APPENDIX B

In-Service Test Criteria

Coal Plant In-Service Test Criteria

1. Unit must demonstrate that it can operate at its design minimum load or above.

$$\frac{\text{Hours at or above design minimum load}}{400 \text{ hours}} \geq 0.80$$

2. Unit must be able to operate at or above its design capacity factor for a reasonable period of time. If the design capacity factor is not specified it will be assumed to be 0.60 unless the utility can offer evidence justifying a lower value.

$$\text{Design capacity factor} \leq \frac{\text{energy generated for a continuous period of 168 hours}}{\text{Design full load x 168 hours}}$$

3. Unit must operate at an average capacity equal to 98% of its design maximum continuous rating for four (4) hours.

4. Unit must be operated so as to show a clear and obvious trend toward the predominate use of coal as its primary fuel. Test period will be thirty (30) days. The following items will be used as an indication of the trend for coal operation:

   a) Boiler control tuning completed such that the unit can operate safely with all control systems in auto.

   b) Ash build up in the furnace and backpass areas shall be monitored and be within expected levels.

   c) All boiler/turbine interlocks shall be proven to work as designed.

d) Sootblowing timing and sequences shall be set properly to clean the tube areas.

e) All critical alarms brought into the control room shall be operational and functioning properly.

f) At the end of the test period, oil burn levels, if applicable, will be at or near design levels while burning coal.

g) Oil ignitors are functioning in accordance with specifications.

5. Unit must have successfully completed all major equipment startup test procedures.

6. Sufficient transmission interconnection facilities shall exist for the total plant design net electrical capacity at the time the newest unit is declared fully operational and used for service.

7. Sufficient transmission facilities shall exist for Empire's share of the total plant design net electrical capacity from the generating station into the Empire service territory at the time the newest unit is declared fully operational and used for service.

8. Equipment installed to comply with emission requirements shall be operational and demonstrate the ability to remove 93% or more of the NOX, SO_2, particulate, and mercury emissions they were installed to remove over a continuous four (4) hour period while operating at or above 95% of its design load. This equipment shall also be required to demonstrate that it is able to

remove 88% or more of these same emissions it was installed to remove over a continuous 120 hour period while operating at or above 80% of its design load.

Combustion Turbine Unit (Over 95 MW) In-Service Test Criteria

1. All major construction is completed.

2. All pre-operational tests have been successfully completed.

3. Unit successfully meets all contract operational guarantees.

4. Unit will successfully demonstrate the ability to initiate the proper start sequence resulting in the unit operating from zero (0) rpm (or turning gear) to full load when prompted at a location (or locations) from which it will be normally operated.

5. If unit has fast start capability, unit will demonstrate the ability to meet fast start capability.

6. Unit will successfully demonstrate the ability to initiate the proper shutdown sequence from full load resulting in zero (0) rpm (or turning gear) when prompted at a location (or locations) from which it will be normally operated.

7. Unit will successfully demonstrate the ability to operate at minimum load for one (1) hour.

8. Unit will successfully demonstrate the ability to operate at or above 95% of nominal capacity for four (4) continuous hours.

9. Unit will successfully demonstrate the ability to produce an amount of energy (MWh) within a 72 hour period that results in a capacity factor of at least 50% during the period when calculated by the formula:

$$\text{capacity factor} = \frac{\text{MWh generated in 72 hours}}{(\text{nominal capacity} \times 72 \text{ hours})}$$

10. Transmission and distribution facilities will demonstrate their capability to export the entire plant net capacity.

11. If unit has dual fuel capability, the unit will successfully demonstrate the ability to start on the back up/secondary fuel as described in item 4.

12. If unit has dual fuel capability, the unit will successfully demonstrate the ability to transfer between the two fuels while on line.