

Appendix H.1

Industrial Boiler/Process Heater/RICE MACT

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The Environmental Protection Agency (EPA) issued final rules to substantially reduce emissions of toxic air pollutants from industrial, commercial and institutional boilers, process heaters and from stationary reciprocating internal combustion engines (RICE). These rules reduce emissions of a number of toxic air pollutants, including hydrogen chloride, manganese, lead, arsenic and mercury by 2009. This rule also reduces emissions of sulfur dioxide and particulate matter in conjunction with the toxic air pollutant reductions. The applied Maximum Achievable Control Technology (MACT) control efficiencies were 4 percent for SO₂ and 40 percent for PM₁₀ and PM_{2.5}. However, EPA's industrial boiler MACT rules were vacated on June 8, 2007. The emissions reductions that were modeled to account for the industrial boiler MACT were 1,343.5 tons/year of SO₂, 879.4 tons/year of PM_{2.5}, and 1,304.2 tons/year of PM₁₀ [see Tables 1-3]. These reductions are insignificantly small (0.69% for SO₂, 0.39% for PM_{2.5}, and 0.13% for PM₁₀) compared to the statewide totals (193,665.5 tons/year SO₂; 225,104.5 tons/year PM_{2.5}; and 1,002,873.2 tons/year PM₁₀) and should not impact the conclusions made in the SIP. If another VISTAS "best and final" modeling run is performed, it will remove control assumptions solely due to this MACT rule.

Table 1: SO2 emissions (tons/year) for Boiler MACT Sources

County	2002 Actual	2009 Growth Only	2009 Growth and Boiler MACT Control	2009 Reduction Due to Boiler MACT	2018 Growth Only	2018 Growth and Boiler MACT Control	2018 Reduction Due to Boiler MACT
Appling	7.9	8.7	8.4	0.3	9.6	9.3	0.3
Atkinson	47.8	52.5	50.4	2.1	58.1	55.7	2.4
Ben Hill	1.6	1.7	1.7	0.0	1.9	1.8	0.1
Bibb	728.8	744.5	714.7	29.8	782.3	751.0	31.3
Camden	11.3	12.4	12.4	0.0	13.7	13.7	0.0
Chatham	8,949.5	9,484.3	9,104.9	379.4	10,325.8	9,912.8	413.0
Chattooga	1,507.6	1,511.4	1,451.0	60.4	1,558.2	1,495.9	62.3
Cobb	710.8	758.5	728.1	30.4	831.0	797.7	33.3
Cook	1.8	2.0	1.9	0.1	2.2	2.1	0.1
Crisp	23.1	25.4	24.3	1.1	28.1	26.9	1.2
Dooly	0.1	0.1	0.1	0.0	0.1	0.1	0.0
Dougherty	87.2	93.0	89.3	3.7	101.9	97.9	4.0
Early	4,420.4	4,716.5	4,527.9	188.6	5,167.4	4,960.7	206.7
Effingham	3,882.9	4,143.1	4,143.1	0.0	4,539.1	4,539.1	0.0
Evans	6.0	6.6	6.3	0.3	7.3	7.0	0.3
Floyd	4,420.5	4,716.7	4,528.0	188.7	5,167.6	4,960.8	206.8
Glynn	1,641.7	1,751.7	1,681.6	70.1	1,919.1	1,842.4	76.7
Hall	579.0	580.5	557.3	23.2	598.4	574.5	23.9
Houston	867.8	972.9	934.0	38.9	994.9	955.1	39.8
Laurens	1,057.0	1,127.9	1,092.2	35.7	1,235.7	1,196.6	39.1
Liberty	6.6	6.6	6.3	0.3	6.6	6.3	0.3
Lowndes	9.9	10.6	10.6	0.0	11.6	11.6	0.0
Macon	54.5	58.2	55.8	2.4	63.7	61.2	2.5
Marion	0.2	0.2	0.2	0.0	0.2	0.2	0.0
Meriwether	3.0	3.3	3.2	0.1	3.6	3.5	0.1
Morgan	4.4	4.9	4.7	0.2	5.4	5.2	0.2
Pierce	1.7	1.9	1.8	0.1	2.1	2.0	0.1
Putnam	6.0	6.6	6.3	0.3	7.3	7.0	0.3
Rabun	13.0	14.3	13.7	0.6	15.8	15.2	0.6
Richmond	2,153.5	2,297.8	2,229.3	68.5	2,517.4	2,442.4	75.0
Thomas	6.9	7.6	7.3	0.3	8.4	8.1	0.3
Walker	203.1	203.6	195.4	8.2	209.9	201.5	8.4
Wayne	2,223.5	2,372.5	2,277.6	94.9	2,599.3	2,495.3	104.0
Webster	2.0	2.2	2.1	0.1	2.4	2.3	0.1
Whitfield	249.4	250.1	240.1	10.0	257.8	247.5	10.3
TOTAL	33,890.5	35,950.8	34,712.0	1,238.8	39,053.9	37,710.4	1,343.5

