



# **Station Blackout and Advanced Accident Mitigation (B.5.b) Overview**

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# **Station Blackout Background**

- **WASH-1400, “Reactor Safety Study,” issued 1975, indicated that station blackout (SBO) could be an important contributor to the total risk from nuclear power plant accidents**
- **In 1980, the Commission designated the issue of station SBO as Unresolved Safety Issue (USI) A-44, “Station Blackout”**
- **NRC issued the final SBO Rule (10 CFR 50.63) on June 21, 1988**
- **SBO Rule requires each plant to be able to cope and recover from an SBO event**

# **Station Blackout Staff Evaluations**

- **NRC issued Regulatory Guide (RG) 1.155, “Station Blackout,” on August 1988 and endorsed NUMARC 87-00 industry guidance to implement the SBO Rule**
- **All 104 plants met the SBO rule requirements at the time of the staff’s review**
  - **Safety Evaluations**
  - **Pilot Inspections**
- **License Renewal Application reviews - Staff verifies the scoping and aging management of systems, structures, and components required for SBO in accordance with 10 CFR 54.4(a)(3) and 10 CFR 54.21**

# **Station Blackout - New Reactors**

- **All new standard reactor designs must include an alternate ac (AAC) power source with diverse design to cope with an SBO for 8-hours**
- **New reactors with passive designs cope with an SBO with battery power for 72-hours**

## **B.5.b Requirements**

### **NRC Imposed Requirements after the events of September 11, 2001**

- **Interim Compensatory Measures Order EA-02-026**
- **License Condition**
- **10 CFR 50.54(hh)(2)**

## **10 CFR 50.54(hh)(2)**

**“Each licensee shall develop and implement guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire ....”**