

**Appendix C**

**CAMx Modeling Matrix**

**August 25-September 1, 2000 Episode**

Peak Modeled Ozone Concentrations in parts/billion (ppb). (Note: Due to space limitations, only data files from selected model runs have been retained.)

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Tracer1	N/A	Model Calibration: Regional 36km and East Texas 12km domains; No EI, chemistry, or deposition	†	†	†	†	†	†	†	†
Tracer2	N/A	Model Calibration: Regional 36km and East Texas 12km domains; No EI, chemistry, or deposition	†	†	†	†	†	†	†	†
Base 0	N/A	Preliminary inventory with MOBILE5, 1999 points	104	112	96	102	101	108	131	117
Base 0	N/A	Preliminary inventory with MOBILE5, 1999 points, modified NOx	†	†	†	†	†	†	†	†
Base 0	300ETHOLE	Olefin emissions increased 3 x	†	†	†	†	†	†	†	†
Base 0	500ETHOLE	Olefin emissions increased 5 x	†	†	†	†	†	†	†	†
Base 0	1200ETHOLE	Olefin emissions increased 12 x (to equal NO <sub>x</sub> emissions)	143	139	116	120	121	132	152	122
Base 0	N/A	Preliminary inventory with MOBILE5, 1999 points, run with process analysis	104	112	96	102	101	108	131	112
Base 0	1200ETHOLE_pa	Olefin emissions increased 12x (to equal NO <sub>x</sub> emissions); run with process analysis	143	139	116	120	121	132	152	122
Base 0	nocloud	No cloud cover	†	†	†	†	†	†	†	†

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 1	N/A	New Base case with MOBILE6, 2000 points (no special inv.)	110	114	92	102	100	111	129	108
Base 1	070wind	70% wind speed	114	111	96	107	104	104	146	127
Base 1	080pbl	80% mixing height	110	114	92	102	100	111	129	108
Base 1	300kv_ly1	Increase mixing between lowest two model layers 3 x	112	114	92	102	100	111	127	108
Base 1A	N/A	Add Special Inventory to Base 1	111	115	94	103	101	111	130	109
Base 1A	kv_mp81	Use McNider-Pielke vertical diffusivities instead of O'Brien	173	152	146	183	171	146	154	143
Base 1A	temp5lyr10deg	Increase temperatures over ship channel by 10 degrees Kelvin	111	115	94	103	101	111	130	109
Base 1A	wind_rn4lyr	Modify low level winds to 50% MM5 values during Regime 2 (August 29-September 1)	NA	NA	NA	NA	101	111	131	111
Base 1A	flex1km	Flexi-nest (1 km grid)	108	112	92	98	106	115	135	114
		Flexi-nest (4 km grid)	109	117	95	103	106	113	132	108
Base 1A	pt_ole2nox	Set olefin emiss. at selected facilities = to NO <sub>x</sub> emiss	156	132	107	115	127	135	142	115
Base 1A	35xETH100xOLE	Increase point ETH 35 times and OLE 100 times	403	343	266	321	305	251	270	208
Base 1A	ks1 ("kitchen sink")	pt_ole2nox + 70% wind + 70% pbl + flexi-nest (1 km grid)	294				193	161	179	142

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
		(4 km grid)	242	167	138	141	181	158	171	139
Base 1A	ks1a	pt_ole2nox + 70% pbl + nocturnal low-level (last 4 days)	177	147	121	131	139	135	151	121
Base 1a	ks1b	pt_ole2nox + 70% wind	176							
Base 1a	ks1c	pt_ole2nox + flexi-nest	194							
		(4 km grid)	170							
Base 1a	ks 1d	pt_ole2nox + nocturnal low-level (last 4 days)					126	135	142	117
Base 1a	ks 1e	pt_ole2nox (ole only) + 70% pbl	148	136	114	124	126	121	143	117
Base 1a	ks 1f	pt_ole2nox (ole only) + 70% pbl + flexi-next (1 km grid)	185				152	137	151	120
		(4 km grid)	178	140	117	126	146	136	149	115
Base 1a	ks1f_hg_010pN	pt_ole2nox (ole only) + 70% pbl + 10% point NOx EI in HG area + flexi-nest (1-km grid)	188				143	143	142	116
		(4-km grid)	177	128	98	119	137	137	139	112
Base 1a	ks1f_hg_020pN	pt_ole2nox (ole only) + 70% pbl + 20% point NOX EI in HG area + flexi-nest (1-km grid)	194				149	147	144	117
		(4-km grid)	181	130	99	120	141	139	141	114

