10.19 LIGHTING SYSTEM

The plant lighting system is comprised of the normal, standby, and emergency lighting subsystems. The normal lighting subsystem is fed from 480-V three phase lighting board panels through 480-240/120-V single phase lighting transformers. The normal lighting subsystem provides adequate illumination during normal plant operation. This common system is ordinarily powered from the Normal Auxiliary Power System through the 480-V Station Service System (see UFSAR Figure 8.4-1a).

The standby lighting subsystem is supplied power from the Standby Auxiliary Power System and provides a dual purposes light source. Specifically, its primary function is to provide adequate, long term duration, diesel-backed AC lighting for personnel safety and continuity of essential functions in the absence of the normal lighting subsystem. It has a secondary function of supplementing the normal lighting subsystem. The standby lighting subsystem is supplied power through 480-240/120-V single phase transformers and is diesel-backed.

The emergency lighting subsystem is comprised of a 250-V DC emergency lighting system and individual battery pack lights used to supplement the 250-V DC emergency lighting system. A portion of the individual battery pack lights are required to meet fire protection requirements in accordance with the appropriate design criteria. The 250-V DC emergency lighting system is supplied power from 240-V AC lighting boards. In the event of an AC power supply failure, the emergency lights automatically energize or transfer to their DC power source.

Standby and/or emergency lighting is provided in critical areas of the Control Bay, Reactor, Turbine, Diesel Generator, Radwaste, and Standby Gas Treatment Buildings.

Local 480-240/120-V single phase transformers supply normal lighting power for remote areas including the circulating water intake structure. Emergency lighting for these remote areas is supplied from 120-V AC preferred service power.