PSD / NSPS Observations	
Plant Emissions - Criteria Pollutants	
	SO2 (tons)
1996	3759
1997	5076
1998	4281
1999	3698
2000	3474
5 Year Avg	4058
Last 2 yr Avg	3586
TRIGGER: Average + Sig. Incr.	3626
Projected Actuals:	3513
Plant Operational Data	
	Coal Usage (tons)
1996	4310562
1997	5158867
1998	5278344
1999	5244793
2000	5283790
5 Year Avg	5055271
Last 2 Year Avg	5264292
Projected Actuals:	5578473
OPERATING CHANGES	Actual
	Max Heat Input
Present Operation	7628
Proposed Operation	8083

ASSUMPTIONS:
All increases / decreases based on coal use only. Fuel oil & other bulk chemical chemical use not expected to change.
Estimated 15% nominal reduction, with new NOx controls, of 2 yr avrge NOx and 2854 ton/yr increase in potential NOx formation.
Estimated 4% nominal removal improvement in scrubber efficiency.
HAPs PSD triggers calculated per UDAQ Dispersion Modeling Guidelines at R307-410-4.
VOC's calculated from HAPs list.
Projected nominal efficiency improvement: 8.0%
Projected nominal capacity improvement: 8.6%
Projected heat input / coal usage increase: 5.9%
Projected uncontrolled NOx increase: 11.2%

Pollutant	Significant Net PSD Emissions Rate Increase (tons)
Carbon monoxide	100
Nitrogen oxides	40

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SO2 % Removal	Nox (tons)	CO (tons)	PM10 (tons)	Lead (lbs)	VOC (lbs)	Beryllium (lbs)	Mercury (lbs)
92.28	19688	1080	83	224		3.57	270
92.05	22675	1291	108	263		4.17	323
92.67	25708	1321	114	167		2.23	331
93.57	24179	1312	249	156	25394	2.18	123
93.67	26109	1322	299	191	25204	1.89	201
92.8	23672	1265	171	200	25299	2.81	250
93.6	25144	1317	274	174	25299	2.03	162
	25184	1417	289	1374	105299	2.83	362
93.88	24346	1395	284	210	26809	2.23	211

Plant Operating Hours	Btu/lb Coal HV	MBTU/hr Avg Heat Input	LB/MMBtu NOx Emission rate	lbs/hr NOx Emission Rate	LB/MMBtu SO2 Emission Rate	lbs/hr SO2 Emission Rate	
15359	11860	6657	0.39	2564	0.07	489	
16564	11789	7343	0.37	2738	0.08	613	
16683	11823	7481	0.41	3082	0.07	513	
16462	11858	7556	0.39	2938	0.06	449	
16309	11885	7701	0.42	3202	0.06	426	
16275	11843	7348	0.39	2905	0.07	498	**Max. - Prev. 5 yrs:**
16386	11872	7628	0.40	3070	0.06	438	**Proposed Average:**
16386	11843	8064	0.37	2972	0.05	429	**Proposed Max:**

Design Max Heat Input (MMBtu/hr)	Fuel Use (coal, tons)	Heat Rate	Mlbs/hr Steam	Mwhe	Stack Flow (scfh)
8352	5264292	9564	6.1	875	125,000,000
9225	5,578,473	9475	6.9	950	133,000,000

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	ATTACHMENT 1: Worksheet B
Fluorides (HF) (lbs)	Sulfuric Acid (lbs)
19139	*
22905	*
23436	8440
19167	8234
19621	8015
20854	8230
19394	8124
25394	22124
20313	8108
NSPS Determination (lbs/hr)	
Maximum NOx Emission Rate (Last 5 years)	Maximum SO2 Emission Rate (Last 5 years)
6045	1150
4872	1333
5331	1279
5007	1456
5441	1379
6045	1456
2972	429
4613	1384

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Sulfur dioxide	40
Particulate matter (TSP)	25
PM10	15
Ozone (VOC)	40
Lead	0.6
Asbestos*	0.007
Beryllium	0.0004
Mercury	0.1
Vinyl chloride*	1
Fluorides	3
Sulfuric acid mist	7
Hydrogen sulfide (H2 S)*	10
Total reduced sulfur (including H2 S)*	10
Reduced sulfur compounds (including H2 S)*	10

*No values attributable to IPP operation.

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1200 lbs
14 lbs
0.8 lbs
200 lbs

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HAPs / Other Projection Data - COAL							
POLLUTANT	Class	Fuel Source	Throughput (in Tons)	Heating Value HV(btu's/lb)	Emission Factor (lbs/MMBtu)	Concentration (ppm)	% Ash
Metals							
Anitmony	HAP Metal	Coal	5,578,473	11,872	0.0047	3.1	8.64
Arsenic	HAP Metal	Coal	5,578,473	11,872	0.0047	12	8.64
Barium	TRI	Coal	5,578,473	11,872	0.0047	113	8.64
Beryllium	HAP Metal	Coal	5,578,473	11,872	0.0047	0.38	8.64
Cadmium	HAP Metal	Coal	5,578,473	11,872	0.0047	0.66	8.64
Chromium	HAP Metal	Coal	5,578,473	11,872	0.0047	24	8.64
Cobalt	HAP Metal	Coal	5,578,473	11,872	0.0047	2.9	8.64
Copper	TRI	Coal	5,578,473	11,872	0.0047	7.8	8.64
Lead	HAP Metal	Coal	5,578,473	11,872	0.0047	7.1	8.64
Manganese	HAP Metal	Coal	5,578,473	11,872	0.0047	9.9	8.64
Mercury	HAP Metal	Coal	5,578,473			0.061	
Nickel	HAP Metal	Coal	5,578,473	11,872	0.0047	4.7	8.64
Selenium	HAP Metal	Coal	5,578,473			2.4	
Vanadium	TRI	Coal	5,578,473	11,872	0.0047	5.6	8.64
Zinc	TRI	Coal	5,578,473	11,872	0.0047	7.4	8.64
Organics							
Acenaphthene	HAP PAH	Coal	5,578,473				
Acenaphthylene	PAH	Coal	5,578,473				
Acetaldehyde@	HAP	Coal	5,578,473				
Acetophenone@	HAP	Coal	5,578,473				
Acrolein@	HAP	Coal	5,578,473				
Anthracene	HAP PAH	Coal	5,578,473				
Benzene@	HAP	Coal	5,578,473	11,872			
Benzo(a)anthracene	PAH	Coal	5,578,473				
Benzo(a)pyrene	PAH	Coal	5,578,473	11,872			
Benzo(b,j,k)Fluoranthene	PAH	Coal	5,578,473				
Benzo(g,h,i)perylene	PAH	Coal	5,578,473				
Benzyl chloride@	HAP	Coal	5,578,473				
Biphenyl@	HAP PAH	Coal	5,578,473				
Bis(2-ethylhexyl)phthalate (DEHP)@	HAP	Coal	5,578,473				
Bromoform@	HAP	Coal	5,578,473				
Carbon disulfide@	HAP	Coal	5,578,473				
2-Chloroacetophenone@	HAP	Coal	5,578,473				
Chlorobenzene@	HAP	Coal	5,578,473				
Chloroform@	HAP	Coal	5,578,473				
Chrysene	HAP PAH	Coal	5,578,473				
Cumene@	HAP	Coal	5,578,473				
Cyanide	HAP	Coal	5,578,473				
2,4-Dinitrotoluene@	HAP	Coal	5,578,473				
Dimethyl sulfate@	HAP	Coal	5,578,473				
Ethyl benzene@	HAP	Coal	5,578,473				
Ethyl chloride@	HAP	Coal	5,578,473				
Ethylene dichloride@	HAP	Coal	5,578,473				
Ethylene dibromide@	HAP	Coal	5,578,473				
Fluoranthene	HAP PAH	Coal	5,578,473				
Fluorene	PAH	Coal	5,578,473				
Formaldehyde@	HAP	Coal	5,578,473	11,872			
Hexane@	HAP	Coal	5,578,473				
Indeno(1,2,3-cd)pyrene	PAH	Coal	5,578,473				
Isophorone@	HAP	Coal	5,578,473				
Methyl bromide@	HAP	Coal	5,578,473				
Methyl chloride@	HAP	Coal	5,578,473				