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 1a	ks1g_hg_020pN	70% pbl + 20% NOX in HG area + flexi- nest (1-km grid)	130				113	126	133	106
		(4-km grid)	127	121	96	113	111	120	131	104
Base 1a	met_grid4_gs2	02Mar08 MM5 output set for 32-km and 12-km domains and 02May05 gs_tke for 4-km domain; a met sensitivity test	112	122	107	123	110	113	128	125
Base 1a	met_grid4_gs1	02Mar08 MM5 output set for 32-km and 12-km domains and 02May05 gs_ob70 for 4-km domain; a met sensitivity test	111	121	104	118	108	113	126	116
Base 1a	ks2a	02Mar08 MM5 output set for 32-km and 12-km domains and 02May05 gs_ob70 for 4-km domain + point source OLE emissions to NOx level in selected facilities; a met sensitivity test	143	142	121	129	119	131	136	124
Base 1a	ks2b	02Mar08 MM5 output set for 32-km and 12-km domains and 02May05 gs_ob70 for 4-km domain + point source OLE emissions to NOx level in selected facilities; a met sensitivity test	148	143	125	137	119	132	132	127
Base 2	N/A	updated point source data + updated special inventory + grown offshore point	110	115	94	102	100	110	130	109
Base 2	pt_ole2nox2	Base 2 emissions + OLE emissions set equal to NOx emissions for selected OLE sources	137	127	104	111	118	126	138	114

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 2	pt_o2n2bs50	pt_ole2nox + big smoky: 50 x VOC emissions at one stack account in Channelview						136		
Base 2	ks3	70% pbl + pt_o2n2bs50						146		
Base 2	ks4	21 MM5 layers in HGBPA 4-km domain, 14 MM5 layers in other domains + updated point source EI with increased OLE emissions to NOX level on selected sources + 50 x big smoky VOC						156		
Base 2	hgbpa21lyr	21 MM5 layers in HGBPA 4-km domain, 14 MM5 layers in other domains + Base 2 emissions						113		
Base 2	hgbpa21lyr flex1km	21 MM5 layers in HGBPA 4-km domain, 14 MM5 layers in other domains + Base 2 emissions + flexi-nest (1-km grid)						124		
		(4-km grid)						117		
Base 2	ks4a	21 MM5 layers in HGBPA 4-km domain, 14 MM5 layers in other domains + pt_ole2nox + 50x big smoky VOC + flexi-nest (1-km grid)						186		
		(4-km grid)						165		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 2	ks5	70% pbl over Galveston Bay + pt_ole2nox + flexi-nest (1-km grid)	178				151	128	152	118
		(4-km grid)	173	139	116	126	145	125	151	112
Base 2	ks6	70% pbl with wind fields rotated 20 degrees clockwise + pt_ole2nox + flexi-nest (1-km grid)	210				138	140	165	137
		(4-km grid)	193	132	120	126	135	135	163	138
Base 2	ks1f	70% pbl + pt_ole2nox + flexi-nest (1-km grid)	178				151	135	152	122
		(4-km grid)	173	139	117	126	145	134	151	117
Base 3	N/A	Base 2 emissions + 02AUG03 MM5 data + flexi-nest (1-km grid)	104				105	113	135	114
		(4-km grid)	110	115	97	104	104	110	133	109
Base 3	ks1f	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl + flexi-nest (1-km grid)	180				160	146	174	129
		(4-km grid)	174	142	125	128	156	139	164	123
Base 3	ks1f_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains + adjusted pbl for 4-km domain based on NOAA profiler data + flexi-nest 1-km domain for 8-30-2002 (1-km grid)						159		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
		(4-km grid)						148		
Base 3	ks3_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains + adjusted pbl for 4-km domain based on NOAA profiler data + flexi-nest 1-km domain for 8-30-2002 + 50x big smoky VOC (1-km grid)						247		
		(4-km grid)						194		
Base 3	ks1f_drydep	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl + flexi-nest + CAMx with modified dry deposition for drought condition	177	144	127	130	158	140	165	123
Base 3	ks1f_a	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl + 1.5x OLE for seven selected accounts + flexi-nest (1-km grid)						171		
		(4-km grid)						160		
Base 3	ks1f_a_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + flexi-nest (1-km grid)						191		
		(4-km grid)						178		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 3	ks3a_nvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + 50x big smoky VOC + flexi-nest (1-km grid)						247		
		(4-km grid)						194		
Base 3	ks3b_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + 30x big smoky VOC + flexi-nest (1-km grid)						246		
		(4-km grid)						191		
Base 3	ks3c_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + 10x big smoky VOC + flexi-nest (1-km grid)						213		
		(4-km grid)						178		

