3.82e-9	lbs/hr	CE7%O2	
6D Other	316C2R3	6.82e-3	ng/dscm	7%O2	2.34e-9	lbs/hr	CE7%O2	
6D Total	316C1R1	1.55e-1	ng/dscm	7%O2	5.09e-8	lbs/hr	OCE	
6D Total	316C1R2	1.67e+1	ng/dscm	7%O2	5.62e-6	lbs/hr	OCE	
6D Total	316C1R3	3.24e-2	ng/dscm	7%O2	1.08e-8	lbs/hr	OCE	
6D Total	316C2R1	8.97e-2	ng/dscm	7%O2	3.04e-8	lbs/hr	OCE	
6D Total	316C2R2	2.43e-2	ng/dscm	7%O2	7.84e-9	lbs/hr	OCE	
6D Total	316C2R3	2.11e-2	ng/dscm	7%O2	7.23e-9	lbs/hr	OCE	
6F 123478	316C1R1	5.27e-2	ng/dscm	7%O2	1.74e-8	lbs/hr	CE7%O2	
6F 123478	316C1R2	3.05e+0	ng/dscm	7%O2	1.03e-6	lbs/hr	CE7%O2	
6F 123478	316C1R3	3.36e-2	ng/dscm	7%O2	1.12e-8	lbs/hr	CE7%O2	
6F 123478	316C2R1	2.97e-2	ng/dscm	7%O2	1.01e-8	lbs/hr	CE7%O2	
6F 123478	316C2R2	1.37e-2	ng/dscm	7%O2	4.42e-9	lbs/hr	CE7%O2	
6F 123478	316C2R3	1.49e-2	ng/dscm	7%O2	5.10e-9	lbs/hr	CE7%O2	
6F 123678	316C1R1	2.20e-2	ng/dscm	7%O2	7.24e-9	lbs/hr	CE7%O2	
6F 123678	316C1R2	1.42e+0	ng/dscm	7%O2	4.79e-7	lbs/hr	CE7%O2	