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Pollutant Emission Factor (lbs/10^12 Btu)	Control Device Efficiency (CE) (% emission of fuel conc.)	Table or Method Used*	Actual Emission Factor (EF)	Calculation
0.92*(C/A*PM)^0.63		AP-42 1.1-15	0.300	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
3.1*(C/A*PM)^0.85		AP-42 1.1-15	2.157	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
(C/A*PM)		Eng. Calc.(1)	6.147	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
1.2*(C/A*PM)^1.1		AP-42 1.1-15	0.017	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
3.3*(C/A*PM)^0.5		AP-42 1.1-15	0.625	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
3.7*(C/A*PM)^0.58		AP-42 1.1-15	4.319	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
1.7*(C/A*PM)^0.69		AP-42 1.1-15	0.475	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
(C/A*PM)		Eng. Calc.(1)	0.424	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
3.4*(C/A*PM)^0.80		AP-42 1.1-15	1.588	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
3.8*(C/A*PM)^0.60		AP-42 1.1-15	2.621	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
	31%	Eng. Calc.(2)		E=ConcHg(ppm)*Thruput(Mtons)*Control Efficiency(CE)*2000lbs/ton
4.4*(C/A*PM)^0.48		AP-42 1.1-15	2.286	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
	12%	Eng. Calc.(3)		E=ConcHg(ppm)*Thruput(Mtons)*Control Efficiency(CE)*2000lbs/ton
(C/A*PM)		Eng. Calc.(1)	0.305	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
(C/A*PM)		Eng. Calc.(1)	0.403	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
0.00000051 (lbs/ton)		AP-42 1.1-12	5.10E-07	E=EF(lbs/ton)*Thruput(tons)
2.5E-07 (lbs/ton)		AP-42 1.1-12	2.50E-07	E=EF(lbs/ton)*Thruput(tons)
0.00057 (lbs/ton)		AP-42 1.1-13	5.70E-04	E=EF(lbs/ton)*Thruput(tons)
0.000015 (lbs/ton)		AP-42 1.1-13	1.50E-05	E=EF(lbs/ton)*Thruput(tons)
0.00029 (lbs/ton)		AP-42 1.1-13	2.90E-04	E=EF(lbs/ton)*Thruput(tons)
0.00000021 (lbs/ton)		AP-42 1.1-12	2.10E-07	E=EF(lbs/ton)*Thruput(tons)
3.8 (lbs/10^12 BTU)		Eng. Calc.(3)	3.80E+00	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
8.0E-08 (lbs/ton)		AP-42 1.1-12	8.00E-08	E=EF(lbs/ton)*Thruput(tons)
0.0018 (lbs/10^12 BTU)		Eng. Calc.(3)	1.80E-03	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
1.1E-07 (lbs/ton)		AP-42 1.1-12	1.10E-07	E=EF(lbs/ton)*Thruput(tons)
2.7E-08 (lbs/ton)		AP-42 1.1-12	2.70E-08	E=EF(lbs/ton)*Thruput(tons)
0.0007 (lbs/ton)		AP-42 1.1-13	7.00E-04	E=EF(lbs/ton)*Thruput(tons)
0.0000017 (lbs/ton)		AP-42 1.1-12	1.70E-06	E=EF(lbs/ton)*Thruput(tons)
0.000073 (lbs/ton)		AP-42 1.1-13	7.30E-05	E=EF(lbs/ton)*Thruput(tons)
0.000039 (lbs/ton)		AP-42 1.1-13	3.90E-05	E=EF(lbs/ton)*Thruput(tons)
0.00013 (lbs/ton)		AP-42 1.1-13	1.30E-04	E=EF(lbs/ton)*Thruput(tons)
0.000007 (lbs/ton)		AP-42 1.1-13	7.00E-06	E=EF(lbs/ton)*Thruput(tons)
0.000022 (lbs/ton)		AP-42 1.1-13	2.20E-05	E=EF(lbs/ton)*Thruput(tons)
0.000059 (lbs/ton)		AP-42 1.1-13	5.90E-05	E=EF(lbs/ton)*Thruput(tons)
0.0000001 (lbs/ton)		AP-42 1.1-12	1.00E-07	E=EF(lbs/ton)*Thruput(tons)
0.0000053 (lbs/ton)		AP-42 1.1-13	5.30E-06	E=EF(lbs/ton)*Thruput(tons)
0.0025 (lbs/ton)		AP-42 1.1-13	2.50E-03	E=EF(lbs/ton)*Thruput(tons)
0.00000028 (lbs/ton)		AP-42 1.1-13	2.80E-07	E=EF(lbs/ton)*Thruput(tons)
0.000048 (lbs/ton)		AP-42 1.1-13	4.80E-05	E=EF(lbs/ton)*Thruput(tons)
0.000094 (lbs/ton)		AP-42 1.1-13	9.40E-05	E=EF(lbs/ton)*Thruput(tons)
0.000042 (lbs/ton)		AP-42 1.1-13	4.20E-05	E=EF(lbs/ton)*Thruput(tons)
0.00004 (lbs/ton)		AP-42 1.1-13	4.00E-05	E=EF(lbs/ton)*Thruput(tons)
0.0000012 (lbs/ton)		AP-42 1.1-13	1.20E-06	E=EF(lbs/ton)*Thruput(tons)
0.00000071 (lbs/ton)		AP-42 1.1-12	7.10E-07	E=EF(lbs/ton)*Thruput(tons)
9.1E-07 (lbs/ton)		AP-42 1.1-12	9.10E-07	E=EF(lbs/ton)*Thruput(tons)
3.0 (lbs/10^12 BTU)		Eng. Calc.(3)	3.00E+00	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
0.000067 (lbs/ton)		AP-42 1.1-13	6.70E-05	E=EF(lbs/ton)*Thruput(tons)
6.1E-08 (lbs/ton)		AP-42 1.1-12	6.10E-08	E=EF(lbs/ton)*Thruput(tons)
0.00058 (lbs/ton)		AP-42 1.1-13	5.80E-04	E=EF(lbs/ton)*Thruput(tons)
0.00016 (lbs/ton)		AP-42 1.1-13	1.60E-04	E=EF(lbs/ton)*Thruput(tons)
0.00053 (lbs/ton)		AP-42 1.1-13	5.30E-04	E=EF(lbs/ton)*Thruput(tons)

