



# Long Mott Generating Station Preliminary Safety Analysis Report

## Tables

**Table 2.0-1: Long Mott Generation Station (LMGS) Site Characteristics  
(Sheet 1 of 3)**

Site Characteristic		LMGS Site Value	PSAR Section
Geography and Demography			
Exclusion Area Boundary (EAB)		400 m	Section 2.1.2
Low Population Zone (LPZ)		400 m	Section 2.1.2
Population Center Distance		22 mi (Victoria, TX)	Section 2.1.1.1
Nearby Industrial, Transportation, and Military Facilities			
Explosion Hazards		Probability of occurrences is less than $1.0E^{-6}$ per year	Section 2.2.3.3.7
Aircraft Hazards		Annual aircraft crash probability is less than $1.0E^{-7}$	Section 2.2.2.7.1
Meteorology			
Air Temperature and Humidity			
Maximum Dry-Bulb Temperature	2% Annual Exceedance	94.1 °F (DBT) 76.6 °F (MCWB)	Section 2.3.1.2.6.2
	1% Annual Exceedance	95.9 °F (DBT) 76.6 °F (MCWB)	Section 2.3.1.2.6.2
	0.4% Annual Exceedance	97.9 °F (DBT) 76.5 °F (MCWB)	Section 2.3.1.2.6.2
	100-Year Return Period	84.7 °F (DBT) 75.2 °F (MCWB)	Section 2.3.1.2.6.2
Minimum Dry-Bulb Temperature	99% Annual Exceedance	34.5 °F	ASHRAE 2017 "Fundamentals" Victoria, TX
	99.6% Annual Exceedance	31.4 °F	ASHRAE 2017 "Fundamentals" Victoria, TX
	100-Year Return Period	54 °F	Section 2.3.1.2.6.2
Maximum Wet-Bulb Temperature	1% Annual Exceedance	79.8 °F	Section 2.3.1.2.6.2
	0.4% Annual Exceedance	80.3 °F	Section 2.3.1.2.6.2
	100-Year Return Period	84.3 °F	ASHRAE 2017 "Fundamentals" Victoria, TX
Basic Wind Speeds			
3-Second Gust		122 mph	Section 2.3.1.2.4
Hurricane			
Maximum Wind Speed		210 mph	RG 1.221, Figure 1 NUREG/CR-7005, App. B
Tornado			
Maximum Wind Speed		200 mph	Section 2.3.1.2.2
1 Additional site-specific data will be provided by the end of second quarter 2026 to update and recalibrate the groundwater model.			
<del>2 Additional site-specific analyses will be provided by the end of 2025.</del>			
32 Additional site-specific analyses and associated evaluations for these items will be provided by the end of 2025.			