US EPA ARCHIVE DOCUMENT



SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

6F 123678	316C1R3		1.65e-2	ng/dscm	7%O2	5.49e-9	lbs/hr	CE7%O2
6F 123678	316C2R1		1.37e-2	ng/dscm	7%O2	4.64e-9	lbs/hr	CE7%O2
6F 123678	316C2R2		4.98e-3	ng/dscm	7%O2	1.61e-9	lbs/hr	CE7%O2
6F 123678	316C2R3		4.97e-3	ng/dscm	7%O2	1.70e-9	lbs/hr	CE7%O2
6F 123789	316C1R1		3.78e-3	ng/dscm	7%O2	1.24e-9	lbs/hr	CE7%O2
6F 123789	316C1R2		4.00e-2	ng/dscm	7%O2	1.35e-8	lbs/hr	CE7%O2
6F 123789	316C1R3	ND	2.08e-3	ng/dscm	7%O2	6.94e-10	lbs/hr	CE7%O2
6F 123789	316C2R1	ND	2.97e-3	ng/dscm	7%O2	1.01e-9	lbs/hr	CE7%O2
6F 123789	316C2R2	ND	3.12e-3	ng/dscm	7%O2	1.01e-9	lbs/hr	CE7%O2
6F 123789	316C2R3	ND	4.97e-3	ng/dscm	7%O2	1.70e-9	lbs/hr	CE7%O2
6F 234678	316C1R1		2.51e-2	ng/dscm	7%O2	8.25e-9	lbs/hr	CE7%O2
6F 234678	316C1R2		1.90e+0	ng/dscm	7%O2	6.41e-7	lbs/hr	CE7%O2
6F 234678	316C1R3		1.77e-2	ng/dscm	7%O2	5.90e-9	lbs/hr	CE7%O2
6F 234678	316C2R1		1.61e-2	ng/dscm	7%O2	5.46e-9	lbs/hr	CE7%O2
6F 234678	316C2R2		9.33e-3	ng/dscm	7%O2	3.01e-9	lbs/hr	CE7%O2
6F 234678	316C2R3		1.12e-2	ng/dscm	7%O2	3.82e-9	lbs/hr	CE7%O2
6F Other	316C1R1		1.22e-1	ng/dscm	7%O2	4.01e-8	lbs/hr	CE7%O2
6F Other	316C1R2		7.78e+0	ng/dscm	7%O2	2.63e-6	lbs/hr	CE7%O2
6F Other	316C1R3		7.33e-2	ng/dscm	7%O2	2.44e-8	lbs/hr	CE7%O2
6F Other	316C2R1		6.13e-2	ng/dscm	7%O2	2.08e-8	lbs/hr	CE7%O2
6F Other	316C2R2		2.12e-2	ng/dscm	7%O2	6.83e-9	lbs/hr	CE7%O2
6F Other	316C2R3		2.10e-2	ng/dscm	7%O2	7.20e-9	lbs/hr	CE7%O2
6F Total	316C1R1		2.25e-1	ng/dscm	7%O2	7.42e-8	lbs/hr	OCE
6F Total	316C1R2		1.42e+1	ng/dscm	7%O2	4.79e-6	lbs/hr	OCE
6F Total	316C1R3		1.43e-1	ng/dscm	7%O2	4.76e-8	lbs/hr	OCE
6F Total	316C2R1		1.24e-1	ng/dscm	7%O2	4.19e-8	lbs/hr	OCE
6F Total	316C2R2		5.23e-2	ng/dscm	7%O2	1.69e-8	lbs/hr	OCE
6F Total	316C2R3		5.70e-2	ng/dscm	7%O2	1.95e-8	lbs/hr	OCE
7D 1234678	316C1R1		1.14e-1	ng/dscm	7%O2	3.74e-8	lbs/hr	CE7%O2
7D 1234678	316C1R2		4.14e+0	ng/dscm	7%O2	1.40e-6	lbs/hr	CE7%O2
7D 1234678	316C1R3		5.80e-2	ng/dscm	7%O2	1.93e-8	lbs/hr	CE7%O2
7D 1234678	316C2R1		6.29e-2	ng/dscm	7%O2	2.13e-8	lbs/hr	CE7%O2
7D 1234678	316C2R2	ND	6.35e-2	ng/dscm	7%O2	2.05e-8	lbs/hr	CE7%O2
7D 1234678	316C2R3		6.93e-2	ng/dscm	7%O2	2.38e-8	lbs/hr	CE7%O2
7D Other	316C1R1		9.60e-2	ng/dscm	7%O2	3.16e-8	lbs/hr	CE7%O2
7D Other	316C1R2		7.16e+0	ng/dscm	7%O2	2.42e-6	lbs/hr	CE7%O2
7D Other	316C1R3		5.01e-2	ng/dscm	7%O2	1.67e-8	lbs/hr	CE7%O2
7D Other	316C2R1		6.41e-2	ng/dscm	7%O2	2.18e-8	lbs/hr	CE7%O2
7D Other	316C2R2		5.35e-2	ng/dscm	7%O2	1.73e-8	lbs/hr	CE7%O2
7D Other	316C2R3		4.22e-2	ng/dscm	7%O2	1.45e-8	lbs/hr	CE7%O2
7D Total	316C1R1		2.10e-1	ng/dscm	7%O2	6.90e-8	lbs/hr	OCE
7D Total	316C1R2		1.13e+1	ng/dscm	7%O2	3.81e-6	lbs/hr	OCE
7D Total	316C1R3		1.08e-1	ng/dscm	7%O2	3.60e-8	lbs/hr	OCE
7D Total	316C2R1		1.27e-1	ng/dscm	7%O2	4.31e-8	lbs/hr	OCE
7D Total	316C2R2		1.17e-1	ng/dscm	7%O2	3.78e-8	lbs/hr	OCE
7D Total	316C2R3		1.12e-1	ng/dscm	7%O2	3.82e-8	lbs/hr	OCE
7F 1234678	316C1R1		1.05e-1	ng/dscm	7%O2	3.47e-8	lbs/hr	CE7%O2
7F 1234678	316C1R2		3.41e+0	ng/dscm	7%O2	1.15e-6	lbs/hr	CE7%O2
7F 1234678	316C1R3		3.24e-2	ng/dscm	7%O2	1.08e-8	lbs/hr	CE7%O2
7F 1234678	316C2R1		3.97e-2	ng/dscm	7%O2	1.35e-8	lbs/hr	CE7%O2
7F 1234678	316C2R2		1.62e-2	ng/dscm	7%O2	5.22e-9	lbs/hr	CE7%O2
7F 1234678	316C2R3		2.05e-2	ng/dscm	7%O2	7.03e-9	lbs/hr	CE7%O2
7F 1234789	316C1R1	ND	1.19e-2	ng/dscm	7%O2	3.93e-9	lbs/hr	CE7%O2
7F 1234789	316C1R2		4.01e-1	ng/dscm	7%O2	1.35e-7	lbs/hr	CE7%O2
7F 1234789	316C1R3	ND	7.93e-3	ng/dscm	7%O2	2.64e-9	lbs/hr	CE7%O2
7F 1234789	316C2R1	ND	4.76e-3	ng/dscm	7%O2	1.61e-9	lbs/hr	CE7%O2
7F 1234789	316C2R2	ND	3.12e-3	ng/dscm	7%O2	1.01e-9	lbs/hr	CE7%O2
7F 1234789	316C2R3	ND	6.20e-3	ng/dscm	7%O2	2.13e-9	lbs/hr	CE7%O2
7F Other	316C1R1		4.70e-2	ng/dscm	7%O2	1.55e-8	lbs/hr	CE7%O2
7F Other	316C1R2		2.43e+0	ng/dscm	7%O2	8.19e-7	lbs/hr	CE7%O2
7F Other	316C1R3		1.90e-2	ng/dscm	7%O2	6.32e-9	lbs/hr	CE7%O2