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Projected Emissions (lbs/yr)	MW	ACGIH Class	z	Previous Actuals 1999	2000	Average	Change +/-	Release Rate	ACGIH TLV	Units	ETF	ETV	TSL
39.70		Chronic	30	35.249686	35.22769636	35.23869118	4.47	0.0002725	0.5	mg/m3	0.368	0.184	0.016666667
285.75		A1	90	271.4042005	259.7689862	265.5865933	20.16	0.001230335	0.01	mg/m3	0.123	0.00123	0.000111111
814.20				686.1213449	611.2064079	648.6638764	165.54	0.010102368					
2.23		A1	90	1.878347314	2.179624581	2.028985948	0.20	1.22205E-05	0.002	mg/m3	0.123	0.000246	2.22222E-05
82.82		A2	90	74.3726225	62.1744665	68.2735445	14.55	0.000887876	0.01	mg/m3	0.123	0.00123	0.000111111
572.05		A1	90	534.0143915	524.299845	529.1571183	42.89	0.002617514	0.05	mg/m3	0.123	0.00615	0.000555556
62.97		Chronic	30	55.73090035	53.55300623	54.64195329	8.33	0.000508172	0.02	mg/m3	0.368	0.00736	0.000666667
56.20				52.4658637	33.13198938	42.79892654	13.40	0.000817929					
210.39		Chronic	30	190.6875338	156.0387354	173.3631346	37.03	0.002259576	0.05	mg/m3	0.368	0.0184	0.001666667
347.20		Chronic	30	334.4265091	251.099068	292.7627885	54.44	0.003322407	0.1	mg/m3	0.368	0.0368	0.003333333
210.98		Chronic	30	201.0140415	123.4200948	162.2170682	48.76	0.002975759	0.025	mg/m3	0.368	0.0092	0.000833333
302.84		Chronic	30	322.8089641	270.9079077	296.8584359	5.98	0.000364871	0.1	mg/m3	0.368	0.0368	0.003333333
3213.20		Chronic	30	3035.360736	3393.982104	3214.67142	-1.47	-8.977E-05	0.2	mg/m3	0.368	0.0736	0.006666667
40.35				771.6565463		771.6565463	-731.31	-0.044629974					
53.32				50.13591069	44.30573506	47.22082287	6.10	0.000372181					
2.85				2.6947329	2.67484443	2.684788665	0.16	9.77863E-06					
1.395				1.3209475	1.31119825	1.316072875	0.08	4.79344E-06					
3,179.73	44.05	Acute	10	3011.7603	2989.53201	3000.646155	179.08	0.010929053	25	ppm C	0.31	13.96267894	4.50408998
83.68	120.15	Chronic	30	79.25685	78.671895	78.9643725	4.71	0.000287607	10	ppm	0.368	18.08392638	1.63803681
1,617.76	56.06	Acute	10	1532.2991	1520.98997	1526.644535	91.11	0.005560395	0.1	ppm C	0.31	0.071078119	0.022928425
1.171				1.1095959	1.10140653	1.105501215	0.07	4.02649E-06					
503.33	78.11	Chronic	30	477.5258698	472.828236	475.1770529	28.15	0.00171811	0.5	ppm	0.368	0.587821677	0.053244717
0.446				0.4227032	0.41958344	0.42114332	0.03	1.5339E-06					
0.238				0.226196465	0.22397127	0.225083867	0.01	8.13841E-07					
0.614				0.5812169	0.57692723	0.579072065	0.03	2.10912E-06					
0.151				0.14266233	0.141609411	0.142135871	0.01	5.17692E-07					
3,904.93	126.58	Chronic	30	3698.653	3671.3551	3685.00405	219.93	0.013421643	1	ppm	0.368	1.90517137	0.17256987
9.48	154.2	Chronic	30	8.982443	8.9161481	8.94929555	0.53	3.25954E-05	0.2	ppm	0.368	0.464176687	0.04204499
407.23				385.71667	382.869889	384.2932795	22.94	0.001399686					
217.56	252.8	Chronic	30	206.06781	204.546927	205.3073685	12.25	0.000747777	0.5	ppm	0.368	1.902462168	0.172324472
725.20	76.14	Chronic	30	686.8927	681.82309	684.357895	40.84	0.002492591	10	ppm	0.368	11.45992638	1.03803681
39.05	154.59	Chronic	30	36.98653	36.713551	36.8500405	2.20	0.000134216	0.05	ppm	0.368	0.116337669	0.010537832
122.73	112.56	Chronic	30	116.24338	115.385446	115.814413	6.91	0.000421823	10	ppm	0.368	16.94154601	1.534560327
329.13	119.38	Chronic	30	311.74361	309.442787	310.5931985	18.54	0.001131253	10	ppm	0.368	17.96803272	1.627539196
0.558	228.3	Chronic	30	0.528379	0.5244793	0.52642915	0.03	1.91738E-06	L	ppm	0.368	#VALUE!	#VALUE!
29.57	120.19	Chronic	30	28.004087	27.7974029	27.90074495	1.67	0.000101621	50	ppm	0.368	90.44973415	8.192910702
13,946.18				13209.475	13111.9825	13160.72875	785.45	0.047934441					
1.562				1.4794612	1.46854204	1.47400162	0.09	5.36866E-06					
267.77	126.1	Chronic	30	253.62192	251.750064	252.685992	15.08	0.000920341	0.1	ppm	0.368	0.189794683	0.017191547
524.38	106.16	Chronic	30	496.67626	493.010542	494.843401	29.53	0.001802335	100	ppm	0.368	159.7827403	14.4730743
234.30	64.52	Chronic	30	221.91918	220.281306	221.100243	13.20	0.000805299	100	ppm	0.368	97.10985685	8.796182686
223.14	98.96	Chronic	30	211.3516	209.79172	210.57166	12.57	0.000766951	10	ppm	0.368	14.89459305	1.349147921
6.69	187.88	Chronic	30	6.340548	6.2937516	6.3171498	0.38	2.30085E-05	L	ppm	0.368	#VALUE!	
3.96				3.7514909	3.72380303	3.737646965	0.22	1.36134E-05					
5.08				4.8082489	4.77276163	4.790505265	0.29	1.74481E-05					
397.37	30.03	Acute / A2	90	376.9941077	373.2854495	375.1397786	22.23	0.001356402	0.3	ppm	0.123	0.04532135	0.00409407
373.76	86.18	Chronic	30	354.01393	351.401131	352.7075305	21.05	0.001284643	500	ppm	0.368	648.5529652	58.7457396
0.340				0.32231119	0.319932373	0.321121782	0.02	1.1696E-06					
3,235.51	138.21	Acute	10	3064.5982	3041.97994	3053.28907	182.23	0.01112079	5	ppm	0.31	8.761779141	2.826380368
892.56	94.95	Chronic	30	845.4064	839.16688	842.28664	50.27	0.003067804	1	ppm	0.368	1.429104294	0.129447853
2,956.59	50.49	Chronic	30	2800.4087	2779.74029	2790.074495	166.52	0.010162101	50	ppm	0.368	37.99656442	3.441717791

