

APPENDIX C.
Summary of Case Studies for Photochemical Modeling Sensitivity Analyses

Case	Purpose	Reduction Policy	Strategy	Physical entity upon which cap is placed	OVOC TPD	HRVOC TPD	VOC TPD
	Initial Inventory (ungrown, uncontrolled)	None	None	None	177.3	177.4	354.7
0	UT run of attainment demonstration* (*estimate based on post processing analysis)	Attainment Demonstration	Reduction of HRVOC only from non-fugitive EPNs at capped accounts. Uniform reduction of HRVOC+OVOC on fugitives at both capped and uncapped accounts	EPN	136.7	53.4	190.2
1	Reduced HRVOC+ancillary OVOC	Uniform Control	Uniform reduction of HRVOC+OVOC on all HRVOC sources at capped accounts	EPN	95.9	41.2	137.1
Cap at Account (Site)							
2	Max HRVOC with Min OVOC reduction	Cap at Account (site)	Preferential elimination of EPNs with high HRVOC. Overcompensation to meet cap	Account	130.4	30.1	160.4
2.1	Max HRVOC with Min OVOC reduction	Cap at Account (site)	Preferential elimination of VOCs at EPNs with high HRVOC. No overcompensation	Account	154.4	41.2	195.5
Trade within Defined Geographic Areas							
3	Spatial concentration in association with NEGU NOx	Trade of HRVOCs at moderate spatial scale	Preferential elimination of EPNs furthest from NOX	100 km ² box	107.7	40.6	148.3
3.1	Spatial concentration in association with NEGU NOx	Trade of HRVOCs at large spatial scale	Preferential elimination of EPNs furthest from NOX	Harris County	90.7	40.4	131.1

APPENDIX C.
Summary of Case Studies for Photochemical Modeling Sensitivity Analyses, continued

Case	Purpose	Reduction Policy	Strategy	Physical entity upon which cap is placed	OVOC TPD	HRVOC TPD	VOC TPD
Imputation of VOCs							
4	Imputation of OVOCs (alkanes and aromatics)	No reduction on imputed inventory, uniform control on base	Test for effects of possible under-representation in inventory with minimal ancillary reduction	EPN	526.8	41.2	568.0
4.1	Imputation of aromatics	No reduction on imputed inventory, uniform control on base	Test for effects of possible under-representation in inventory with minimal ancillary reduction	EPN	152.5	41.2	193.6
4.2	Imputation of alkanes	No reduction on imputed inventory, uniform control on base	Test for effects of possible under-representation in inventory with minimal ancillary reduction	EPN	470.3	41.2	511.4
5	Imputation of OVOCs (alkanes and aromatics) with ancillary reductions	Uniform Control	Test for effects of possible under-representation in inventory with OVOC reduction	EPN	291.0	41.2	332.2
5.1	Imputation of aromatics with ancillary reductions	Uniform Control	Test for effects of possible under-representation in inventory with OVOC reduction	EPN	135.1	41.2	176.2
5.2	Imputation of alkanes with ancillary reductions	Uniform Control	Test for effects of possible under-representation in inventory with OVOC reduction	EPN	251.8	41.2	293.0
Interspecies Trading							
6	MIR trade of imputed and reduced OVOCs (alkanes and aromatics) for propene	Uniform Control	Interspecies trading of OVOCs for HRVOCs	EPN	95.9	74.8	170.7
6.1	MIR trade of imputed and reduced aromatics for propene	Uniform Control	Interspecies trading of OVOCs for HRVOCs	EPN	95.9	56.8	152.7
6.2	MIR trade of imputed and reduced alkanes for propene	Uniform Control	Interspecies trading of OVOCs for HRVOCs	EPN	95.9	59.2	155.1