Table 2: PM2.5 emissions (tons/year) for Boiler MACT Sources

County	2002 Actual	2009 Growth Only	2009 Growth and Boiler MACT Control	2009 Reduction Due to Boiler MACT	2018 Growth Only	2018 Growth and Boiler MACT Control	2018 Reduction Due to Boiler MACT
Appling	11.7	12.9	7.7	5.2	14.2	8.5	5.7
Atkinson	81.0	88.9	53.3	35.6	98.4	59.0	39.4
Ben Hill	28.3	31.1	18.6	12.5	34.4	20.6	13.8
Bibb	98.8	103.9	62.4	41.5	112.3	67.4	44.9
Camden	0.1	0.1	0.1	0.0	0.2	0.1	0.1
Chatham	0.8	0.8	0.5	0.3	0.8	0.5	0.3
Chattooga	1.2	1.2	0.7	0.5	1.2	0.7	0.5
Cobb	30.6	32.6	19.6	13.0	35.7	21.4	14.3
Cook	19.4	21.3	12.8	8.5	23.6	14.1	9.5
Crisp	23.1	25.4	15.2	10.2	28.1	16.8	11.3
Dooly	0.1	0.1	0.0	0.1	0.1	0.0	0.1
Dougherty	3.1	3.3	2.0	1.3	3.6	2.2	1.4
Early	151.3	161.4	96.9	64.5	176.9	106.1	70.8
Effingham	7.6	8.1	4.9	3.2	8.9	5.4	3.5
Evans	8.3	9.1	5.5	3.6	10.1	6.1	4.0
Floyd	60.9	65.0	39.0	26.0	71.2	42.7	28.5
Hall	0.8	0.8	0.5	0.3	0.8	0.5	0.3
Houston	49.8	54.6	32.8	21.8	60.5	36.3	24.2
Jasper	60.2	66.1	39.7	26.4	73.2	43.9	29.3
Laurens	56.1	60.7	36.4	24.3	66.8	40.1	26.7
Liberty	17.2	17.2	17.2	0.0	17.2	17.2	0.0
Lowndes	90.6	96.7	58.0	38.7	106.0	63.6	42.4
McDuffie	16.8	18.4	11.1	7.3	20.4	12.2	8.2
Macon	125.5	133.9	80.3	53.6	146.7	88.0	58.7
Marion	0.5	0.6	0.3	0.3	0.6	0.4	0.2
Meriwether	80.6	83.6	50.2	33.4	87.3	52.4	34.9
Morgan	29.1	31.9	19.1	12.8	35.3	21.2	14.1
Pierce	30.5	33.4	20.1	13.3	37.0	22.2	14.8
Putnam	15.6	17.2	10.3	6.9	19.0	11.4	7.6
Rabun	35.5	38.9	23.3	15.6	43.1	25.8	17.3
Richmond	178.9	190.8	114.5	76.3	208.7	125.2	83.5
Thomas	64.2	70.4	42.3	28.1	78.0	46.8	31.2
Walker	1.7	1.7	1.0	0.7	1.7	1.0	0.7
Warren	3.5	3.9	2.3	1.6	4.3	2.6	1.7
Wayne	361.6	385.8	231.5	154.3	422.7	253.6	169.1
Webster	33.2	36.4	21.8	14.6	40.3	24.2	16.1
Whitfield	121.8	122.1	73.2	48.9	125.8	75.5	50.3
TOTAL	1,900.0	2,030.3	1,225.1	805.2	2,215.1	1,335.7	879.4