IP11_002401

	ATTACHMENT 1: Worksheet C
	Modeling
Difference	Review?
-0.1837275	
3.34976E-07	Y
-0.00023378	
-0.000342124	
-0.003532486	
-0.006851828	
-0.016140424	
-0.033477593	
-0.006224241	
-0.036435129	
-0.07368977	
-13.95174988	
-18.08363877	
-0.065517723	
-0.586103567	
-1.891749727	
-0.464144092	
-1.90171439	
-11.45743379	
-0.116203452	
-16.94112419	
-17.96690147	
#VALUE!	
-90.44963253	
-0.188874342	
-159.780938	
-97.10905155	
-14.8938261	
-0.043964947	
-648.5516806	
-8.750658351	
-1.42603649	
-37.98640232	

IP11_002402

5-Methyl chrysene	PAH	Coal	5,578,473				
Methyl ethyl ketone@	HAP	Coal	5,578,473				
Methyl hydrazine@	HAP	Coal	5,578,473				
Methyl methacrylate@	HAP	Coal	5,578,473				
Methyl tert butyl ether@	HAP	Coal	5,578,473				
Methylene chloride	HAP	Coal	5,578,473				
Naphthalene@	HAP PAH	Coal	5,578,473				
Phenanthrene	HAP PAH	Coal	5,578,473				
Phenol@	HAP	Coal	5,578,473				
Propionaldehyde@	HAP	Coal	5,578,473				
Pyrene	HAP PAH	Coal	5,578,473				
Tetrachloroethylene	HAP	Coal	5,578,473				
Toluene@	HAP	Coal	5,578,473	11,872			
1,1,1-Trichloroethane	HAP	Coal	5,578,473				
Styrene@	HAP	Coal	5,578,473				
Xylenes@	HAP	Coal	5,578,473				
Vinyl acetate@	HAP	Coal	5,578,473				
TOTAL VOCs (@)							
Total PCDD/PCDF	NSPS	Coal	5,578,473	11,872			
Acid Gases							
Hydrogen Chloride	NSPS	Coal	5,578,473			299	
Hydrogen Fluoride	NSPS	Coal	5,578,473			63	
Sulfuric Acid	NSPS	Coal	5,578,473			0.50%	
NOTES: Emission Calculations							
(1) By ash fraction derivative							
(2) By stack test							
(3) By EPRI's Trace Report							
(4) By SoCo's Paper							
Realized HAP emission increases calculated per Utah R307-410-4.							
To convert ppm to mg/m3: TLV(ppm) X MW / 24.45							
z = Impact (acute/chronic/carcinogenic)							
ETF = Emission Threshold Factor (Table IV-2, R307-410-4, Boundaries >100m)							
TLV = Threshold Limit Values (ACGIH 2001 version)							
ETV = Emission Threshold Value ([lb/hr] = [TLV] X [ETF])							
TSL = Toxic Screening Level (TLV/z)							
MW = Atomic molecular weight of compound							
@ = VOC							

"L" = no adopted TLV above zero.

