3.3 Estimated Emissions

Estimates of the potential emission rates for each source are included in Table 3-1. Emission estimates include NO_X, CO, VOCs, PM_{10}, $PM_{2.5}$, SO_2, GHG expressed as carbon dioxide equivalents (CO_2e), and total hazardous air pollutants (HAPs). Emission calculations are provided in Appendix E.

Table 3-1: Estimated Annual Emissions (tons per year) from Routine Operation of the Terminal and Compressor Station 3

Emission Source	Pollutants (tons per year)								
	NO_X	CO	SO_2**	H_2SO_4	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_{2e}
Terminal									
Gas Turbines (12)	1,675.6	2,699.9	1.7	0.1	367.9	367.9	97.1	46.2	6,111,531
Thermal Oxidizers (6)	31.3	52.6	27.6	2.1	4.7	4.7	3.5	1.2	1,464,018
Regeneration Heaters (6)	10.3	26.8	0.02	0.002	5.1	5.1	3.7	1.3	84,676
Hot Oil Heaters (12)	42.6	111.0	0.1	0.01	19.0	19.0	15.3	4.7	700,973
Essential Generators (6)	11.5	6.3	0.01	-	0.4	0.4	-	0.01	1,290
Emergency Firewater Pumps (2)	1.6	0.8	0.0	-	0.1	0.1	-	0.0	180
Ground Flare System (2)	5.9	26.7	0.0	0.0	0.0	0.0	49.1	0.0	36,565
LNG Tank and BOG Low-Pressure Vent with Ignition Package (1)	1.2	5.3	0.0	0.0	0.0	0.0	82.9	0.0	2,325
Ground Flare System (MSS)	47	213	0.2	0.01	0.0	0.0	392	0.0	85,144
Fugitives	-	-	-	-	-	-	0.17	0.00	312
Compressor Station 3									
Backup Generators (2)	0.06	0.3	0.0	0.0	0.0	0.0	0.1	0.02	45
Condensate Tank (1)	-	-	-	-	-	-	3.7	0.2	52-
Pigging Emissions	-	-	-	-	-	-	7.6	0.1	17,140
Fugitives Emission	-	-	-	-	-	-	0.7	-0	63

Table 3-1: Estimated Annual Emissions (tons per year) from Routine Operation of the Terminal and Compressor Station 3

Emission Source	Pollutants (tons per year)								
	NO_X	CO	SO_2**	H_2SO_4	PM_{10}	$PM_{2.5}$	VOC	HAPs	CO_{2e}
Project Total									
Project Total	1,827.1	3,142.7	29.6	2.3	397.2	397.2	643.8	53.4	8,489,150
PSD Threshold	250	250	250	N/A	250	250	250	N/A	75,000
Trigger PSD?	YES	YES	NO	N/A	YES	YES	YES	N/A	YES
Significant Emission Rate	40	100	40	7	15	10	40	N/A	N/A
PSD Modeling Required?	YES	YES	NO	NO	YES	YES	N/A	N/A	N/A

Notes:
** Annual SO_2 emissions are based on fuel samples found in Appendix F, and assuming 0.0021 grains/100scf H_2S and 0.01 grains/100 scf of other sulfur species. The SO_2 emission estimates are based on approximately four times the worst case scenario given the available data. It is assumed that all H_2S is fully converted to SO_2.

Key:
N/A = Not applicable

3.4 Source Designation

Based on preliminary calculations of the Terminal's potential to emit (PTE), and per the definitions in Title 30 of TAC §116.12, RG LNG expects that the Terminal will be considered a new major stationary source. It is also anticipated that the Terminal and Compressor Station 3 are subject to PSD review for CO, NO_X, PM (including PM_{10} and $PM_{2.5}$), VOCs, and GHGs since emissions from the Terminal and Compressor Station 3 are greater than the corresponding significance thresholds. In addition the Terminal/Compressor Station 3 entity will be a major source of HAPs.