



Results of Temporary Instruction 2515/165

*Operational Readiness of Offsite Power and the Impact
on Plant Risk*

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Background

- **Performed assessments of operational readiness of offsite power for nuclear power plants**
 - Temporary Instruction 2515/156 [ML041200565]
 - Temporary Instruction 2515/163 [ML051240080]
 - Temporary Instruction 2515/165 [ML060550258]



Temporary Instruction 2515/165

■ **Offsite power**

- Notification of inadequate post-trip voltage
- Compensatory actions

■ **Maintenance**

- Procedures for including offsite power in assessing plant risk
- Acceptance criteria for notifying grid operator to manage risk



Temporary Instruction 2515/165 Findings

- **Notified of a post-trip contingency, all nuclear power plants would either immediately declare offsite power inoperable or evaluate the situation before deciding on what action to take**
- **All but 5 nuclear power plants have procedures with compensatory actions**
- **All nuclear power plants consider offsite power in their risk assessments**



Temporary Instruction 2515/165 Findings (Cont.)

- **All nuclear power plants have or are developing procedures that require the assessment of plant risk based on maintenance activities**
- **A few nuclear power plants do not notify the Grid Operator of changes at the nuclear power plant that could impact the transmission system**



Summary

- **Nuclear power plants appear to be ready for the summer**
- **Nuclear Power Plant Licensees recognize the sensitivity of offsite power**



Results of Generic Letter 2006-02

*Grid Reliability and the Impact on Plant Risk
and the Operability of Offsite Power*

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Focus of Generic Letter 2006-02

- **Generic Letter focused on Licensees' capability to:**
 - Monitor grid conditions to determine the operability of offsite power systems
 - Incorporate grid conditions in the assessment and management of risk-associated maintenance
 - Evaluate site-specific increases in loss of offsite power frequency and impact on station blackout



Offsite Power Area Results

- **Switchyard voltage limits [Question 1g]**
 - Not provided by some licensees

- **Compensatory measures for loss of ability to predict post-trip voltage [2f]**
 - Multi-layered software capability

- **Validation of predicted post-trip voltage [2g]**
 - Actual trip values not used for verification



Offsite Power Area Results (Cont.)

- **Definition of single-contingency [3a]**
 - Only addressed trip of nuclear power plant

- **Double sequencing [3b]**
 - Not part of licensing basis
 - Some licensees have performed an analysis



Maintenance Rule Area Results

- **Seasonal variation in grid stress [5c]**
 - Not addressed

- **Communication during grid risk-sensitive maintenance [5g]**
 - Changes not addressed



Station Blackout Area Results

- **Review of station blackout analysis [8b]**
 - Nuclear power plants that experienced a loss-of-offsite power event have not addressed classification



Summary

■ **Off-site Power Area**

- Protocols exist between Nuclear Power Plant Licensees and Grid Operators [1]

■ **Maintenance Rule Area**

- Grid-risk-sensitive equipment considered in maintenance rule evaluations [5a]

■ **Station Blackout Area**

- Nuclear Power Plants given off-site power restoration priority [7a]



Next Steps

- **Work with nuclear power plant licensees and industry to resolve open items**
- **Possible generic communication to outline concerns in detail**