IP11_002403

2.2E-08 (lbs/ton)		AP-42 1.1-12	2.20E-08	E=EF(lbs/ton)*Thruput(tons)
0.00039 (lbs/ton)		AP-42 1.1-13	3.90E-04	E=EF(lbs/ton)*Thruput(tons)
0.00017 (lbs/ton)		AP-42 1.1-13	1.70E-04	E=EF(lbs/ton)*Thruput(tons)
0.00002 (lbs/ton)		AP-42 1.1-13	2.00E-05	E=EF(lbs/ton)*Thruput(tons)
0.000035 (lbs/ton)		AP-42 1.1-13	3.50E-05	E=EF(lbs/ton)*Thruput(tons)
0.00029 (lbs/ton)		AP-42 1.1-13	2.90E-04	E=EF(lbs/ton)*Thruput(tons)
0.000013 (lbs/ton)		AP-42 1.1-12	1.30E-05	E=EF(lbs/ton)*Thruput(tons)
0.0000027 (lbs/ton)		AP-42 1.1-12	2.70E-06	E=EF(lbs/ton)*Thruput(tons)
0.000016 (lbs/ton)		AP-42 1.1-13	1.60E-05	E=EF(lbs/ton)*Thruput(tons)
0.00038 (lbs/ton)		AP-42 1.1-13	3.80E-04	E=EF(lbs/ton)*Thruput(tons)
0.00000033 (lbs/ton)		AP-42 1.1-12	3.30E-07	E=EF(lbs/ton)*Thruput(tons)
0.000043 (lbs/ton)		AP-42 1.1-13	4.30E-05	E=EF(lbs/ton)*Thruput(tons)
1.4 (lbs/10^12 BTU)		Eng. Calc.(3)	1.40E+00	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
0.00002 (lbs/ton)		AP-42 1.1-13	2.00E-05	E=EF(lbs/ton)*Thruput(tons)
0.000025 (lbs/ton)		AP-42 1.1-13	2.50E-05	E=EF(lbs/ton)*Thruput(tons)
0.000037 (lbs/ton)		AP-42 1.1-13	3.70E-05	E=EF(lbs/ton)*Thruput(tons)
0.0000076 (lbs/ton)		AP-42 1.1-13	7.60E-06	E=EF(lbs/ton)*Thruput(tons)
0.000002 (lbs/10^12 BTU)		Eng. Calc.(3)	2.00E-06	E=[EF(lbs/10^12 Btu)*Thruput(tons)*2000lbs/ton*HV(Btu/lb)]/10^12
	3%	Eng. Calc.(3)		E=Conc(ppm)*Thruput(Mtons)*Control Efficiency(CE)*2000lbs/ton
	3%	Eng. Calc.(3)		E=Conc(ppm)*Thruput(Mtons)*Control Efficiency(CE)*2000lbs/ton
0.0646 (lbs/ton)	4.50%	Eng. Calc.(4)	0.0645986	E=EF(lbs/ton)*Thruput(tons)*Conc(%)*100*Control Efficiency(CE)
	Assumed Constants			
	Coal Throughput = 5,578,473 tons			
	Heating Value = 11,872 Btu/lb			
	Ash = 8.64%			
	Plant operating hours = 16,386			
	Fabric Filter Efficiency = 0.0047 lbs/MMBtu			

IP11_002404

0.123				0.11624338	0.115385446	0.115814413	0.01	4.21823E-07					
2,175.60	72.1	Chronic	30	2060.6781	2045.46927	2053.073685	122.53	0.007477773	200	ppm	0.368	217.0372188	19.65916837
948.34	46.07	Chronic	30	898.2443	891.61481	894.929555	53.41	0.003259542	0.01	ppm	0.368	0.006934053	0.000628085
111.57	100.13	Chronic	30	105.6758	104.89586	105.28583	6.28	0.000383476	50	ppm	0.368	75.35345603	6.825494206
195.25	88.17	Chronic	30	184.93265	183.567755	184.2502025	11.00	0.000671082	40	ppm	0.368	53.08230675	4.808179959
1,617.76	84.93	Chronic	30	1532.2991	1520.98997	1526.644535	91.11	0.005560395	50	ppm	0.368	63.91460123	5.789366053
72.52	128.19	Chronic	30	68.68927	68.182309	68.4357895	4.08	0.000249259	10	ppm	0.368	19.29403681	1.747648262
15.06				14.266233	14.1609411	14.21358705	0.85	5.17692E-05					
89.26	94.11	Chronic	30	84.54064	83.916688	84.228664	5.03	0.00030678	5	ppm	0.368	7.082306748	0.641513292
2,119.82				2007.8402	1993.02134	2000.43077	119.39	0.007286035					
1.841				1.7436507	1.73078169	1.737216195	0.10	6.32735E-06					
239.87	165.8	Chronic	30	227.20297	225.526099	226.3645345	13.51	0.000824472	25	ppm	0.368	62.38691207	5.650988412
185.44	92.13	Chronic	30	175.9305836	174.1998764	175.06523	10.37	0.000632988	50	ppm	0.368	69.33300613	6.280163599
111.57	133.42	Chronic	30	105.6758	104.89586	105.28583	6.28	0.000383476	350	ppm	0.368	702.8423722	63.66325835
139.46	104.16	Chronic	30	132.09475	131.119825	131.6072875	7.85	0.000479344	20	ppm	0.368	31.35450307	2.8400818
206.40	106.16	Chronic	30	195.50023	194.057341	194.7787855	11.62	0.00070943	100	ppm	0.368	159.7827403	14.4730743
42.40	86.09	Chronic	30	40.156804	39.8604268	40.0086154	2.39	0.000145721	10	ppm	0.368	12.95751329	1.173687798
26569.0441				25167.22598	24978.94757	25073.08678							
264.9E-6				0.000251329	0.000248857	0.000250093	0.00	9.04268E-10					
96,408.29				96912.55014	95576.89842	96244.72428	163.56	0.009981802					
20,313.45				19621.02804	19166.91888	19393.97346	919.48	0.056113641					
8,108.13				7994.561802	8215.776742	8105.169272	2.97	0.000180978					

IP11_002405

-217.029741	
-0.003674511	
-75.35307256	
-53.08163567	
-63.90904083	
-19.29378755	
-7.081999968	
-62.38608759	
-69.33237315	
-702.8419887	
-31.35402372	
-159.7820309	
-12.95736757	

IP11_002406

INTERMOUNTAIN POWER HP TURBINE BLADE PACK PROJECT					
NOI / PSD Calculations					
Operating & Production					
Parameter	**Average Value**	**UoM**	**Post-Change Value**		
Rated Output	875	Mwhe	950		
Fuel Use (Coal)	5,264,292	tons/yr	5,578,473		
Plant Operating Time	16,386	Unit hours	16,386		
Heat Value	11,872	BTU/lb	11,872		
Heat Input (Actual)	7,628	MMBtu/hr	8,083		
Heat Input (Design)	8,352	MMBtu/hr	9,225		
Heat Rate	9,564	Btu/KWhr	9,475		
Flow - Stack	125,000,000	scfh	133,000,000		
Emissions					PSD Significance
Parameter/Pollutant	**2 Yr Average Value**	**UoM**	**Post-Change Value**	**Change+/-**	**Levels**
PSD					
SO2	3586.31	Tons	3513.10	-73.21	40
SO2 % Removal	93.62	%	93.88		
NOx	25143.97	Tons	24346.10	-797.87	40
CO	1317.06	Tons	1394.60	77.54	100
PM10	273.77	Tons	283.51	9.75	15
Lead	0.087	Tons	0.105	0.018	0.600
VOC	12.65	Tons	13.40	0.75	40
Beryllium	0.0010	Tons	0.0011	0.00010	0.0004
Mercury	0.081	Tons	0.105	0.024	0.100
Fluorides (HF)	9.70	Tons	10.16	0.46	3
Sulfuric Acid	4.06	Tons	4.05	-0.01	7