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
Base 3	ks1f_lidar0825	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains for 0826-0901 (02AUG04 MM5 outputs with incorporated lidar data for 0825) + flexi-nest (1-km grid)	209								
		(4-km grid)	197								
Base 3	ks3d_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + 20x big smoky VOC + flexi-nest (1-km grid)							237		
		(4-km grid)							184		
Base 3	ks1fa_m80n_kvnoaa0830	Base 2 pt_ole2nox point EI + 02AUG03 MM5 data with 70% pbl for 36-km and 12-km domains and adjusted Kv for 4-km grid based on NOAA profiler data + 1.5x OLE for seven selected accounts + 20% mobile source NOx reduction + flexi-nest (1-km grid)							196		
		(4-km grid)							185		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_ole2nox2	02AUG04 MM5 output set + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources + flexi-nest (1-km grid)	244				134	125	130	104
FY07a	pt_o2n2altE	02AUG04 MM5 output set + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources and altESAD + flexi-nest (1-km grid)	240				143	127	133	107
FY07a	pt_ole2nox070pbl	02AUG04 MM5 output set with 70% pbl + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources + flexi-nest (1-km grid)	195*				159	136	142	108
FY07a	pt_o2n2altE_070pbl	02AUG04 MM5 output set with 70% pbl + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources and altESAD + flexi-nest (1-km grid)	206*				169	139	147	110

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_ole2nox2_kvnoa a0830	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources + flexi-nest (1-km grid)						146		
FY07a	pt_o2n2altE_kvnoaa 0830	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources and altESAD + flexi-nest (1-km grid)						156		
FY07a	pt_o23altE_070pbl	02AUG04 MM5 output set with 70% pbl + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 100% extra OLE to NOx level at selected sources and altESAD + flexi-nest (1-km grid)	206*							

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07a	pt_altE_070pbl	02AUG04 MM5 output set with 70% pbl + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with altESAD and no extra OLE + flexi-nest (1-km grid)	140								
FY07a	pt_085N_070pbl	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 85% NOx cuts and no extra OLE + flexi-nest (1-km grid)	143				112	129	125		
FY07a	pt_o2n2_085N_070pbl	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 85% NOx cuts and 100% extra OLE to NOX level at selected sources + flexi-nest (1-km grid)	201*				165	151	144		

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07a	pt_o2n3_085N_070 pbl	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with 85% NOx cuts and 50% extra OLE to NOX level at selected sources + flexi-nest (1-km grid)	178*					143	142	135	
FY07a	pt_altE_kvnoaa0830	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with altESAD and no extra OLE + flexi-nest (1-km grid)							131		
FY07a	pt_o2n3altE_kvnoaa0830	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + area sources with all GAP measures + mobile6 in entire domain with all GAP measures + 2007 projected point source EI with altESAD and 50% extra OLE to NOx level at selected sources + flexi-nest (1-km grid)							145		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 3	ks1f_kvnoaa	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + OLE emissions to NOx level at selected point sources + flexi-nest; run with process analysis on 0825; (1-km grid)	192				131	146	166	
Base 4	pt_o2n4_070pbl	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl on 0830 for 4-km domain based on NOAA lidar data + new point source EI with extra OLE to NOx levels in selected sources + flexi-nest (1-km grid)	228				156	163	165	
Base 4	pt_o2n4_kvnoaa	02AUG04 MM5 output set with 70% pbl for 36-km and 12-km domains and adjusted pbl for 4-km domain based on NOAA lidar data + new point source EI with extra OLE to NOx levels in selected sources + flexi-nest (1-km grid)	158				123	143	161	
Base 3	lidar0825	02AUG04 MM5 output set with lidar data for 0825 + Base 2 point source EI with no adjustment + flexi-nest (1-km grid)	106							
		(4-km grid)	111							