US EPA ARCHIVE DOCUMENT

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

7F Other	316C2R1	1.78e-2	ng/dscm 7%O2	6.03e-9	lbs/hr	CE7%O2
7F Other	316C2R2	4.35e-3	ng/dscm 7%O2	1.40e-9	lbs/hr	CE7%O2
7F Other	316C2R3	5.58e-3	ng/dscm 7%O2	1.91e-9	lbs/hr	CE7%O2
7F Total	316C1R1	1.64e-1	ng/dscm 7%O2	5.41e-8	lbs/hr	OCE
7F Total	316C1R2	6.23e+0	ng/dscm 7%O2	2.10e-6	lbs/hr	OCE
7F Total	316C1R3	5.93e-2	ng/dscm 7%O2	1.97e-8	lbs/hr	OCE
7F Total	316C2R1	6.23e-2	ng/dscm 7%O2	2.11e-8	lbs/hr	OCE
7F Total	316C2R2	2.37e-2	ng/dscm 7%O2	7.63e-9	lbs/hr	OCE
7F Total	316C2R3	3.23e-2	ng/dscm 7%O2	1.11e-8	lbs/hr	OCE
8D	316C1R1	9.98e-1	ng/dscm 7%O2	3.29e-7	lbs/hr	CE7%O2
8D	316C1R2	4.53e+0	ng/dscm 7%O2	1.53e-6	lbs/hr	CE7%O2
8D	316C1R3	2.74e-1	ng/dscm 7%O2	9.11e-8	lbs/hr	CE7%O2
8D	316C2R1	3.84e-1	ng/dscm 7%O2	1.30e-7	lbs/hr	CE7%O2
8D	316C2R2	1.17e+0	ng/dscm 7%O2	3.79e-7	lbs/hr	CE7%O2
8D	316C2R3	1.05e+0	ng/dscm 7%O2	3.59e-7	lbs/hr	CE7%O2
8F	316C1R1	1.77e-1	ng/dscm 7%O2	5.84e-8	lbs/hr	CE7%O2
8F	316C1R2	1.24e+0	ng/dscm 7%O2	4.20e-7	lbs/hr	CE7%O2
8F	316C1R3	4.95e-2	ng/dscm 7%O2	1.65e-8	lbs/hr	CE7%O2
8F	316C2R1	3.57e-2	ng/dscm 7%O2	1.21e-8	lbs/hr	CE7%O2
8F	316C2R2	7.03e-2	ng/dscm 7%O2	2.27e-8	lbs/hr	CE7%O2
8F	316C2R3	6.69e-2	ng/dscm 7%O2	2.29e-8	lbs/hr	CE7%O2
TEQ	316C1R1	1.04e-1	ng/dscm 7%O2	3.41e-8	lbs/hr	CCET
TEQ	316C1R2	1.54e+0	ng/dscm 7%O2	5.20e-7	lbs/hr	CCET
TEQ	316C1R3	9.42e-2	ng/dscm 7%O2	3.14e-8	lbs/hr	CCET
TEQ	316C2R1	7.42e-2	ng/dscm 7%O2	2.52e-8	lbs/hr	CCET
TEQ	316C2R2	3.13e-2	ng/dscm 7%O2	1.01e-8	lbs/hr	CCET
TEQ	316C2R3	3.34e-2	ng/dscm 7%O2	1.14e-8	lbs/hr	CCET
Total PCDD/PCDF	316C1R1	1.82e+1	ng/dscm 7%O2	6.01e-6	lbs/hr	CCET
Total PCDD/PCDF	316C1R2	1.10e+2	ng/dscm 7%O2	3.70e-5	lbs/hr	CCET
Total PCDD/PCDF	316C1R3	1.77e+1	ng/dscm 7%O2	5.90e-6	lbs/hr	CCET
Total PCDD/PCDF	316C2R1	1.47e+1	ng/dscm 7%O2	4.99e-6	lbs/hr	CCET
Total PCDD/PCDF	316C2R2	5.72e+0	ng/dscm 7%O2	1.85e-6	lbs/hr	CCET
Total PCDD/PCDF	316C2R3	6.94e+0	ng/dscm 7%O2	2.38e-6	lbs/hr	CCET