IP11_002407

ATTACHMENT 1: Worksheet A

PSD Major Trigger Value	Difference (Trigger - Post)	PSD Triggered?
3626.31	-113.21	N
25183.97	-837.87	N
1417.06	-22.46	N
288.77	-5.25	N
0.687	-0.582	N
52.65	-39.25	N
0.0014	-0.00030	N
0.181	-0.076	N
12.70	-2.54	N
11.06	-7.01	N

IP11_002408

INTERMOUNTAIN POWER HP TURBINE DENSE PACK PROJECT			
NOI / PSD Calculations			
Operating & Production			
Parameter	Average Value	UoM	Post-Change Value
Rated Output	875	Mwhe	925
Fuel Use (Coal)	5,264,292	tons/yr	5,578,473
Plant Operating Time	16,386	Unit hours	16,386
Heat Value	11,872	BTU/lb	11,872
Heat Input (Actual)	7,628	MMBtu/hr	8,083
Heat Input (Design)	8,352	MMBtu/hr	9,225
Heat Rate	9,564	Btu/KWhr	9,475
Emissions			
Parameter/Pollutant	2 Yr Average Value	UoM	Post-Change Value
PSD			
SO2	3586.31	Tons	3513.10
SO2 % Removal	93.62	%	93.88
NOx	25143.97	Tons	24346.10
CO	1317.06	Tons	1394.60
PM10	273.77	Tons	283.51
Lead	173.51	pounds	245.50
VOC	25299.45	pounds	26808.92
Beryllium	2.03	pounds	2.76
Mercury	162.23	pounds	210.98
Fluorides (HF)	19393.97	pounds	20313.00
Sulfuric Acid	8124.47	pounds	8108.13
HAPs & Others	2 Yr Average Value	UoM	Post-Change Value
Metals			
Anitmony	35.24	pounds	39.70
Arsenic	265.59	pounds	285.75
Barium	648.66	pounds	814.20
Beryllium	2.03	pounds	2.23
Cadmium	68.27	pounds	82.82
Chromium	529.16	pounds	572.05
Cobalt	54.64	pounds	62.97
Copper	42.80	pounds	56.20
Lead	173.36	pounds	210.39
Manganese	292.76	pounds	347.20
Mercury	162.22	pounds	210.98
Nickel	296.86	pounds	302.84
Selenium	3214.67	pounds	3213.20
Vanadium	771.66	pounds	40.35
Zinc	47.22	pounds	53.32
Organics			
Acenaphthene	2.68	pounds	2.85

IP11_002409

ATTACHMENT 1: Worksheet D

PSD Major	Trigger Value	Difference	PSD?
40	3626.31	-113.21	N
40	25183.97	-837.87	N
100	1417.06	-22.46	N
15	288.77	-5.25	N
1200	1373.51	-1128.01	N
80000	105299.45	-78490.53	N
0.8	2.83	-0.08	N
200	362.23	-151.25	N
6000	25393.97	-5080.97	N
14000	22124.47	-14016.33	N

ETV	Trigger Value	Difference	Review?
0.184	Any Increase	-0.184	
0.001	Any Increase	3.35E-07	Y
0.00	Any Increase	-2.34E-04	
0.001	Any Increase	-3.42E-04	
0.006	Any Increase	-0.004	
0.007	Any Increase	-0.007	
0.018	Any Increase	-0.016	
0.037	Any Increase	-0.033	
0.009	Any Increase	-0.006	
0.037	Any Increase	-0.036	
0.074	Any Increase	-0.074	

IP11_002410

Acenaphthylene	1.32	pounds	1.39
Acetaldehyde	3000.65	pounds	3179.73
Acetophenone	78.96	pounds	83.68
Acrolein	1526.64	pounds	1617.76
Anthracene	1.11	pounds	1.17
Benzene	475.18	pounds	503.33
Benzo(a)anthracene	0.42	pounds	0.45
Benzo(a)pyrene	0.23	pounds	0.24
Benzo(b,j,k)Fluoranthene	0.58	pounds	0.61
Benzo(g,h,i)perylene	0.14	pounds	0.15
Benzyl chloride	3685.00	pounds	3904.93
Biphenyl	8.95	pounds	9.48
Bis(2-ethylhexyl)phthalate (DEHP)	384.29	pounds	407.23
Bromoform	205.31	pounds	217.56
Carbon disulfide	684.36	pounds	725.20
2-Chloroacetophenone	36.85	pounds	39.05
Chlorobenzene	115.81	pounds	122.73
Chloroform	310.59	pounds	329.13
Chrysene	0.53	pounds	0.56
HAPs & Others	2 Yr Average Value	UoM	Post-Change Value
Cumene	27.90	pounds	29.57
Cyanide	13160.73	pounds	13946.18
2,4-Dinitrotoluene	1.47	pounds	1.56
Dimethyl sulfate	252.69	pounds	267.77
Ethyl benzene	494.84	pounds	524.38
Ethyl chloride	221.10	pounds	234.30
Ethylene dichloride	210.57	pounds	223.14
Ethylene dibromide	6.32	pounds	6.69
Fluoranthene	3.74	pounds	3.96
Fluorene	4.79	pounds	5.08
Formaldehyde	375.14	pounds	397.37
Hexane	352.71	pounds	373.76
Indeno(1,2,3-cd)pyrene	0.32	pounds	0.34
Isophorone	3053.29	pounds	3235.51
Methyl bromide	842.29	pounds	892.56
Methyl chloride	2790.07	pounds	2956.59
5-Methyl chrysene	0.12	pounds	0.12
Methyl ethyl ketone	2053.07	pounds	2175.60
Methyl hydrazine	894.93	pounds	948.34
Methyl methacrylate	105.29	pounds	111.57
Methyl tert butyl ether	184.25	pounds	195.25
Methylene chloride	1526.64	pounds	1617.76
Naphthalene	68.44	pounds	72.52
Phenanthrene	14.21	pounds	15.06
Phenol	84.23	pounds	89.26
Propionaldehyde	2000.43	pounds	2119.82
Pyrene	1.74	pounds	1.84
Tetrachloroethylene	226.36	pounds	239.87
Toluene	175.07	pounds	185.44

