

SUMMARY OF NO₂ SCREEN3 MODELING RESULTS
NON-RULE STANDARD PERMIT REVISION
GHOST RIDER COMPRESSOR STATION
ENTERPRISE NAVITAS MIDSTREAM MIDLAND BASIN LLC

EPN	FIN	Description	PTE(NO _x ,HR) ^a (lb/hr)	C(NO _x ,HR) ^b (µg/m ³)	GLC(NO _x ,HR) ^c (µg/m ³)	R(NO ₂ /NO _x) ^d (lb NO ₂ /lb NO _x)	GLC(NO ₂ ,HR) ^e (µg/m ³)	Annual	GLC(NO _x ,YR) ^f (µg/m ³)
								Conversion Factor (CF)	
ENG-1	ENG-1	2,500-hp Caterpillar 3608A4	3.31	3.39	11.19	0.20	2.24	0.08	0.18
ENG-2	ENG-2	2,500-hp Caterpillar 3608A4	3.31	3.39	11.19	0.20	2.24	0.08	0.18
ENG-3	ENG-3	2,500-hp Caterpillar 3608A4	3.31	2.94	9.71	0.20	1.94	0.08	0.16
ENG-4	ENG-4	2,500-hp Caterpillar 3608A4	3.31	3.53	11.66	0.20	2.33	0.08	0.19
ENG-5	ENG-5	2,500-hp Caterpillar 3608A4	3.31	3.53	11.67	0.20	2.33	0.08	0.19
ENG-6	ENG-6	2,500-hp Caterpillar 3608A4	3.31	3.53	11.67	0.20	2.33	0.08	0.19
GEN-1	GEN-1	259-hp Gillette SP-1500	0.57	101.80	58.13	0.20	11.63	0.08	0.93
DR-1	DR-1	Glycol Dehy Reboiler 1	0.10	43.47	4.26	0.90	3.84	0.08	0.31
COMB-1	COMB-1	Vapor Combustor	0.03	79.12	2.74	0.90	2.47	0.08	0.20
Project Total NO₂ Concentration (µg/m³):							31.35		2.51
Significant Impact Level (µg/m³):^g							7.50		1.00
Glasscock County NO₂ Background Concentration (µg/m³):^h							70		20
Total Off-Property Concentration (µg/m³):							108.85		23.51
NO₂ NAAQS (µg/m³):							188		100

^a PTE(NO_x,HR) = Hourly PTE NO_x.

^b C(NO_x,HR) = Hourly NO_x concentration predicted by SCREEN3 model, using a nominal 1 lb/hr NO_x emission rate.

^c GLC(NO_x,HR) = Hourly ground level concentration of NO_x.

An example calculation for hourly NO_x ground level concentration for EPN ENG-1 follows:

$$GLC(NO_x,HR) = PTE \text{ Increase } (NO_x,HR) * C(NO_x,HR)$$

$$GLC(NO_x,HR) = (3.31 \text{ lb/hr}) * (3.39 \text{ µg/m}^3/1 \text{ lb/hr})$$

$$GLC(NO_x,HR) = 11.19 \text{ µg/m}^3 \text{ NO}_x$$

^d R(NO₂/NO_x) = NO₂/NO_x ratio per TCEQ guidance and NRSP(k).

^e GLC(NO₂,HR) = Hourly ground level concentration of NO₂.

An example calculation for hourly NO₂ ground level concentration for EPN ENG-1 follows:

$$GLC(NO_2,HR) = GLC(NO_x,HR) * R(NO_2/NO_x)$$

$$GLC(NO_2,HR) = (11.19 \text{ µg/m}^3) * (0.2 \text{ lb NO}_2/\text{lb NO}_x)$$

$$GLC(NO_2,HR) = 2.24 \text{ µg/m}^3 \text{ NO}_2$$

^f GLC(NO₂,YR) = Annual ground level concentration of NO₂.

An example calculation for annual NO₂ ground level concentration for EPN ENG-1 follows:

$$GLC(NO_2,YR) = GLC(NO_2,HR) * CF$$

$$GLC(NO_2,YR) = (2.24 \text{ µg/m}^3) * (0.08)$$

$$GLC(NO_2,YR) = 0.18 \text{ µg/m}^3 \text{ NO}_2$$

^g The hourly and annual NO₂ significant impact levels are from the TCEQ Air Quality Modeling Guidelines (APDG 6232), Revised 06/24.

^h The hourly and annual NO₂ background concentrations are based on TCEQ Guidance.