

**Attachment A**

**Table 1 - Mercury Emissions from Existing and New Coal-fired Electrical Generating Units in Wisconsin Greater than 25 Megawatts**

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This table includes a determination of annual mercury emissions based primarily on information collected in 2005 under requirements in the current state mercury rule, Chapter NR 446. Mercury emission estimates for a range of control efficiencies are also provided including the control efficiencies in the rule revisions proposed in March 2008.

For the majority of EGUs, the mercury content of fuel used and mercury emission levels are based on fuel samples and stack emission testing required under the current mercury rule that affected the four largest utilities in the state; Alliant Energy, We Energies, Dairyland Power Cooperative, and Wisconsin Public Service Corporation.

Mercury emissions from recently permitted EGUs, Weston 4 and Elm Road 1 & 2, are based on their air pollution control permit requirements. For the remaining EGUs, the fuel mercury content and mercury emission determinations are based on data in DNR's 2005 air emissions inventory.

**Fuel Mercury Content (Column A)** - The annual amount of mercury in fuel consumed over one year based on .

**Current Control Efficiency Range (Column B)** - For EGUs affected by the requirements in Chapter NR 446, the control efficiency is the result of stack testing which demonstrated a range of control which is represented the "high" and "low" cases. For the new units, the control efficiency in both cases is the permit requirement. For the AEI reporting units the efficiency is based on the estimated of fuel mercury content and reported emission levels.

**Current Annual Mercury Emissions (Column C)** - Estimate of current annual mercury emissions after applying the control efficiencies from column B to the fuel mercury content from column A.

**Estimated Annual Mercury Emissions Over a Range of Control Efficiencies (Column D)** - Annual mercury emissions at a range of control efficiencies, 70%, 75%, 80%, 85% or 90%, applied to the fuel mercury content in Column A. For new EGUs these control ranges are not applied below the permitted control efficiencies for Weston 4 (83%) and Elm Road 1 & 2 (90%). No mercury emissions are reported for the Blount Street (planned conversion to natural gas) and Pulliam 3 & 4 (planned retirement).

**Mercury Emissions under the Proposed Rule Revisions (Column E)** - Estimated mercury emissions for large EGUs at 90% control efficiency and for small EGUs at 80% control efficiency reflecting the expected impact of the proposed rule revisions.

**Table 1. Mercury Emissions from Existing and New Coal-fired EGUs**

**Units => 150 MW**

Electric Generating Units		Generation Capacity (MW)		Column A	Column B		Column C		Column D					Column E
				Fuel Mercury Content (lbs)	Mercury Control Efficiency - Existing Equipment		Annual Mercury Emissions (lbs)		Mercury Emissions at Different Control Efficiencies (lbs)					Proposed Rule Emissions - 90% Control Efficiency
					High Control	Low Control	High Control	Low Control	70%	75%	80%	85%	90%	
<b>NR 446 Reported</b>														
Weston 3	337	246	9%	0%	225	246	74	62	49	37	25	25		
Genoa	376	117	67%	56%	39	52	35	29	23	18	12	12		
JPM	374	119	72%	0%	34	120	36	30	24	18	12	12		
Col 1	511	320	22%	0%	250	320	96	80	64	48	32	32		
Col 2	512	300	33%	0%	200	300	90	75	60	45	30	30		
Edge 4	330	161	23%	22%	124	126	48	40	32	24	16	16		
Edge 5	380	213	24%	23%	162	164	64	53	43	32	21	21		
PP1	580	463	8%	1%	424	457	139	116	93	69	46	46		
PP2	580	480	20%	12%	385	421	144	120	96	72	48	48		
Oak Creek 5	258	95	46%	22%	52	74	29	24	19	14	10	10		
Oak Creek 6	260	92	12%	2%	81	91	28	23	18	14	9	9		
Oak Creek 7	280	125	28%	19%	90	102	38	31	25	19	13	13		
Oak Creek 8	305	100	27%	11%	74	89	30	25	20	15	10	10		
<b>Subtotal=</b>	<b>5083</b>	<b>2831</b>	<b>24%</b>	<b>10%</b>	<b>2139</b>	<b>2559</b>	<b>849</b>	<b>708</b>	<b>566</b>	<b>425</b>	<b>283</b>	<b>283</b>		
<b>Permitted</b>														
Oak Creek 1 (a)	600	572	90%	90%	57	57	57	57	57	57	57	57		
Oak Creek 2 (a)	600	572	90%	90%	57	57	57	57	57	57	57	57		
Weston 4 (a)	519	418	83%	83%	71	71	71	71	71	63	42	42		
<b>Subtotal=</b>	<b>1719</b>	<b>1562</b>	<b>88%</b>	<b>88%</b>	<b>185</b>	<b>185</b>	<b>185</b>	<b>185</b>	<b>185</b>	<b>177</b>	<b>156</b>	<b>156</b>		
<b>Total &gt; 150 MW</b>	<b>6802</b>	<b>4393</b>	<b>47%</b>	<b>38%</b>	<b>2324</b>	<b>2745</b>	<b>1035</b>	<b>893</b>	<b>752</b>	<b>602</b>	<b>439</b>	<b>439</b>		