IP11_002411

13.963	Any Increase	-13.952	
18.084	Any Increase	-18.084	
0.071	Any Increase	-0.066	
0.588	Any Increase	-0.586	
1.905	Any Increase	-1.892	
0.464	Any Increase	-0.464	
1.902	Any Increase	-1.902	
11.46	Any Increase	-11.457	
0.116	Any Increase	-0.116	
16.942	Any Increase	-16.941	
17.968	Any Increase	-17.967	
ETV	***Trigger Value***	***Change+/-***	**Review?**
90.45	Any Increase	-90.45	
0.19	Any Increase	-0.189	
159.783	Any Increase	-159.781	
97.11	Any Increase	-97.109	
14.895	Any Increase	-14.894	
0.045	Any Increase	-0.044	
648.553	Any Increase	-648.552	
8.762	Any Increase	-8.751	
1.429	Any Increase	-1.426	
37.997	Any Increase	-37.986	
217.037	Any Increase	-217.03	
0.007	Any Increase	-0.004	
75.353	Any Increase	-75.353	
53.082	Any Increase	-53.082	
63.915	Any Increase	-63.909	
19.294	Any Increase	-19.294	
7.082	Any Increase	-7.082	
62.387	Any Increase	-62.386	
69.333	Any Increase	-69.332	

IP11_002412

1,1,1-Trichloroethane	105.29	pounds	111.57
Styrene	131.61	pounds	139.46
Xylenes	194.78	pounds	206.40
Vinyl acetate	40.01	pounds	42.40
Total PCDD/PCDF	0.000250093	pounds	0.000264911
Acid Gases			
Hydrogen Chloride	96244.72	pounds	100077.81
Hydrogen Fluoride	19393.97	pounds	20313.00
ASSUMPTIONS:			
All increases / decreases based on coal use only. Fuel oil & other bulk chemical use not expected to change.			
Estimated 15% nominal reduction, with new NOx controls, of 2 yr avrge NOx and 2854 ton/yr increase in potential NOx formation.			
Estimated 4% nominal removal improvement in scrubber efficiency.			
HAPs PSD triggers calculated per UDAQ Dispersion Modeling Guidelines at R307-410-4.			
VOC's calculated from HAPs list.			

IP11_002413

702.842	Any Increase	-702.842	
31.355	Any Increase	-31.354	
159.783	Any Increase	-159.782	
12.958	Any Increase	-12.957	

IP11_002414

	HP TURBINE DENSE PACK SO2 PROJECTIONS		
	99-00 Average lbs/mmbtu		
	inlet	stack	% reduction
	0.7744	0.0494	93.8209
	0.7744	0.0474	93.8760
	0.7744	0.0204	97.3657
	1999		
	Unit One		
	Coal Burned (tons)	2,472,213	
	Heating Value btu/lb	11,858	
	Inlet SO2 lbs/mmbtu	0.7963	
	Stack SO2 lbs/mmbtu	0.0479	
	Inlet Tons SO2	23,343.93	
	Stack Tons SO2	1,404.21	1,566.40
	% Removal (lbs/mmbtu)	93.9847	
	% Removal (tons)	93.9847	
	% Removal (EDR tons)	93.2899	0.69
	2000		
	Unit One		
	Coal Burned (tons)	2,799,081	
	Heating Value btu/lb	11,885	
	Inlet SO2 lbs/mmbtu	0.7712	
	Stack SO2 lbs/mmbtu	0.0482	
	Inlet Tons SO2	25,655.57	
	Stack Tons SO2	1,603.47	1,855.10
	% Removal (lbs/mmbtu)	93.7500	
	% Removal (tons)	93.7500	
	% Removal (EDR tons)	92.7692	0.98
	1999-2000 Average Intermountain Generating Station		
	% Removal (lbs/mmbtu)	93.6194	
	% Removal (tons)	93.6194	
	% Removal (EDR tons)	92.6098	1.01
	Dense Pack - Intermountain Generating Station		
	PREMODIFICATION	1999 - 2000 Average (calculated)	
	Coal Burned (tons)	5,268,249	
	Heating Value btu/lb	11,871	
	Inlet SO2 lbs/mmbtu	0.7744	
	Stack SO2 lbs/mmbtu	0.0494	

IP11_002415

	U1/U2 '99-00 average			
	4% reduction stack lbs/mmbtu			
	97.3657% reduction (4% increase in scrubber efficiency)			
	Unit Two			
	Coal Burned (tons)	2,772,580		
	Heating Value btu/lb	11,858		
	Inlet SO2 lbs/mmbtu	0.7867		
	Stack SO2 lbs/mmbtu	0.0538		
	Inlet Tons SO2	25,864.54		
(EDR)	Stack Tons SO2	1,768.80	2,131.80 (EDR)	
	% Removal (lbs/mmbtu)	93.1613		
	% Removal (tons)	93.1613		
	% Removal (EDR tons)	91.7578	1.40	
	Unit Two			
	Coal Burned (tons)	2,484,709		
	Heating Value btu/lb	11,885		
	Inlet SO2 lbs/mmbtu	0.7432		
	Stack SO2 lbs/mmbtu	0.0477		
	Inlet Tons SO2	21,947.27		
(EDR)	Stack Tons SO2	1,408.62	1,619.20 (EDR)	
	% Removal (lbs/mmbtu)	93.5818		
	% Removal (tons)	93.5818		
	% Removal (EDR tons)	92.6223	0.96	
	Inlet lbs/mmbtu	0.7744		
	Stack lbs/mmbtu	0.0494		
	POST MODIFICATION (W/O Scrubber Modification)			
	Coal Burned (tons)	5,578,473		
	Heating Value btu/lb	11,871		
	Inlet SO2 lbs/mmbtu	0.7744		
	Stack SO2 lbs/mmbtu	0.0494		

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	Inlet Tons SO2	48,430.50	54,170.45
	Stack Tons SO2	3,089.45	3586.25
	% Removal (lbs/mmbtu)	93.6209	93.38
		Tons of SO2 Reduction	
		130.85	
		73.15	(EDR Projected)
		Tons of SO2 Reduction	
		1,920.44	
		2974.06	(EDR Projected)
NOTES:			
1	Stack SO2 tons calculated from lbs/mmbtu are less than SO2 tons calculated for EDR from CEM SO2 ppm and Stack flow.		
2	Dense Pack SO2 tons are calculated from lbs/mmbtu. (yellow boxes)		

