

ATTACHMENT K

El Paso Natural Gas Company, LLC

Monument Compressor Station - Stack Test Data

Engine Cost Analysis	Interest Rate:	3.25%
All Units	Period (yrs):	20

Cost Effectiveness Summary using Stack Test Data Emission Factors

Control Equipment	Unit	Capital Cost	Total Annual Cost*	Emission Reduction	Cost Effectiveness
		(\$)	(\$)	(tpy)	(\$/ton)
Low Emission Combustion Technology	A-04	3,333,000	229,240	3.2	72,527
	A-05	3,333,000	229,240	1.8	125,428

* Total Annual Cost includes the annualized capital cost.

El Paso Natural Gas Company, LLC

Monument Compressor Station - Stack Test Data

Cooper Bessemer GMV-10TF
A-04

Interest Rate: 3.25%
Period (yrs): 20 <-- EPA Air Pollution Control Cost Manual

Base Case

NO _x lb/hr:	1.95 lb/hr	<-- 2018 through 2020 average stack test results
NO _x tpy:	7.31 tpy	<-- Calculated using 2018 through 2020 average stack test results and operating hours

Controlled Retrofit

NO _x lb/hr:	1.10 lb/hr	0.5 g/bhp-hr * 1002 HP * lb/453.6 g; based on proposed rule limit
NO _x tpy:	4.15 tpy	<-- Calculated using average 2018 through 2020 operating hours at proposed limit

Total Capital Investment	\$ 3,333,000	<-- EPNG Cost Estimate
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Total Annual Costs:	\$ 229,240	<-- Based on interest rate, year and TCI
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Emissions Reduction:	3.2 tpy
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Cost Effectiveness:	\$ 72,526.71 \$/ton
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El Paso Natural Gas Company, LLC

Monument Compressor Station - Stack Test Data

Cooper Bessemer GMV-10TF
A-05

Interest Rate: 3.25%
Period (yrs): 20 <-- EPA Air Pollution Control Cost Manual

Base Case

NO _x lb/hr:	1.73 lb/hr	<-- 2018 through 2020 average stack test results
NO _x tpy:	5.04 tpy	<-- Calculated using 2018 through 2020 average stack test results and operating hours

Controlled Retrofit

NO _x lb/hr:	1.10 lb/hr	0.5 g/bhp-hr * 1002 HP * lb/453.6 g; based on proposed rule limit
NO _x tpy:	3.21 tpy	<-- Calculated using average 2018 through 2020 operating hours at proposed limit

Total Capital Investment	\$ 3,333,000	<-- EPNG Cost Estimate
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Total Annual Costs:	\$ 229,240	<-- Based on interest rate, year and TCI
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Emissions Reduction:	1.8 tpy
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Cost Effectiveness:	\$ 125,428.20 \$/ton
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Engines

Units: A-04, A-05
Description: Engine Retrofit to Comply with NMED Ozone Standard

Site Rating: 1002 hp

	A-04	A-05
2016 through 2018 Average Operating Hours:	7,506.25	5,812.83

Criteria Pollutant	Emission Factor		Units	Source	A-01	A-02
	A-04	A-05			TPY	TPY
NOx	1.95	1.73	lb/hr	2018 through 2020 average stack test results	7.306	5.038

Op Hour Comparison

Operating Hours Per Year		
Yr/Unit	A-04	A-05
2018	7,831.00	7,980.00
2019	7,715.25	3,887.25
2020	6,972.50	5,571.25
2018 – 2020 Avg. Hours	7,506.25	5,812.83

Date	A-04	A-05
	NOx (lb/hr)	
CY2020	1.52	1.63
CY2019	3.02	2.57
CY2018	1.30	1.00
CY18-CY20	1.95	1.73

Permit Limit: 3.9 lb/hr