

Oconee SLRA Site Audit and Operating Experience Audit Electrical Review

Areas of virtual walkdown (this could be one or combination of; live walkdown sessions, previously recorded videos, still photos, etc.):

1. Station Black Out (SBO) recovery path including in-scope switchyard components, transmission lines, insulators, connectors, metal enclosed bus, alternate AC source connections, etc. In particular, looking for examples of: material conditions, construction configurations, porcelain, polymer insulators, and general observations/environmental features such as bird congregation signs (droppings, etc.) on high voltage systems, vicinity to diesel exhaust fumes or sources of plumes (e.g., cooling towers), any signs of lightning strikes, any signs of wind effects (e.g., airborne dust particles stripping paint), etc.
2. Cables and cable connections examples. Videos or photos indicating whether cables have fire retardant coating, general material conditions, adverse localized environment examples, signs of overheating or excessive cable jacket degradation, etc.
3. Examples of photos of high voltage instrumentation cables in high radiation environments (if available).
4. Electrical manholes- photos showing general conditions of the structures, cable routing, water level and high watermarks, smart covers (if any installed), level alarms, sump pumps and controls (if any installed), etc.
5. In-scope metal enclosed bus arrangement with emphasis on elastomeric material at the joints and building connections. Photos of internal electrical connections and insulating material (if available).
6. All Bushings, surge arrestor, cable connections, T-connections, and cables (drop lines) for:
 - a. Unit 1 CT-1
 - b. Unit 2 CT-2
 - c. Unit 3 CT-3
 - d. Keowee Hydro underground emergency ac power stepdown transformer
 - e. Lee/Central substation CT-7 and CT-8C
 - f. 100kV/13.8kV stepdown transformers

The main goal is to develop an understanding of: general material conditions (best and worst), signs of wear and degradation, signs of environmental stressors such as moisture, heat, radiation, ultraviolet light, smoke or exhaust fumes, cooling tower flume, chemical contaminations, signs of vibrations due to nearby equipment, signs of wind-induced abrasion and movement, signs of lightning strikes, signs of cyclic fatigue, general conditions of paints and coatings (when applied) etc.

**Additional Operating Experience (OE) Corrective Actions Program (CAP) Data Base
Search Keywords:**

1. Taughtened Glass Insulator
2. Wind
3. Elastomers
4. Adverse Localized Environment (ALE)

Questions:

- Is there a document available that explains the sampling methodology for testing/inspection of in-scope electrical connections?

Copies of Documents Requested to be Posted on the Portal:

- Please post the ARs 01981365, Apparent Cause Evaluation Report, CT3 Drop Line Open Phase, in portal for review (or provide locations if already on the portal)
- Examples of EQ folders and samples of re-analysis performed to evaluate/extend the qualified life that explains the methods and assumptions.