Mariposa Energy –
Budget CO/VOC Catalyst Matrix
Express Proposal C10-109

	Case 1	**Case 2**	**Case 3**
CO – ppmvd @ 15% O2	CO 48→4	CO 48→2	CO 48 → 1.5
Capital Cost for CO Catalyst + Frame	$450,000	$850,000	$950,000
Back Pressure Inches w.c. @ Full Load	2.0	3.0	3.7
Guaranteed / Expected Catalyst Life – Hours	25,000 / 35,000	25,000 / 35,000	25,000 / 35,000
Replacement Catalyst Cost – Current Day Pricing	$325,000	$375,000	$450,000
Expected SO2 to SO3 Conversion Rates	60%	68%	72%
Expected Catalyst Replacement Labor Hours	120	250	350

Notes:

1. All three CO Catalysts can achieve a 50% VOC reduction, which would be suitable for taking VOCs from 2 ppmvd to 1 ppmvd @ 15% O2.
2. Based on the exhaust gas temperatures for NOx Catalyst performance (i.e. controlled to 850ºF or less) VOC reduction from 6 to 1 ppmvd @ 15% O2 is not achievable, as this would equate to 83% reduction rate. (Temperatures below 1,110 - 1,200ºF will not achieve 83% reduction.)
3. In addition to increased catalyst volume, cell density, and precious metals concentration, the catalyst frames and sealing mechanisms will require more stringent considerations, and this represents the incremental difference between the catalyst first cost vs. replacement cost, as well as the difference in installation hours.