7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Chlorine	316C1R1	7.90e-1	ppmv 7%O2	7.64e-1	lbs/hr	CC7%O2
Chlorine	316C1R2	1.23e+0	ppmv 7%O2	1.22e+0	lbs/hr	CC7%O2
Chlorine	316C1R3	5.80e-1	ppmv 7%O2	5.67e-1	lbs/hr	CC7%O2
Chlorine	316C2R1	6.06e-1	ppmv 7%O2	6.04e-1	lbs/hr	CC7%O2
Chlorine	316C2R2	1.02e+0	ppmv 7%O2	9.64e-1	lbs/hr	CC7%O2
Chlorine	316C2R3	1.54e+0	ppmv 7%O2	1.55e+0	lbs/hr	CC7%O2
HCl	316C1R1	3.31e+1	ppmv 7%O2	1.65e+1	lbs/hr	CC7%O2
HCl	316C1R2	3.45e+1	ppmv 7%O2	1.76e+1	lbs/hr	CC7%O2
HCl	316C1R3	3.24e+1	ppmv 7%O2	1.63e+1	lbs/hr	CC7%O2
HCl	316C2R1	2.38e+1	ppmv 7%O2	1.22e+1	lbs/hr	CC7%O2
HCl	316C2R2	1.93e+1	ppmv 7%O2	9.40e+0	lbs/hr	CC7%O2
HCl	316C2R3	1.74e+1	ppmv 7%O2	9.02e+0	lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration		Mass Rate	Calc	
Arsenic	316C1R1	ND	6.99e-1 ug/dscm 7%O2	2.30e-4	lbs/hr	CC7%O2
Arsenic	316C1R2	ND	6.58e-1 ug/dscm 7%O2	2.22e-4	lbs/hr	CC7%O2
Arsenic	316C1R3	ND	6.77e-1 ug/dscm 7%O2	2.25e-4	lbs/hr	CC7%O2
Arsenic	316C2R1	ND	6.55e-1 ug/dscm 7%O2	2.22e-4	lbs/hr	CC7%O2
Arsenic	316C2R2	ND	6.98e-1 ug/dscm 7%O2	2.25e-4	lbs/hr	CC7%O2
Arsenic	316C2R3	ND	6.63e-1 ug/dscm 7%O2	2.27e-4	lbs/hr	CC7%O2
Beryllium	316C1R1		2.17e-1 ug/dscm 7%O2	7.14e-5	lbs/hr	CC7%O2

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA ID: TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