**Table 1. Mercury Emissions from Existing and New Coal-fired EGUs (continued)**

**Units < 150 MW**

Electric Generating Units	Generation Capacity (MW)	Column A	Column B		Column C		Column D					Column E
		Fuel Mercury Content (lbs)	Mercury Control Efficiency - Existing Equipment		Annual Mercury Emissions (lbs)		Mercury Emissions at Different Control Efficiencies (lbs)					Proposed Rule Emissions - BACT @ 80% Control Efficiency (lbs)
			High Control	Low Control	High Control	Low Control	70%	75%	80%	85%	90%	
<b>NR 446 Reported</b>												
Alma 4	59	10	86%	79%	1	2	3	3	2	2	1	2
Alma 5	85	15	65%	11%	5	13	5	4	3	2	2	3
Bayfront	40	8	0%	0%	8	8	2	2	2	1	1	2
Edge 3	60	36	19%	19%	29	29	11	9	7	5	4	7
ND 1	110	26	20%	0%	21	26	8	7	5	4	3	5
ND 2	110	25	1%	0%	25	25	8	6	5	4	3	5
Pul 3 (b)	26	14	36%	8%	9	13	4.2	3.5	0	0	0	-
Pul 4 (b)	27	16	33%	13%	11	14	4.8	4	0	0	0	-
Pul 5	52	29	14%	1%	25	29	9	7	6	4	3	6
Pul 6	67	42	4%	0%	40	42	13	11	8	6	4	8
Pul 7	88	48	4%	0%	46	48	14	12	10	7	5	10
Pul 8	135	80	34%	23%	53	62	24	20	16	12	8	16
Val 1	62	8	79%	10%	2	7	2	2	2	1	1	2
Val 2	64	8	76%	13%	2	7	2	2	2	1	1	2
Val 3	70	8	88%	10%	1	7	2	2	2	1	1	2
Val 4	70	8	89%	15%	1	7	2	2	2	1	1	2
Weston 1	68	43	9%	4%	39	41	13	11	9	6	4	9
Weston 2	92	67	15%	9%	57	61	20	17	13	10	7	13
<b>Subtotal=</b>	<b>1285</b>	<b>491</b>	<b>24%</b>	<b>10%</b>	<b>375</b>	<b>441</b>	<b>147</b>	<b>123</b>	<b>92</b>	<b>69</b>	<b>46</b>	<b>92</b>
<b>AEI Reported or Estimated</b>												
Stoneman	50	3.7	46%	46%	2	2	1	1	1	1	0	1
MPU	50	20	50%	75%	5	10	6	5	4	3	2	4
Blount (b)	80	12	25%	25%	9	9	4	3	0	0	0	-
<b>Subtotal=</b>	<b>180</b>	<b>36</b>	<b>55%</b>	<b>41%</b>	<b>16</b>	<b>21</b>	<b>11</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>5</b>
<b>Total &lt; 150 MW</b>	<b>1465</b>	<b>527</b>	<b>26%</b>	<b>12%</b>	<b>391</b>	<b>462</b>	<b>158</b>	<b>132</b>	<b>97</b>	<b>73</b>	<b>48</b>	<b>97</b>

**Table 1. Mercury Emissions from Existing and New Coal-fired EGUs (continued)**

**Total: All Units > 25 MW**

Electric Generating Units	Generation Capacity (MW)	Column A		Column B		Column C		Column D					Column E
		Fuel Mercury Content (lbs)	Current Control Efficiency (446 tests, Permitted, or Reported)		Current Emissions (lbs)		Emissions When Applying Percent Control to Fuel Mercury Content					Emissions for Proposed Rule	
			High Control	Low Control	High Control	Low Control	70%	75%	80%	85%	90%		
<b>Total (a)</b>	<b>8267</b>	<b>4920</b>	<b>45%</b>	<b>35%</b>	<b>2715</b>	<b>3207</b>	<b>1193</b>	<b>1025</b>	<b>849</b>	<b>674</b>	<b>488</b>	<b>536</b>	

A) Italicized values in Column D represent maximum permitted emissions for Oak Creek 1 & 2 and Weston 4

B) Shaded values where future emissions are 0. Pulliam 3 & 4 are to be retired by 2010. Blount Street is to be converted to natural gas by 2010.