# **Long Mott Generating Station** **Preliminary Safety Analysis Report**

**Table 2.0-1: Long Mott Generation Station (LMGS) Site Characteristics (Continued)**  
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Site Characteristic		LMGS Site Value	PSAR Section
Maximum Translational Speed		40 mph	Section 2.3.1.2.2
Maximum Rotational Speed		160 mph	Section 2.3.1.2.2
Radius of Maximum Rotational Speed		150 ft	RG 1.76, Table 1 Region II
Maximum Pressure Drop		0.9 psi	RG 1.76, Table 1 Region II
Rate of Pressure Drop		0.4 psi/s	RG 1.76, Table 1 Region II
Winter Precipitation			
Normal Annual Snowfall		0.1 in	Section 2.3.1.2.5
Maximum Monthly Snowfall		2.1 in	Section 2.3.1.2.5
Short-Term (Accident Release) Atmospheric Dispersion			
Control Room $\chi/Q$		2.97E-03 s/m <sup>3</sup>	Section 2.3.4.2
DBAs (EAB/LPZ)		3.57E-04 s/m <sup>3</sup>	Section 2.3.4.3
Non-DBEs (EAB/LPZ)		1.89E-04 s/m <sup>3</sup>	Section 2.3.4.3
Long-Term (Normal Release) Atmospheric Dispersion			
Site Boundary 0.25 mi	Undepleted No Decay $\chi/Q$ Value	1.00E-04 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-2
	Undepleted 2.26-Day Decay $\chi/Q$ Value	1.00E-04 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-2
	Depleted 8-Day Decay $\chi/Q$ Value	9.70E-05 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-2
	D/Q Value	3.50E-07 1/m <sup>2</sup>	Section 2.3.5 Table 2.3.5-2
Location of Interest Receptor 1 0.87 mi NNW	Undepleted No Decay $\chi/Q$ Value	6.40E-06 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-3
	Undepleted 2.26-Day Decay $\chi/Q$ Value	6.20E-06 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-3
	Depleted 8-Day Decay $\chi/Q$ Value	5.60E-06 s/m <sup>3</sup>	Section 2.3.5 Table 2.3.5-3
	D/Q Value	3.90E-08 1/m <sup>2</sup>	Section 2.3.5 Table 2.3.5-3
Hydrology			
Maximum Ground Water Elevation <sup>1</sup>		Water level varies by geologic strata and seasonal variation	Section 2.4.12
<sup>1</sup> Additional site-specific data will be provided by the end of second quarter 2026 to update and recalibrate the groundwater model. <del><sup>2</sup> Additional site-specific analyses will be provided by the end of 2025.</del> <sup>3</sup> <sup>2</sup> Additional site-specific analyses and associated evaluations for these items will be provided by the end of 2025.			



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**Table 2.0-1: Long Mott Generation Station (LMGS) Site Characteristics (Continued)  
(Sheet 3 of 3)**

Site Characteristic	LMGS Site Value	PSAR Section
Maximum Still Water Flood Elevation <sup>2</sup> West Coloma Creek	32 ft	Section 2.4.2.2
Wave Runup <sup>2</sup> (West Coloma Creek)	1 ft	Section 2.4.2.2
Combined Effects Maximum Flood Elevation <sup>2</sup> (West Coloma Creek)	33 ft	Section 2.4.2.2
Maximum Still Water Flood Elevation On-Site Pond Failure (wave runup not applicable to this flooding mechanism)	32.5 ft	Section 2.4.4.3
Local Intense Precipitation	19.4 in/hr	Section 2.4.2.3.1 Table 2.4.2-5
Probable Maximum Storm Surge	36.38 <del>41.47</del> ft (still water) 46.49 ft (with wave runup)	Section 2.4.5.6 <del>2.2-5</del>
Site Grade	31 ft	Section 2.4.10
Hydraulic Conductivity	Table 2.4.12-12	Section 2.4.12.2.2
Hydraulic Gradient	Table 2.4.12-12	Section 2.4.12.2.2
Geology, Seismology, and Geotechnical Engineering		
Basic Geological and Seismic Information		
Capable Tectonic Structures	No capable tectonic structures within the site region.	Section 2.5.3.6
Foundation Type	Drilled Piers	Section 2.5.4.3
Lateral Soil Variability	Minor due to depositional environment	Section 2.5.4.2.1
Vibratory Ground Motion		
Ground Motion Response Spectra	Figure 2.5.2-48	Section 2.5.2
Peak Ground Acceleration	0.1853 g (horizontal) 0.1160 g (vertical)	Section 2.5.2, Table 2.5.2-21
Stability of Subsurface Materials and Foundations		
Liquefaction Potential <sup>3,2</sup>	Site data from predominate cohesive site is being analyzed.	Section 2.5.4.6
Maximum Settlement <sup>3,2</sup>	3.8 in.	Section 2.5.4.10.2
Minimum Shear Wave Velocity <sup>3,2</sup>	Site data is being analyzed. Vs <sup>30</sup> > 789 ft/sec from STP used.	Table 2.5.2-5
Fault Displacement Surface Deformation Potential	No	Section 2.5.3.2.2.3
Slope Failure Potential	No	Section 2.5.5.2
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