Beryllium	316C1R2	1.94e-1	ug/dscm 7%O2	6.54e-5	lbs/hr	CC7%O2	
Beryllium	316C1R3	2.06e-1	ug/dscm 7%O2	6.85e-5	lbs/hr	CC7%O2	
Beryllium	316C2R1	ND	3.93e-2	ug/dscm 7%O2	1.33e-5	lbs/hr	CC7%O2
Beryllium	316C2R2	ND	4.19e-2	ug/dscm 7%O2	1.35e-5	lbs/hr	CC7%O2
Beryllium	316C2R3	ND	3.97e-2	ug/dscm 7%O2	1.36e-5	lbs/hr	CC7%O2
Cadmium	316C1R1	7.36e-1	ug/dscm 7%O2	2.42e-4	lbs/hr	CC7%O2	
Cadmium	316C1R2	1.11e+0	ug/dscm 7%O2	3.74e-4	lbs/hr	CC7%O2	
Cadmium	316C1R3	1.44e+0	ug/dscm 7%O2	4.80e-4	lbs/hr	CC7%O2	
Cadmium	316C2R1	1.69e+0	ug/dscm 7%O2	5.71e-4	lbs/hr	CC7%O2	
Cadmium	316C2R2	6.61e-1	ug/dscm 7%O2	2.13e-4	lbs/hr	CC7%O2	
Cadmium	316C2R3	8.09e-1	ug/dscm 7%O2	2.77e-4	lbs/hr	CC7%O2	
Chromium	316C1R1	1.03e+1	ug/dscm 7%O2	3.38e-3	lbs/hr	CC7%O2	
Chromium	316C1R2	7.12e+0	ug/dscm 7%O2	2.40e-3	lbs/hr	CC7%O2	
Chromium	316C1R3	6.77e+0	ug/dscm 7%O2	2.25e-3	lbs/hr	CC7%O2	
Chromium	316C2R1	5.05e+0	ug/dscm 7%O2	1.71e-3	lbs/hr	CC7%O2	
Chromium	316C2R2	2.84e+0	ug/dscm 7%O2	9.15e-4	lbs/hr	CC7%O2	
Chromium	316C2R3	2.60e+0	ug/dscm 7%O2	8.89e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C1R1	1.51e+0	ug/dscm 7%O2	4.97e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C1R2	1.00e+0	ug/dscm 7%O2	3.37e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C1R3	1.13e+0	ug/dscm 7%O2	3.76e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C2R1	1.17e+0	ug/dscm 7%O2	3.96e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C2R2	1.50e+0	ug/dscm 7%O2	4.83e-4	lbs/hr	CC7%O2	
Chromium (Hex)	316C2R3	1.31e+0	ug/dscm 7%O2	4.47e-4	lbs/hr	CC7%O2	
Lead	316C1R1	5.47e+0	ug/dscm 7%O2	1.80e-3	lbs/hr	CC7%O2	
Lead	316C1R2	5.72e+0	ug/dscm 7%O2	1.93e-3	lbs/hr	CC7%O2	
Lead	316C1R3	4.06e+0	ug/dscm 7%O2	1.35e-3	lbs/hr	CC7%O2	
Lead	316C2R1	5.87e+0	ug/dscm 7%O2	1.99e-3	lbs/hr	CC7%O2	
Lead	316C2R2	3.38e+0	ug/dscm 7%O2	1.09e-3	lbs/hr	CC7%O2	
Lead	316C2R3	4.26e+0	ug/dscm 7%O2	1.46e-3	lbs/hr	CC7%O2	

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	316C1R1	1.11e-2 gr/dscf 7%O2	8.36e+0 lbs/hr	CC7%O2
Particulate	316C1R2	9.79e-3 gr/dscf 7%O2	7.56e+0 lbs/hr	CC7%O2
Particulate	316C1R3	1.17e-2 gr/dscf 7%O2	8.89e+0 lbs/hr	CC7%O2
Particulate	316C2R1	1.18e-2 gr/dscf 7%O2	9.17e+0 lbs/hr	CC7%O2
Particulate	316C2R2	1.25e-2 gr/dscf 7%O2	9.21e+0 lbs/hr	CC7%O2
Particulate	316C2R3	1.28e-2 gr/dscf 7%O2	1.00e+1 lbs/hr	CC7%O2

6. Description: EMISSIONS

Process Group: DRY KILN

Location: STACK-BYPASS

Phase: GAS

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
CO	316C1R1	1.45e+2 ppmv 7%O2	0.00e+0	
CO	316C1R2	1.19e+2 ppmv 7%O2	0.00e+0	
CO	316C1R3	1.34e+2 ppmv 7%O2	0.00e+0	
CO	316C2R1	1.14e+2 ppmv 7%O2	0.00e+0	
CO	316C2R2	9.50e+1 ppmv 7%O2	0.00e+0	
CO	316C2R3	1.83e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C1R1	3.08e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C1R2	2.90e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C1R3	2.81e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C2R1	2.61e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C2R2	3.23e+2 ppmv 7%O2	0.00e+0	
CO(MHRA)	316C2R3	2.64e+2 ppmv 7%O2	0.00e+0	
THC	316C1R1	5.60e+0 ppmv 7%O2	0.00e+0	
THC	316C1R2	4.80e+0 ppmv 7%O2	0.00e+0	
THC	316C1R3	7.00e+0 ppmv 7%O2	0.00e+0	