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
Base 4	pt_o2n5_kvnoaa	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv, except NOAA profiler PBL adjusted Kv for hgbpa_04km subdomain on 0825-0831 + new base EI with extra OLE to the NOx levels in selected sources + flexi-nest (1-km grid)	221					135	145	167	
		(4-km grid)	194	121	105	108	128	141	156		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg100 n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830. + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 50% reduction of VOC emissions in HG 8-county area + area source emissions with all GAP measures and 50% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures and 50% reduction of VOC emissions in HG 8-county area + flexi-nest (1-km grid)	133				113	125	125	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07a	pt_o2n3altE_hg050 n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 50% reduction of NOx emissions in HG 8-county area + area source with all GAP measures and 50% reduction of NOx emissions in HG 8-county area + mobile6 in entire domain with all GAP measures and 50% reduction NOx of emissions in HG 8-county area + flexi- nest (1-km grid)	150*					124	118	118	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg050 n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), 50% reduction of NOx emissions, and 50% reduction VOC emissions in HG 8-county area + area source with all GAP measures, 50% reduction of NOx emissions and 50% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures, 50% reduction of NOx emissions, and 50% reduction of VOC emissions in HG 8-county area + flexi-nest (1-km grid)	132				108	110	110	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg075 n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 25% reduction of NOx emissions in HG 8-county area + area source EI with all GAP measures and 25% reduction of NOx emissions in HG 8-county area + mobile6 in entire domain with all GAP measures and 25% reduction of NOx emissions in HG 8-county area + flexi- nest (1-km grid)	171				139	135	130	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg100 n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 25% reduction of VOC emissions in HG 8-county area + area source EI with all GAP measures and 25% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures and 25% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	161				126	136	131	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg075 n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 25% reduction of NOx emissions and 25% reduction VOC emissions in HG 8-county area + area source with all GAP measures, 25% reduction of NOx emissions, and 25% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures, 25% reduction of NOx emissions, and 25% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	159				128	129	124	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
Base 4a	pt_o2n2_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08, MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources and special inventory v4 to match fy07a runs + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	209					160	161	173	
		(4-km grid)	198	142	124	128	156	149	161		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n55altE_070 pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 55% extra OLE to NOx level at selected sources and altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts in noESAD) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	184				147	146	138	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2nsc55altE_070 pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 55% extra OLE to NOx level at selected sources but only in the Ship Channel Area (Harris + Chambers Counties) and altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts in noESAD) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	183				146	146	138	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n37altE_070 pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 37% extra OLE to NOx level at selected sources and altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts in noESAD) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	172				134	141	134	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2nsc37altE_070 pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 37% extra OLE to NOx level at selected sources but only in the Ship Channel Area (Harris + Chambers Counties) and altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts in noESAD) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi- nest (1-km grid)	172				133	141	134	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2nsc37_e55altE_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 37% extra OLE to NOx level at selected sources but only in the Ship Channel Area (Harris + Chambers Counties), 55% extra OLE to NOx level at selected sources everywhere else, and altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts in noESAD) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi- nest (1-km grid)	172				134	141	134	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg075 n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 25% reduction of NOx emissions and 50% reduction VOC emissions in HG 8-county area + area source with all GAP measures, 25% reduction of NOx emissions and 50% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures, 25% reduction of NOx emissions and 50% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	140				112	121	118	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07a	pt_o2n3altE_hg050 n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 50% reduction of NOx emissions and 25% reduction VOC emissions in HG 8-county area + area source EI with all GAP measures, 50% reduction of NOx emissions, and 25% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures, 50% reduction of NOx emissions, and 25% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	142					118	115	114	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg025 n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 75% reduction of NOx emissions and 75% reduction VOC emissions in HG 8-county area + area source EI with all GAP measures, 75% reduction of NOx emissions, and 75% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures, 75% reduction of NOx emissions, and 75% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	98							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg100 n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 75% reduction VOC emissions in HG 8-county area + area source EI with all GAP measures, and 75% reduction of VOC emissions in HG 8-county area + mobile6 in entire domain with all GAP measures and 75% reduction of VOC emissions in HG 8-county area + flexi- nest (1-km grid)	102							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg025 n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), and 75% reduction of NOx emissions + area source with all GAP measures and 75% reduction of NOx emissions + mobile6 in entire domain with all GAP measures and 75% reduction of NOx emissions + flexi-nest (1-km grid)	124							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 4a	pt_o2n2_070pbl_7a m1	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830; minimum layer one Kv of 1 at 7:00am for hgpba_04km on 0825 + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources and special inventory v4 to match fy07a runs + area source with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	205							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 4a	pt_o2n2_070pbl_lu kv	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830; Environ's land use based minimum Kv + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources and special inventory v4 to match fy07a runs + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi- nest (1-km grid)	191							

