



- 45 7. PG&E GTN has elected to take a federally enforceable limit on the number of hours the  
 46 Auxiliary Generator will operate each year.  
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 48 8. The project will result in a potential to emit up to 88.5 tons per year of NO<sub>x</sub>.  
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 50 9. Dry low-NO<sub>x</sub> control (SoLoNO<sub>x</sub>) has been determined to be Best Available Control  
 51 Technology (BACT) for the control of NO<sub>x</sub> emissions from the turbine.  
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 53 10. The project is located in an area that has been designated Class II for the purposes of PSD  
 54 evaluation. The nearest Class I Areas are identified in Table 1 below:  
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Class I Area	Distance Kilometers (km)
Eagle Cap Wilderness	95
Spokane Indian Reservation	200
Cabinet Mountains	290

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 57 TABLE 1.  
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- 59 11. The project is located in an area that is currently designated in attainment for all national and  
 60 state air quality standards except particulate matter finer than 10 microns in diameter (PM<sub>10</sub>).  
 61 This area is in serious nonattainment status for PM<sub>10</sub>, however, PM<sub>10</sub> emissions from this  
 62 proposed project are below the 70 ton per year significance level.  
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 64 12. The ambient impacts of the proposed increase in emissions were determined with the EPA's  
 65 Industrial Source Complex Short-Term Model Version 3 (ISCST3). Class I increment  
 66 analysis and visibility impairment were evaluated using Calpuff.  
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 68 13. Table 2 below, identifies the modeling results as compared to the Modeled Significance  
 69 Level (MSL):  
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Pollutant	Averaging Period	Eagle Cap Wilderness (µg/m <sup>3</sup> )	Spokane Indian Reservation (µg/m <sup>3</sup> )	Cabinet Mountains (µg/m <sup>3</sup> )	MSL (µg/m <sup>3</sup> )
NO <sub>x</sub>	24-hour	0.091	0.024	0.014	1

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 72 TABLE 2.  
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- 74 14. The project will have no significant impact on ambient air quality.  
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 76 15. The project will not have a noticeable effect on industrial, commercial, or residential growth  
 77 in the Wallula area.

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16. Visibility will not be significantly impaired at the Spokane Indian Reservation, Cabinet Mountains, or the Eagle Cap Wilderness.

17. The department finds that all requirements for PSD have been satisfied. Approval of the PSD application is granted subject to the following conditions.

**APPROVAL CONDITIONS:**

1. The Solar Titan combustion turbine shall be fueled by pipeline quality natural gas.
2. The Auxiliary Generator shall be fueled by pipeline quality natural gas.
3. The Auxiliary Generator shall not operate for more than 150 hours per year on a 12 month rolling average.
4. Emissions of nitrogen oxides (NO<sub>x</sub>) from the Solar Titan combustion turbine shall not exceed the limits shown in Table 3 below, corrected to 15 percent oxygen and ISO conditions on a one-hour average and 88.0 tons per year on a 12 month rolling average. Initial compliance shall be determined in accordance with 40 CFR 60 Subpart GG and 40 CFR 60 Appendix A, Method 20, except that, the instrument span shall be reduced as appropriate.

Operating Conditions	Emissions
Greater than 94% NGG <sup>1</sup>	25.0 ppm <sup>2</sup>
90% to 94% NGG	42.0 ppm
Startup/shutdown/step to idle/load change	0.334 lb/mscf

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TABLE 3.

5. Emissions of NO<sub>x</sub> from the auxiliary generator shall not exceed 0.48 tons per year on a 12 month rolling summation calculated once per month.
6. Compliance with Approval Condition 1 and 2 shall be monitored by affirming that only natural gas was used.
7. Compliance with Approval Condition 3 shall be monitored by installing and using a nonresetable time totalizer to measure the hours of generator operation.
8. Compliance with Approval Condition 5 shall be monitored by submitting records including the hours of operation.

<sup>1</sup> The N in NGG is the customary letter used to denote speed, while GG refers to the Gas Generator.