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Actual	Inlet Tons SO2	51,282.36	57403.69	Actual Projected	
(EDR)	Stack Tons SO2	3,271.37	3797.47	(EDR Projected)	
	% Removal (lbs/mmbtu)	93.6209	93.68		
	POST MODIFICATION (W/Scrubber Modification)				
	4% reduction stack lbs/mmbtu				
	Coal Burned (tons)	5,578,473			
	Heating Value btu/lb	11,871			
	Inlet SO2 lbs/mmbtu	0.7744			
	Stack SO2 lbs/mmbtu	0.047424			
	Inlet Tons SO2	51,282.36	57403.69	Actual Projected	
	Stack Tons SO2	3,140.51	3,513.10	(EDR Projected)	
	% Removal (lbs/mmbtu)	93.8760	93.88		
	POST MODIFICATION (W/Scrubber Modification)				
	97.3657% reduction (4% increase in scrubber efficiency)				
	Coal Burned (tons)	5,578,473			
	Heating Value btu/lb	11,871			
	Inlet SO2 lbs/mmbtu	0.7744			
	Stack SO2 lbs/mmbtu	0.0204			
	Inlet Tons SO2	51,282.36	57403.69	Actual Projected	
	Stack Tons SO2	1,350.93	1,512.19	(EDR Projected)	
	% Removal (lbs/mmbtu)	97.3657			

IP11_002418

CO Calculations

Dense Pack - Intermountain Generating Station			
PREMODIFICATION	1999 - 2000 Average	POST MODIFICATION	
Coal Burned (tons)	5,268,249	Coal Burned (tons)	5,578,473
CO E.F. (lb/ton)	0.50	CO E.F. (lb/ton)	0.50
CO Emissons (tons)	1317.06	CO Emissons (tons)	1394.62

Tons of CO increase

77.56

AP-42 Table 1.1-3

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ATTACHMENT 1: Worksheet E

IP11_002420

ATTACHMENT 1: Worksheet G

Unit Operating Hours found in EDR 4th qtr. RTC301

1996 op hrs		1997 op. Hrs	
U1	U2	U1	U2
2060.75	2184	2159	2159.75
2182.5	290	1320	2157.75
2168.75	2169	2144.25	2207
2147.25	2156.5	2208	2208
8559.25	6799.5	7831.25	8732.5
15358.75		16563.75	

1998 op hrs		1999 op. Hrs	
U1	U2	U1	U2
2045.75	1888.25	1312.75	2137
2183.75	1756.5	2126.25	2178.75
2208	2208	2149.5	2145
2184.75	2208	2204.75	2208
8622.25	8060.75	7793.25	8668.75
16683		16462	

2000 op hrs 16309

2 yr avg: 16385.5

IP11_002421

SCREEN3 Modeling Results - HAP's

Listed compounds exceeded Emission Treshold Values, or had no OSHA values.

POLLUTANT	Calc'd Results Emission Rate (lbs/hr)	Model Input Emission Rate (g/s)	Model Output Max. Concentration (ug/m3)
Arsenic	0.001230355	0.000155025	0.00013
DEHP	0.001399686	0.00017636	0.0001479
Cyanide	0.047934441	0.00603974	0.005065
2,4-Dinitrotoluene	5.36866E-06	6.76451E-07	5.673E-07
Ethylene Dibromide	2.30085E-05	2.89907E-06	0.000002431
Propionaldehyde	0.007286035	0.00091804	0.0007699
Hydrogen Chloride	0.009981802	0.001257707	0.001055
Hydrogen Fluoride	0.056113641	0.007070319	0.00593

Assumptions:
Point Source
Stack Height 219m
Stack Diameter 8.6m
Gas Volume 2,166,667acfm
Stack Temp 322K
Ambient Temp 293K
Receptor Height 0m (flat terrain to max distance)
Rural Option
No Bldg Downwash
Simple Terrain (flat terrain to max distance)
Full Meteorology
Auto Distance Array
Terrain Height 0m
Min Distance 750m (Property Boundary)
Max Distance 100km
Distance to Max. Concentration 1117m

IP11_002422

DENSE PACK PM10
COAL USAGE CALCULATION SUMMARY

YEARLY INVENTORY

5,578,473	169.5677
5,578,473	109.0078
2,789,237	0.0625
2,789,237	0.0000
11,800	0.0020
25.1	0.0000
0.0056	0.0156
0.0036	0.0312
	0.0195
	0.0195
	3.9049
	0.0312

NOTES:

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Tons coal received Railcar Unloading
Tons of coal fed to both Units
Tons of coal fed to Unit 1
Tons of coal fed to Unit 2
Coal heating value (Btu/lb)
Coal pile (acres)
Unit 1 Particulate lbs/mmbtu (tsp)
Unit 2 Particulate lbs/mmbtu (tsp)

UNIT 1 FABRIC FILTER PARTICULATE EMISSION (online)
TPY Particulate PM10 — AP 42 Table 1.1-6

UNIT 2 FABRIC FILTER PARTICULATE EMISSION (online)
TPY Particulate PM10 — AP 42 Table 1.1-6

COAL TRAIN UNLOADING DUST COLLECTORS A,B,C,D
TPY Particulate PM10

COAL TRUCK UNLOADING DUST COLLECTOR
TPY Particulate PM10 — Included in train unloading

COAL RESERVE RECLAIM DUST COLLECTOR
TPY Particulate PM10 — 10% of Coal Crusher Emissions

COAL SAMPLE PREPARATION DUST COLLECTOR
TPY Particulate PM10

COAL TRANSFER BUILDING #1 DUST COLLECTOR
TPY Particulate PM10

COAL TRANSFER BUILDING #2 DUST COLLECTOR
TPY Particulate PM10

COAL TRANSFER BUILDING #4 DUST COLLECTOR
TPY Particulate PM10

COAL CRUSHER BUILDING DUST COLLECTOR
TPY Particulate PM10

ACTIVE COAL STACKOUT (fugitive)
TPY Particulate PM10

DUST COLLECTOR 13A & 13B
TPY Particulate PM10

IP11_002424

ATTACHMENT 1: Worksheet F

IP11_002425

	0.0156
	0.8368
	283.5145

COMMENTS
EF found in AP-42 Table 11.19.2-1 site dust collectors for coal, limestone, lime vacuum sys. and soda ash PM10 and PM2.5.
Using same ratio of PM10 to PM2.5 found with emissions at stack.
Use cumulative Mass % <= Stated Size in AP-42 Table 1.1-5 for percentages of PM10 and PM2.5 as a ratio of TSP.
PM10 = 92% of TSP
PM2.5 = 53% of TSP

IP11_002426

DUST COLLECTOR 14A & 14B
TPY Particulate PM10

COAL PILE FUGITIVE EMISSIONS
TPY Particulate PM10

TPY PM10 (COAL ONLY)

IP11_002427