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
Base 4a	pt_o2n2_m075n_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources and special inventory v4 to match fy07a runs + area source with all GAP measures + mobile6 in entire domain with all GAP measures and 25% NOx emissions reduction in hgbpa_04km + flexi-nest (1-km grid)	217					160	172	171	
		(4-km grid)	209	135	117	124	156	161	160		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
Base 4a	pt_o2n2bs10a_m075n_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources, special inventory v4 to match fy07a runs, 10x big smoky VOC, and extra OLE at 7 selected point sources + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures and 25% NOx emissions reduction in hgbpa_04km + flexi-nest (1-km grid)						210		
		(4-km grid)						186		

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_ole2nox2_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + pt_ole2nox2 point source EI with 100% extra OLE to NOx level at selected sources, more NOx (closer to NOx cap and no upsets, and single day EI for all episode days (0829) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures + flexi-nest (1-km grid)	242				164	150	142	
		(4-km grid)	188	117	94	108	151	143	136	
Base 4a	regular	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3 + base4a.regular point source EI + area source EI all GAP measures + mobile6 in entire domain and have all GAP measures	105	106	90	97	102	108	133	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	regular	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3 + projected 2007 point source emissions with corrected NOx (more NOx near NOx cap) + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures	112	97	79	89	91	102	112	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg025 n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), 75% reduction of NOx emissions, and 25% reduction of VOC emissions in hg area + area source EI with all GAP measures, 75% reduction of NOx emissions emissions, and 25% reduction of VOC emissions in hg area + mobile6 in entire domain with all GAP measures, 75% reduction of NOx emissions emissions, and 25% reduction of VOC emissions in hg area + flexi-nest (1-km grid)	110							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg025 n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), 75% reduction of NOx emissions, and 50% reduction of VOC emissions in hg area + area source EI with all GAP measures, 75% reduction of NOx emissions, and 50% reduction of VOC emissions in hg area + mobile6 in entire domain with all GAP measures, 75% reduction of NOx emissions, and 50% reduction of VOC emissions in hg area + flexi-nest (1-km grid)	105							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg075 n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), 25% reduction of NOx emissions, and 75% reduction of VOC emissions in hg area + area source EI with all GAP measures, 25% reduction of NOx emissions, and 75% reduction of VOC emissions in hg area + mobile6 in entire domain with all GAP measures, 25% reduction of NOx emissions, and 75% reduction of VOC emissions in hg area + flexi-nest (1-km grid)	112							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07a	pt_o2n3altE_hg050 n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgbpa_04km on 0830 + projected 2007 point source EI with 50% extra OLE to NOx level at selected sources, altESAD (i.e. 80% NOx cuts in altESAD vs. 90% NOx cuts innoESAD), 50% reduction of NOx emissions, and	115							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, and single day EI for all episode days (0829) with better bank + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures with slight fix + flexi-nest (1-km grid)	175				134	144	136	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07b	pt_har37e55altE_hg 100n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 25% VOC reduction in HG area + area source EI with all GAP measures and 25% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 25% VOC reduction in HG area + flexi-nest (1-km grid)		154				120	135	130	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 100n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 50% VOC reduction in HG area + area source EI with all GAP measures and 50% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 50% VOC reduction in HG area + flexi-nest (1-km grid)	126				111	123	123	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07b	pt_har37e55altE_hg 075n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 25% NOx reduction in HG area + area source EI with all GAP measures and 25% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 25% NOx reduction in HG area + flexi-nest (1-km grid)	168					137	134	127	

