APPENDIX Q

DETAILED MATRIX OF THE BAAQMD REFINERIES
CARFG2 AND RELATED CLEAN FUELS REFINERY MODIFICATIONS

Bay Area Refiners Project Description	CHEVRON (Richmond)		EXXON (Benicia)		SHELL (Martinez)		TOSCO (Martinez)		UNOCAL (Rodeo)	
	New	Mod.	New	Mod.	New	Mod.	New	Mod.	New	Mod.
Air Separation Unit								X		
Alkylation Plant		X		X	X			X		
Benzene Reduction (Saturation) Unit		X	X				X		X	
Boilers					X		X		X	
Butamer Plant	X									
Butane Isomerization Unit					X		X			
Butane/Butlyene Selective Hydrogenation Unit		X								
C4 Treater	X									
C5/C6 Isomerization Unit			X		X					
Catalytic Hydrodesulfurization (HDS)								X		
Catalytic Reforming Unit			X		X					
Cogeneration Plant					X					
Cooling Tower	X				X				X	
Depropanizer		X								
Debutanizer		X								
Deisobutanizer Column		X								
Deisopentanizer									X	
Distillate Hydrotreater					X					
Distillation Unit					X					
FCC Feed Hydrotreater							x			
FCC Gasoline Hydrotreating Plant		X								
FCC Hydrodesulfurization Unit							X			
Flare System		X			X			X		
Fluid Catalytic Cracking Unit (FCCU)		X								
Gas Plant Fractionator								X		
Gasoline Blender										X
Gasoline Hydrotreater					X					
Hydrocracker				X				X		
Hydrogen Plant				X	X			X	X	
Hydrogen Recovery Plant		X								
Isomerization Unit										X
Light Cracked Gasoline Treater					X					
LPG Sphere	X									
Methanol Feed Tank			X							
Mid-Barrel Treater			X							
MTBE Process Unit			X							
Naptha Hydrodesulfurization Unit							X			
Pentane Isomerization Unit							X			
Process Wastewater System										X
Reformate Splitting Column	X								X	
Selective Catalytic Reduction (SCR)			X							
Selective Hydrogenation Unit							X			
Storage Tanks	X		X		X		X		X	
Sulfur Plant		X			X					
Tertiary Amyl Methyl Ether (TAME) Plant	X						X			