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: SOUTHDOWN

2. STATE: TN

3. CITY: KNOXVILLE

EPA ID: TND106203375

REGION: 4

4. EP ID: 316 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: FF

THC	316C2R1	3.80e+0	ppmv 7%O2	0.00e+0	
THC	316C2R2	4.70e+0	ppmv 7%O2	0.00e+0	
THC	316C2R3	4.50e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C1R1	7.10e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C1R2	5.50e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C1R3	8.40e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C2R1	4.30e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C2R2	5.80e+0	ppmv 7%O2	0.00e+0	
THC(MHRA)	316C2R3	4.90e+0	ppmv 7%O2	0.00e+0	

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SECTION 7: EMISSIONS ANALYSES

1. COMPANY: TEXAS INDUSTRIES  
 2. STATE: TX  
 3. CITY: MIDLOTHIAN EPA TXD007349327 REGION: 6  
 4. EP ID: 318 DEVICE NAME: KILN NO. 1 SYSTEM TYPE: CEMENT KILN APC SYSTEM: ESP

5. Type: CONTROLLED  
 6. Description: EMISSIONS Process Group: WET KILN Location: STACK Phase: GAS  
 7. Category: Halogens

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Chlorine	318C1R1	8.40e-2 ppmv	5.56e-2 lbs/hr	CC
Chlorine	318C1R2	8.39e-2 ppmv	5.56e-2 lbs/hr	CC
Chlorine	318C1R3	ND 2.43e-2 ppmv	1.59e-2 lbs/hr	CC
Chlorine	318C2R1	8.21e-2 ppmv 7%O2	5.56e-2 lbs/hr	CC7%O2
Chlorine	318C2R2	8.55e-2 ppmv 7%O2	5.56e-2 lbs/hr	CC7%O2
Chlorine	318C2R3	ND 2.35e-2 ppmv 7%O2	1.59e-2 lbs/hr	CC7%O2
HCl	318C1R1	6.37e+1 ppmv	2.17e+1 lbs/hr	CC
HCl	318C1R2	4.15e+1 ppmv	1.42e+1 lbs/hr	CC
HCl	318C1R3	4.83e+1 ppmv	1.63e+1 lbs/hr	CC
HCl	318C2R1	6.24e+1 ppmv 7%O2	2.17e+1 lbs/hr	CC7%O2
HCl	318C2R2	4.23e+1 ppmv 7%O2	1.42e+1 lbs/hr	CC7%O2
HCl	318C2R3	4.69e+1 ppmv 7%O2	1.63e+1 lbs/hr	CC7%O2

