

**Council Bluffs Energy Center
Toxic Release Inventory
For the Year**

2004

CB1 Boiler Coal Burned	234,632.00 tons	4.87 % Ash	8525 Btu/lb
CB2 Boiler Coal Burned	337,033.00 tons	4.86 % Ash	8528 Btu/lb
CB3 Boiler Coal Burned	2,777,671.00 tons	4.82 % Ash	8561 Btu/lb
CB1 & CB2 Total Ash	27,806.38 tons		
CB3 Total Ash	133,883.74 tons		
CB1 & CB2 Fly Ash Generated - m	22,385.00 tons		
CB3 Fly Ash Generated - measurec	108,829.00 tons		
CB1 & CB2 Bottom Ash Generated	5,154.89 tons		
CB3 Bottom Ash Generated = (coe	24,443.60 tons		
Fly Ash Sold	92,024.00 tons		
Bottom Ash Sold	22,683.00 tons		
Fly Ash Point Sources	4.07 tons		
Fly Ash Fugitive Sources	38.07 tons		
Ash pond outflow	0.00 Million gallons		

Metals										
Chemical	Arsenic	Barium	Chromium	Copper	Lead	Manganese	Mercury	Nickel	Vanadium	Zinc
Air Release	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
CB1 Boiler	96	15	80	1	99	115	25	66	0	1
CB2 Boiler	138	21	114	2	142	165	36	94	0	2
CB3 Boiler	1,139	175	942	16	1,160	1,361	296	778	0	17
Fly Ash Point Source Dust Released	1	5,623	1	283	1	5	0	1	2,081	300
Fly Ash Fugitive Dust Released	6	243	6	12	12	43	0	9	90	13
Total Air Releases	1,380	6,077	1,142	314	1,413	1,688	357	947	2,171	333
Chemical Emission Factor lbs/ton c		0.0000630		0.0000056			0.0001003		0.0000000	0.0000061
Chemical Concentration lbs/ton coal - wet	0.00161331	0.485507	0.0070334	0.0176798	0.0037209	0.0258442	0.00011848	0.00469114	0.0220046	0.0142734
Waste Release										
Chemical ppm (flyash)	80.638	3188.598	79.16	160.664	154.739	560.072	0.141	114.725	1180	169.941
Chemical ppm (bottom ash)	119.299	5466.168	129.332	181.262	68.773	1006.506	0.241	178.462	537	129.479
	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
CB1 & CB2 Fly Ash	457	165,505	2,370	7,813	1,805	8,312	4	1,619	12,007	7,194
CB1 & CB2 Bottom Ash	231	112,006	1,457	2,290	82	6,182	3	902	573	962
CB3 Fly Ash	2,236	808,726	11,621	37,949	8,773	40,790	20	7,932	56,331	34,782
CB3 Bottom Ash	1,099	533,812	6,967	10,849	389	29,588	13	4,311	2,620	4,535
Fly Ash Sold	-1,889	-683,255	-9,812	-32,094	-7,419	-34,437	-17	-6,699	-47,927	-29,439
Bottom Ash Sold	-1,019	-494,927	-6,456	-10,069	-361	-27,413	-12	-3,995	-2,447	-4,212
Check Sums										
Total metal in coal -air emission	4,023	1,620,050	22,415	58,901	11,049	84,873	40	14,765	71,530	47,473
Fly Ash metal + Bottom Ash metal	4,023	1,620,050	22,415	58,901	11,049	84,873	40	14,765	71,530	47,473
Impounded (Fly Ash)	805	290,976	4,179	13,668	3,159	14,665	7	2,853	20,410	12,537
Impounded (Bottom Ash)	311	150,891	1,968	3,070	110	8,357	4	1,218	746	1,284
Total Waste Releases	1,115	441,867	6,147	16,738	3,270	23,023	11	4,071	21,156	13,822
Water Releases										
Chemical ppm (ash water)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Water Releases	0	0	0	0	0	0	0	0	0	0
Total Water Releases	0	0	0	0	0	0	0	0	0	0
Total Releases All Media	2,495	447,944	7,289	17,052	4,683	24,711	368	5,018	23,327	14,155
Total Manufactured (metal)	5,404	1,626,126	23,557	59,216	12,463	86,561	397	15,712	73,701	47,806
Total Manufactured (dioxide)	7,711	2,005,011	38,054	89,033	14,387	136,979	460	24,276	119,999	71,205

Acid Gases			
Chemical	Hydrochloric Acid	Hydrogen Fluoride	Sulfuric Acid
Air Release	Lbs	Lbs	Lbs
CB1 Boiler	30,496	16,216	2,133
CB2 Boiler	43,805	23,293	2,783
CB3 Boiler	361,022	191,969	21,541
Total Air Releases	435,323	231,478	26,457
Waste Releases			
No significant releases			
Total Waste Releases	0	0	0
Water Releases			
No significant releases			
Total Water Releases	0	0	0
Total Releases All Media	435,323	231,478	26,457
Total Manufactured	435,323	231,478	26,457

Dioxin and Dioxin-Like Compounds**Air Release**

Boiler combustion Emission Factor from EPRI 4.66E-05 Lbs/trillion Btu
Grams/Lbs 453.59

Grams

CB1 Boiler 0.08
CB2 Boiler 0.12
CB3 Boiler 1.01

Total Air Releases 1.21

Waste Releases

No significant releases

Total Waste Releases 0

Water Releases

No significant releases

Total Water Releases 0

Total Releases All Media 1.2

Total Manufactured 1.2