

Exhibit N: Response to 1.4.3-3

Fugitive Dust Emissions

The criteria air pollutant (CAP) emissions¹ associated with purging the pre-lay segment of the existing pipe will come from the following two sources:

1. Operation of the temporary portable natural gas system
2. Delivery of liquefied natural gas (LNG) to the temporary natural gas system

The temporary portable natural gas system will be composed of a 400,000 British thermal unit (btu) per hour heater, water tank, and heat exchanger. The combustion of natural gas used to power the heater will be the only source of CAP emissions in this system. This system will operate for 24 hours per day, seven days per week, for approximately two months.

To determine the CAP emissions of the heater, the typical heating value of natural gas (1,020 btu/standard cubic foot [scf]) was used to determine the daily volume of natural gas required to operate the heater (9,411.8 scf/day). The emission factors for the combustion of natural gas were then obtained from the United States Environmental Protection Agency's AP-42 Tables 1.4-1 and 1.4-2. These emission factors (presented in pounds per million scf) were used to develop the expected daily emissions, as summarized in Table 1: CAP Emissions from Heater Operation.

Table 1: CAP Emissions from Heater Operation

Category	CAP Emissions					
	PM ₁₀	PM _{2.5}	CO	NO _x	SO _x	VOCs
Emission Factor (pounds/million scf)	7.6	7.6	84	100	0.6	5.5
Emission Rate (pounds/day)	0.072	0.072	0.791	0.941	0.006	0.052

Notes:

1. PM₁₀ = particulate matter less than 10 microns in diameter, PM_{2.5} = particulate matter less than 2.5 microns in diameter, CO = carbon monoxide, NO_x = nitrogen oxides, SO_x = sulfur oxides, and VOCs = volatile organic compounds.
2. All particulate matter emissions from natural gas combustion were assumed to be less than 1.0 micrometer in diameter.

As described previously, LNG will be delivered to the site by tanker trucks. Approximately 60 total truck trips will be required to supply LNG to the temporary natural gas system, with up to three trucks being on site each day. The maximum round-trip distance for each delivery was assumed to be 100 miles. The California Air Resources Board EMFAC2014 Web Database was consulted to develop emission factors (in grams/mile and grams/vehicle/day) within San Diego County for heavy-duty diesel trucks, aggregated by model year and speed. The resulting emission rates are presented in Table 2: CAP Emissions from LNG Delivery Trucks.

¹ The emissions from the direct release of natural gas are accounted for in response to 1.4.7-1.

Table 2: CAP Emissions from LNG Delivery Trucks

Category	CAP Emissions					
	PM ₁₀	PM _{2.5}	CO	NO _x	SO _x	VOCs
Emission Factor (grams/mile)	0.123	0.060	0.859	4.889	0.016	0.155
Emission Factor (grams/vehicle/day)	0.097	0.093	6.270	70.462	0.122	2.024
Emission Rate (pounds per day)	0.082	0.041	0.609	3.700	0.011	0.116

Note: Emission factors in grams/mile include vehicle exhaust, emission factors in grams/vehicle/day include idling exhaust emissions and particulate matter emissions from tire and brake wear.

The daily emission rates from Table 1: CAP Emissions from Heater Operation and Table 2: CAP Emissions from LNG Delivery Trucks were then summed and compared to the minimum daily emission rates from the Proponent's Environmental Assessment (PEA). As shown in Table 3: CAP Emission Rate Comparison, the CAP emissions from the temporary natural gas system will be less than one percent of the daily emissions associated with the Pipeline Safety & Reliability Project (Proposed Project). As a result, the installation and use of this system will not affect the conclusions of the analysis presented in the PEA.

Table 3: CAP Emission Rate Comparison

Category	CAP Emissions					
	PM ₁₀	PM _{2.5}	CO	NO _x	SO _x	VOCs
Temporary Natural Gas System Emission Factor (pounds/day)	0.08	0.04	0.61	3.70	0.01	0.12
Minimum Proposed Project Construction Emission Factor (pounds/day)	56.77	35.49	709.45	572.76	1.55	33.76
Percent of Proposed Project Emissions	0.1%	0.1%	0.1%	0.6%	0.7%	0.3%

Note: The construction emission factors from 2019 were selected to provide a worst-case scenario of the contribution of the temporary natural gas system to the overall Proposed Project emissions.