



The Chemical Company

DATE: January 11, 2010 NO. PAGES 1

TO: RADBACK ENERGY via e-mail

ATTN: Jim McLucas

TO: ENGELHARD

ATTN: Nancy Ellison

FROM: Fred Booth Ph 410-569-0297 // FAX 410-569-1841

RE: Oakley Station
 CO Catalyst Systems
 BASF Catalysts LLC Budgetary Proposal EPB00966

Per your Request –

CASE	1	2
FUEL	NG	NG
ASSUMED TURBINE EXHAUST FLOW, lb/hr	3,833,529	3,833,529
ASSUMED TURBINE EXHAUST GAS ANALYSIS, % VOL. - N ₂	74.38	74.38
O ₂	12.41	12.41
CO ₂	3.80	3.80
H ₂ O	8.52	8.52
Ar	0.89	0.89
CALC. GAS MOL. WT.	28.38	28.38
GIVEN TURBINE CO, ppmvd @ 15% O ₂	9.0	9.0
CALC. TURBINE CO, lb/hr	38.7	38.7
ASSUMED TURBINE VOC, ppmvd @ 15% O ₂	2.4	2.4
CALC. TURBINE VOC (as CH ₄), lb/hr	5.9	5.9
ASSUMED GAS TEMP. @ CO CATALYST, °F (+/-25)	650	650
DESIGN REQUIREMENTS CO OUT, ppmvd @ 15% O ₂	2.0	1.0
VOC OUT, ppmvd @ 15% O ₂	2.0	2.0
GUARANTEED PERFORMANCE DATA		
CO CONVERSION, % - Min.	77.8%	88.9%
CO OUT, lb/hr - Max.	8.6	4.3
CO OUT, ppmvd @ 15% O ₂	2.0	1.0
CO PRESSURE DROP, "WG - Max.	0.7	1.0
EXPECTED PERFORMANCE DATA		
SO ₂ -> SO ₃ CONVERSION, % - Max.	6%	8%
NO -> NO ₂ CONVERSION, % - Max.	Max. 30%	Max. 30%
VOC** CONVERSION, % - Min.	25%	29%
VOC** OUT, lb/hr	4.4	4.2
VOC** OUT, ppmvd @ 15% O ₂	1.8	1.7

** VOC - NON-METHANE / NON-ETHANE - 50% SATURATED

Assumed HRSG Cross Section - 72 ft H x 26 ft W
 Three Year Performance Guarantee

CO MODULES	\$489,000	\$618,000
INTERNAL FRAME	\$90,000	\$90,000
WEIGHT - FRAME + CATALYST	43,000	46,000

Sincerely yours,
 BASF Catalysts LLC

Frederick A. Booth
 Senior Sales Engineer