

# **Appendix F**

## **Sensitivity of Ozone in Atlanta to Reductions in NO<sub>x</sub> and VOC Emissions**

**Table 1:** Sensitivity analysis results for the Conyers site (AIRS ID 13-247-0001)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.76	47.5
10% Atlanta ground-level VOC	52.1	0.06	1.1
10% Atlanta on-road NO <sub>x</sub>	23.2	1.10	47.1
10% Atlanta non-road NO <sub>x</sub>	8.9	0.40	45.2
10% Atlanta area NO <sub>x</sub>	3.8	0.15	40.5
SCRs at Branch	50.9	0.11	2.2
SCRs at Hammond	11.8	0.09	7.6
SCRs at McDonough	7.5	0.11	15.1
SCRs at Scherer	26.8	0.08	2.9
SCRs at Yates	21.7	0.44	20.1

**Table 2:** Sensitivity analysis results for the Douglasville site (AIRS ID 13-097-0004)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	2.04	55.1
10% Atlanta ground-level VOC	52.1	0.00	0.0
10% Atlanta on-road NO <sub>x</sub>	23.2	1.27	54.5
10% Atlanta non-road NO <sub>x</sub>	8.9	0.52	58.2
10% Atlanta area NO <sub>x</sub>	3.8	0.15	38.6
SCRs at Branch	50.9	0.23	4.4
SCRs at Hammond	11.8	0.01	1.2
SCRs at McDonough	7.5	0.24	31.9
SCRs at Scherer	26.8	0.14	5.2
SCRs at Yates	21.7	0.29	13.3

**Table 3:** Sensitivity analysis results for the Fayetteville site (AIRS ID 13-113-0001)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.84	49.5
10% Atlanta ground-level VOC	52.1	0.01	0.1
10% Atlanta on-road NO <sub>x</sub>	23.2	1.16	50.1
10% Atlanta non-road NO <sub>x</sub>	8.9	0.44	49.0
10% Atlanta area NO <sub>x</sub>	3.8	0.14	36.6
SCRs at Branch	50.9	0.15	2.9
SCRs at Hammond	11.8	0.04	3.0
SCRs at McDonough	7.5	0.27	35.2
SCRs at Scherer	26.8	0.20	7.6
SCRs at Yates	21.7	0.09	4.1

**Table 4:** Sensitivity analysis results for the Kennesaw site (AIRS ID 13-067-0003)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.69	45.6
10% Atlanta ground-level VOC	52.1	0.06	1.1
10% Atlanta on-road NO <sub>x</sub>	23.2	1.03	44.4
10% Atlanta non-road NO <sub>x</sub>	8.9	0.41	46.1
10% Atlanta area NO <sub>x</sub>	3.8	0.17	44.4
SCRs at Branch	50.9	0.22	4.4
SCRs at Hammond	11.8	0.06	4.9
SCRs at McDonough	7.5	0.22	28.9
SCRs at Scherer	26.8	0.15	5.5
SCRs at Yates	21.7	0.08	3.7

**Table 5:** Sensitivity analysis results for the Lawrenceville site (AIRS ID 13-135-0002)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.64	44.2
10% Atlanta ground-level VOC	52.1	0.07	1.3
10% Atlanta on-road NO <sub>x</sub>	23.2	1.05	45.2
10% Atlanta non-road NO <sub>x</sub>	8.9	0.37	41.8
10% Atlanta area NO <sub>x</sub>	3.8	0.14	36.8
SCRs at Branch	50.9	0.28	5.5
SCRs at Hammond	11.8	0.09	7.9
SCRs at McDonough	7.5	0.14	19.1
SCRs at Scherer	26.8	0.07	2.7
SCRs at Yates	21.7	0.19	8.7

**Table 6:** Sensitivity analysis results for the McDonough site (AIRS ID 13-151-0002)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.93	52.0
10% Atlanta ground-level VOC	52.1	-0.03	-0.6
10% Atlanta on-road NO <sub>x</sub>	23.2	1.24	53.2
10% Atlanta non-road NO <sub>x</sub>	8.9	0.43	48.2
10% Atlanta area NO <sub>x</sub>	3.8	0.17	46.2
SCRs at Branch	50.9	0.18	3.5
SCRs at Hammond	11.8	0.06	5.2
SCRs at McDonough	7.5	0.42	56.3
SCRs at Scherer	26.8	0.13	4.8
SCRs at Yates	21.7	0.10	4.6

**Table 7:** Sensitivity analysis results for the Newnan site (AIRS ID 13-077-0002)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.60	43.1
10% Atlanta ground-level VOC	52.1	-0.02	-0.5
10% Atlanta on-road NO <sub>x</sub>	23.2	0.99	42.8
10% Atlanta non-road NO <sub>x</sub>	8.9	0.39	43.7
10% Atlanta area NO <sub>x</sub>	3.8	0.13	33.9
SCRs at Branch	50.9	0.26	5.1
SCRs at Hammond	11.8	0.02	1.9
SCRs at McDonough	7.5	0.26	34.7
SCRs at Scherer	26.8	0.23	8.8
SCRs at Yates	21.7	1.50	69.2

**Table 8:** Sensitivity analysis results for the South-DeKalb site (AIRS ID 13-089-0002)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.35	36.3
10% Atlanta ground-level VOC	52.1	0.08	1.6
10% Atlanta on-road NO <sub>x</sub>	23.2	0.88	37.7
10% Atlanta non-road NO <sub>x</sub>	8.9	0.27	30.2
10% Atlanta area NO <sub>x</sub>	3.8	0.13	34.8
SCRs at Branch	50.9	0.21	4.2
SCRs at Hammond	11.8	0.04	3.2
SCRs at McDonough	7.5	0.26	34.1
SCRs at Scherer	26.8	0.16	5.9
SCRs at Yates	21.7	0.19	8.5

**Table 9:** Sensitivity analysis results for the Tucker site (AIRS ID 13-089-3001)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.32	35.6
10% Atlanta ground-level VOC	52.1	0.16	3.1
10% Atlanta on-road NO <sub>x</sub>	23.2	0.83	35.9
10% Atlanta non-road NO <sub>x</sub>	8.9	0.31	35.2
10% Atlanta area NO <sub>x</sub>	3.8	0.10	26.0
SCRs at Branch	50.9	0.31	6.0
SCRs at Hammond	11.8	0.08	6.7
SCRs at McDonough	7.5	0.11	15.2
SCRs at Scherer	26.8	0.13	4.8
SCRs at Yates	21.7	0.18	8.5

**Table 10:** Sensitivity analysis results for the Yorkville site (AIRS ID 13-223-0003)

<b>Sensitivity</b>	<b>TPD reduction</b>	<b>Reduction in O<sub>3</sub> (ppb)</b>	<b>Normalized reduction in O<sub>3</sub> (ppt/TPD)</b>
10% Atlanta ground-level NO <sub>x</sub>	37.1	1.62	43.8
10% Atlanta ground-level VOC	52.1	-0.03	-0.6
10% Atlanta on-road NO <sub>x</sub>	23.2	0.99	42.5
10% Atlanta non-road NO <sub>x</sub>	8.9	0.43	48.3
10% Atlanta area NO <sub>x</sub>	3.8	0.14	37.1
SCRs at Branch	50.9	0.21	4.1
SCRs at Hammond	11.8	0.19	15.9
SCRs at McDonough	7.5	0.21	27.6
SCRs at Scherer	26.8	0.11	4.2
SCRs at Yates	21.7	0.22	10.0