<sup>2</sup> ppm is used to denote Parts per million

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9. Compliance with the NO<sub>x</sub> emission limit from the Solar Titan combustion in Approval Condition 4 shall be monitored by the following procedure:
- a) PG&E GTN shall install totalizers that will record the speed range of the turbine. The three speed ranges shall be:
    - i) Greater than 94% NGG,
    - ii) Between 90 and 94% NGG, and
    - iii) Less than 90% NGG.
  - b) Emission factors shall be developed during the performance testing and modified as a result of subsequent source testing to represent NO<sub>x</sub> emissions during the three speed ranges presented above.
  - c) Source testing shall be performed in accordance with 40 CFR 60 Method 20, except, the test shall be performed for each of the three speed ranges listed above. The frequency of the source testing shall be:
    - i) For the first two years of operation source testing shall be performed quarterly.
    - ii) After the first two years of operation the source testing frequency may be reduced to once every three years provided the emissions tested in speed range i ((greater than 94% NGG) and ii (Between 90 and 94% NGG) are less than 80% of the limits expressed in Condition 4 above.
    - iii) Should the results of the sources testing be greater than 80% of those expressed in condition 4 above, source testing shall be conducted annually.
  - d) Annual emissions shall be monitored by multiplying the emission factors developed in Approval Condition 9b above by the time in each speed range.
10. The short-term NO<sub>x</sub> emission concentrations (ppm) do not apply during startup, shutdown, load changes and step to idle periods. Emissions during startup, shutdown, load changes and step to idle periods shall be counted towards compliance with the annual emission limits, and shall be based upon vender recommendations, source data or other acceptable method of measuring excess emissions.
11. Within 180 days after initial startup, PG&E GTN shall conduct performance tests for NO<sub>x</sub> from the Solar Titan combustion turbine to be performed by an independent testing firm. A test plan shall be submitted to the department for approval at least 30-days prior to testing.
12. PG&E GTN shall report the following monitoring data to the department:
- a) Submit the performance test data from the initial performance test.

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162       b) Submit copies of each source test.  
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164       c) Submit reports at least twice per year, or on another approved reporting schedule and  
165       in the format approved by the department, including the following:  
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167           i)       Calendar date or monitoring period,  
168           ii)       Total NO<sub>x</sub> emissions summed on a 12 month rolling average,  
169           iii)       Identification of any days for which NO<sub>x</sub> data were not obtained,  
170                    including reasons for not obtaining sufficient data and description of  
171                    corrective actions taken,  
172           iv)       Total duration the turbine is operating at greater than 94% NGG,  
173           v)       Total duration the turbine is operating between 90 and 94% NGG, and  
174           vi)       Total duration the turbine is operating out of SoLoNO<sub>x</sub> mode.  
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176       d) In addition, each report shall include:  
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178           i)       Days for which data was not collected, and  
179           ii)       Reasons for which data was not collected.  
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181       e) In addition, PG&E GTN shall maintain monitoring records on site for at least five  
182       years, and shall submit:  
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184           i)       Excess emission reports to the department as appropriate, and  
185           ii)       Results of any compliance source tests.  
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187       13. Within 90 days of startup PG&E GTN shall identify operational parameters and practices  
188       that will constitute proper operation of Solar Titan combustion turbine and the Auxiliary  
189       Generator. These operational parameters and practices shall be included in an operation  
190       and maintenance manual (O&M) for the facility. The O&M manual shall be maintained  
191       by PG&E GTN and shall be available for review by state, federal and local agencies.  
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193       14. Any activity, which is undertaken by PG&E GTN or others, in a manner, which is  
194       inconsistent with the application and this determination, shall be subject to enforcement  
195       under the applicable regulations.  
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197       15. Access to the source by the Environmental Protection Agency, state, and local regulatory  
198       personnel shall be permitted upon request for the purposes of compliance assurance  
199       inspections. Failure to allow such access is grounds for an enforcement action.  
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201 16. This approval shall become invalid if construction of the project is not commenced  
202 within eighteen (18) months after receipt of the final approval, construction of the facility  
203 is discontinued for a period of eighteen (18) months, or the department extends the 18  
204 month period upon satisfactorily showing that an extension is justified, pursuant to 40  
205 C.F.R. 52.21(r)(2) and applicable EPA guidance.  
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209 **Reviewed by:**

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212 \_\_\_\_\_  
213 Richard B. Hibbard, P.E.  
214 Engineering and Technical Services  
215 Washington State Department of Ecology  
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DATE: \_\_\_\_\_

217 **Approved by:**

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220 \_\_\_\_\_  
221 Mary E. Burg  
222 Program Manager, Air Quality Program  
223 Washington State Department of Ecology  
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DATE: \_\_\_\_\_