Table 3: PM10 emissions (tons/year) for Boiler MACT Sources

County	2002 Actual	2009 Growth Only	2009 Growth and Boiler MACT Control	2009 Reduction Due to Boiler MACT	2018 Growth Only	2018 Growth and Boiler MACT Control	2018 Reduction Due to Boiler MACT
Appling	11.7	12.9	7.7	5.2	14.2	8.5	5.7
Atkinson	81.0	88.9	88.9	0.0	98.4	98.4	0.0
Ben Hill	39.2	43.0	25.8	17.2	47.6	28.6	19.0
Bibb	182.4	191.7	115.0	76.7	207.2	124.3	82.9
Camden	0.2	0.3	0.3	0.0	0.3	0.3	0.0
Chatham	1.1	1.2	1.1	0.1	1.2	1.1	0.1
Chattooga	10.0	10.0	6.0	4.0	10.3	6.2	4.1
Cobb	53.1	56.7	34.0	22.7	62.1	37.3	24.8
Cook	22.5	24.7	14.8	9.9	27.4	16.4	11.0
Crisp	26.8	29.4	17.6	11.8	32.6	19.5	13.1
Dooly	0.1	0.1	0.0	0.1	0.1	0.1	0.0
Dougherty	3.5	3.7	2.2	1.5	4.1	2.5	1.6
Early	202.0	215.5	129.3	86.2	236.1	141.7	94.4
Effingham	12.3	13.1	7.8	5.3	14.3	8.6	5.7
Evans	24.0	26.3	26.3	0.0	29.2	29.1	0.1
Floyd	124.9	133.2	79.9	53.3	145.9	87.6	58.3
Hall	1.9	1.9	1.9	0.0	2.0	2.0	0.0
Houston	68.9	75.7	45.4	30.3	83.7	50.3	33.4
Jasper	70.8	77.6	46.6	31.0	85.9	51.6	34.3
Laurens	483.6	517.1	310.3	206.8	567.0	340.2	226.8
Liberty	17.2	17.2	17.2	0.0	17.2	17.2	0.0
Lowndes	113.1	120.7	120.5	0.2	132.3	132.0	0.3
McDuffie	19.7	21.7	21.7	0.0	24.0	24.0	0.0
Macon	147.1	156.9	94.2	62.7	171.9	103.2	68.7
Marion	0.6	0.7	0.4	0.3	0.7	0.4	0.3
Meriwether	112.8	115.8	102.2	13.6	119.4	104.3	15.1
Morgan	49.4	54.2	32.5	21.7	60.0	36.0	24.0
Pierce	42.2	46.3	27.8	18.5	51.2	30.7	20.5
Putnam	15.6	17.2	10.3	6.9	19.0	11.4	7.6
Rabun	41.7	45.8	27.5	18.3	50.7	30.4	20.3
Richmond	315.5	336.6	202.0	134.6	368.4	221.0	147.4
Thomas	82.0	90.0	54.0	36.0	99.6	59.8	39.8
Walker	2.7	2.7	1.6	1.1	2.8	1.7	1.1
Warren	6.0	6.6	4.0	2.6	7.3	4.4	2.9
Wayne	436.3	465.5	279.3	186.2	510.0	306.0	204.0
Webster	46.0	50.4	30.3	20.1	55.8	33.5	22.3
Whitfield	277.4	278.1	166.9	111.2	286.7	172.1	114.6
TOTAL	3,145.3	3,349.4	2,153.3	1,196.1	3,646.6	2,342.4	1,304.2