7. Category: Metals

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Antimony	318C2R1	ND 2.31e+0 ug/dscm 7%O2	5.32e-4 lbs/hr	CC7%O2
Antimony	318C2R2	3.59e-1 ug/dscm 7%O2	7.94e-5 lbs/hr	CC7%O2
Antimony	318C2R3	ND 1.00e+0 ug/dscm 7%O2	2.30e-4 lbs/hr	CC7%O2
Arsenic	318C2R1	ND 7.59e-1 ug/dscm 7%O2	1.75e-4 lbs/hr	CC7%O2
Arsenic	318C2R2	ND 7.19e-1 ug/dscm 7%O2	1.59e-4 lbs/hr	CC7%O2
Arsenic	318C2R3	ND 7.27e-1 ug/dscm 7%O2	1.67e-4 lbs/hr	CC7%O2
Barium	318C2R1	1.21e+2 ug/dscm 7%O2	2.78e-2 lbs/hr	CC7%O2
Barium	318C2R2	1.78e+2 ug/dscm 7%O2	3.92e-2 lbs/hr	CC7%O2
Barium	318C2R3	1.25e+2 ug/dscm 7%O2	2.86e-2 lbs/hr	CC7%O2
Beryllium	318C2R1	ND 3.83e+0 ug/dscm 7%O2	8.81e-4 lbs/hr	CC7%O2
Beryllium	318C2R2	ND 3.56e+0 ug/dscm 7%O2	7.86e-4 lbs/hr	CC7%O2
Beryllium	318C2R3	ND 3.60e+0 ug/dscm 7%O2	8.26e-4 lbs/hr	CC7%O2
Cadmium	318C2R1	3.42e+0 ug/dscm 7%O2	7.86e-4 lbs/hr	CC7%O2
Cadmium	318C2R2	1.16e+1 ug/dscm 7%O2	2.56e-3 lbs/hr	CC7%O2
Cadmium	318C2R3	5.64e+0 ug/dscm 7%O2	1.29e-3 lbs/hr	CC7%O2
Chromium (Hex)	318C2R1	ND 6.56e-1 ug/dscm 7%O2	1.51e-4 lbs/hr	CC7%O2
Chromium (Hex)	318C2R2	ND 6.11e-1 ug/dscm 7%O2	1.35e-4 lbs/hr	CC7%O2
Chromium (Hex)	318C2R3	ND 6.23e-1 ug/dscm 7%O2	1.43e-4 lbs/hr	CC7%O2
Lead	318C2R1	1.23e+2 ug/dscm 7%O2	2.83e-2 lbs/hr	CC7%O2
Lead	318C2R2	1.53e+2 ug/dscm 7%O2	3.38e-2 lbs/hr	CC7%O2
Lead	318C2R3	1.24e+2 ug/dscm 7%O2	2.84e-2 lbs/hr	CC7%O2
Thallium	318C2R1	1.62e+0 ug/dscm 7%O2	3.73e-4 lbs/hr	CC7%O2
Thallium	318C2R2	1.62e+0 ug/dscm 7%O2	3.57e-4 lbs/hr	CC7%O2
Thallium	318C2R3	ND 1.28e+0 ug/dscm 7%O2	2.94e-4 lbs/hr	CC7%O2

7. Category: Particulate

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
Particulate	318C2R1	1.14e-2 gr/dscf 7%O2	5.44e+0 lbs/hr	CE
Particulate	318C2R2	8.27e-3 gr/dscf 7%O2	4.18e+0 lbs/hr	CE
Particulate	318C2R3	9.23e-3 gr/dscf 7%O2	4.84e+0 lbs/hr	CE

7. Category: THC & CO

Analysis:

8. Substance	9. Run ID	Concentration	Mass Rate	Calc
CO(MHRA)	318C1R1	2.23e+2 ppmv	5.83e+1 lbs/hr	CE

SECTION 7: EMISSIONS ANALYSES

1. COMPANY: TEXAS INDUSTRIES

2. STATE: TX

3. CITY: MIDLOTHIAN

EPA ID: TXD007349327

REGION: 6

4. EP ID: 318 DEVICE NAME: KILN NO. 1

SYSTEM TYPE: CEMENT KILN

APC SYSTEM: ESP

CO(MHRA)	318C1R2	2.96e+2	ppmv	7.75e+1	lbs/hr	CE
CO(MHRA)	318C1R3	2.96e+2	ppmv	7.67e+1	lbs/hr	CE
THC(MHRA)	318C1R1	5.00e+0	ppmv	2.06e+0	lbs/hr	CE
THC(MHRA)	318C1R2	6.80e+0	ppmv	2.80e+0	lbs/hr	CE
THC(MHRA)	318C1R3	8.10e+0	ppmv	3.29e+0	lbs/hr	CE
THC(MHRA)	318C2R1	4.67e+0	ppmv 7%O2	1.97e+0	lbs/hr	CE7%O2
THC(MHRA)	318C2R2	5.30e+0	ppmv 7%O2	2.14e+0	lbs/hr	CE7%O2
THC(MHRA)	318C2R3	5.20e+0	ppmv 7%O2	2.18e+0	lbs/hr	CE7%O2
THC(MHRA)	318C3R1	1.10e+1	ppmv	4.51e+0	lbs/hr	CE
THC(MHRA)	318C3R2	5.20e+0	ppmv	2.13e+0	lbs/hr	CE
THC(MHRA)	318C3R3	7.50e+0	ppmv	3.07e+0	lbs/hr	CE

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