Base Case	Sensitivity	Description	August							Sept	
			25	26	27	28	29	30	31	01	
FY07b	pt_har37e55altE_hg 050n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 50% NOx reduction in HG area + area source EI with all GAP measures and 50% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 50% NOx reduction in HG area + flexi-nest (1-km grid)	148					125	118	114	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 075n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 25% VOC and 25% NOx reduction in HG area + area source with all GAP measures and 25% VOC and 25% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 25% VOC and 25% NOx reduction in HG area + flexi-nest (1-km grid)	154				123	129	123	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 050n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank and 25% VOC and 50% NOx reduction in HG area + area source EI with all GAP measures and 25% VOC and 50% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 25% VOC and 50% NOx reduction in HG area + flexi-nest (1-km grid)	141				118	115	111	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 075n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 50% VOC and 25% NOx reduction in HG area + area source EI with all GAP measures and 50% VOC and 25% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 50% VOC and 25% NOx reduction in HG area + flexi-nest (1-km grid)	136				106	121	118	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 050n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 50% VOC and 50% NOx reduction in HG area + area source EI with all GAP measures and 50% VOC and 50% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 50% VOC and 50% NOx reduction in HG area + flexi-nest (1-km grid)	130				107	110	108	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 100n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 75% VOC reduction in HG area + area source EI with all GAP measures and 75% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 75% VOC reduction in HG area + flexi-nest (1-km grid)	99							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 025n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 75% NOx reduction in HG area + area source EI with all GAP measures and 75% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 75% NOx reduction in HG area + flexi-nest (1-km grid)	111							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 075n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 25% NOx and 75% VOC reduction in HG area + area source EI with all GAP measures and 25% NOx and 75% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 25% NOx and 75% VOC reduction in HG area + flexi-nest (1-km grid)	107							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 050n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 50% NOx and 75% VOC reduction in HG area + area source EI with all GAP measures and 50% NOx and 75% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 50% NOx and 75% VOC reduction in HG area + flexi-nest (1-km grid)	113							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 025n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 75% NOx and 75% VOC reduction in HG area + area source with all GAP measures and 75% NOx and 75% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 75% NOx and 75% VOC reduction in HG area + flexi-nest (1-km grid)	97							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 025n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 75% NOx and 25% VOC reduction in HG area + area source EI with all GAP measures and 75% NOx and 25% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 75% NOx and 25% VOC reduction in HG area + flexi-nest (1-km grid)	109							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 086n100v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 14% NOx reduction in HG area + area source EI with all GAP measures and 14% NOx reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 14% NOx reduction in HG area + flexi-nest (1-km grid)	173				138	139	132	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 086n075v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 14% NOx and 25% VOC reduction in HG area + area source EI with all GAP measures and 14% NOx and 25% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 14% NOx and 25% VOC reduction in HG area + flexi-nest (1-km grid)	156				121	132	127	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 086n050v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 14% NOx and 50% VOC reduction in HG area + area source EI with all GAP measures and 14% NOx and 50% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 14% NOx and 50% VOC reduction in HG area + flexi-nest (1-km grid)	132				109	123	120	

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55altE_hg 086n025v_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., latest AltESAD with improved NOx Cap treatment, more NOx - closer to NOx cap and no upsets, single day EI for all episode days (0829) with better bank, and 14% NOx and 75% VOC reduction in HG area + area source EI with all GAP measures and 14% NOx and 75% VOC reduction in HG area + mobile6 in entire domain with all GAP measures with slight fix and 14% NOx and 75% VOC reduction in HG area + flexi-nest (1-km grid)	103							

Base Case	Sensitivity	Description	August							Sept
			25	26	27	28	29	30	31	01
FY07b	pt_har37e55_070pbl	02AUG04 MM5 output set - 02AUG04 MM5 GRID4 (02AUG04 for 0825 - lidar data; 02AUG03 GRID4 for other days), 02MAR08 MM5 GRID2 & GRID3; and 70% PBL adjusted Kv for all domains except NOAA profiler PBL data based Kv for hgpba_04km on 0830 + base4a.pt_ole2nox2 point source EI with 55% extra OLE to NOx level at selected sources except 37% for sources in Harris Co., more NOx - closer to NOx cap and no upsets, and single day EI for all episode days (0829) with better bank + area source EI with all GAP measures + mobile6 in entire domain with all GAP measures with slight fix + flexi-nest (1-km grid)	171				137	138	130	
<b>Monitored Daily Peak Ozone Concentration (ppb)</b>			<b>194</b>	<b>140</b>	<b>87</b>	<b>112</b>	<b>146</b>	<b>201</b>	<b>176</b>	<b>163</b>
<b>Monitored Daily Peak Ozone Concentration (ppb) in HGA 1-km grid</b>			<b>194</b>				<b>146</b>	<b>201</b>	<b>176</b>	<b>163</b>

† Results of some early model sensitivities were examined and deleted to make space for later runs. No significant changes in model performance were seen in these sensitivity analyses.

\* The maximum value reported on 0825 excludes an ozone spike that occurred at 0700 in several future case model runs.