

NEAC Meeting

May 18, 2005

Millstone Unit 3 Special Inspection

April 17, 2005, Reactor Trip and Safety Injection



Nuclear Regulatory Commission-Region I
King of Prussia, PA

NRC Presentation

- NRC Introductions
- Special Inspection Team and Charter
- Event Chronology
- Event Overview and Analysis
- Special Inspection Results
- Discussion

NRC Representatives

- Brian E. Holian, Acting Director, Division of Reactor Projects
- Marvin D. Sykes, Chief, Engineering Branch 1, Team Manager
- G. Scott Barber, Senior Project Engineer, Team Leader
- Don Jackson, Senior Project Engineer
- Ronald Nimitz, Senior Health Physicist
- Thomas Sicola, Reactor Inspector
- S. Max Schneider, Senior Resident Inspector
- Nicole Sieller, Reactor Engineer
- Peter Presby, Reactor Inspector

Special Inspection Team (SIT)

- Team Staffing
 - Four full time members
 - Four part time members
 - Multidisciplined group with diverse backgrounds

Special Inspection Team (SIT)

- Charter / Objectives
 - Chronology of event
 - Apparent cause(s)
 - System response(s)
 - Equipment deficiencies including maintenance and surveillance history
 - Evaluation of licensee follow-up actions
 - Radiological Assessment

Event Chronology

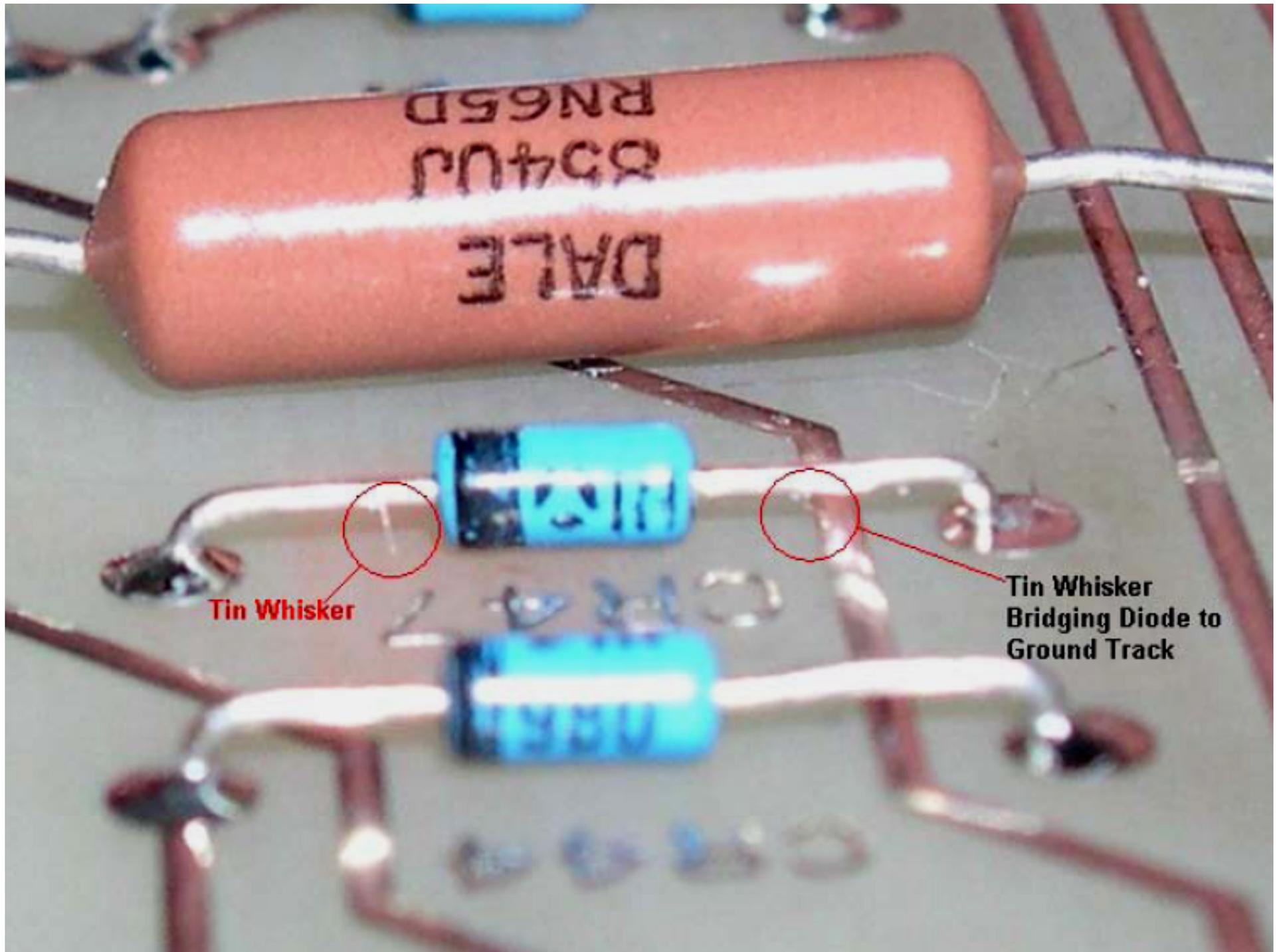
- Low steam line pressure signal reactor trip
- Single train safety injection and main steam line isolation
- Main steam safety valve and atmospheric relief valve opening
- Turbine driven auxiliary feedwater pump trip and restart
- Primary power operated relief valve cycling
- Alert declared
- Operator actions to stabilize plant conditions
- Plant shutdown and cooldown

Event Overview

- Initial response prompt
- Emergency response organizations activated – Dominion and NRC
- Some operational / equipment challenges occurred while stabilizing plant conditions
- Licensee successful in achieving cold shutdown
- No consequences to public health and safety

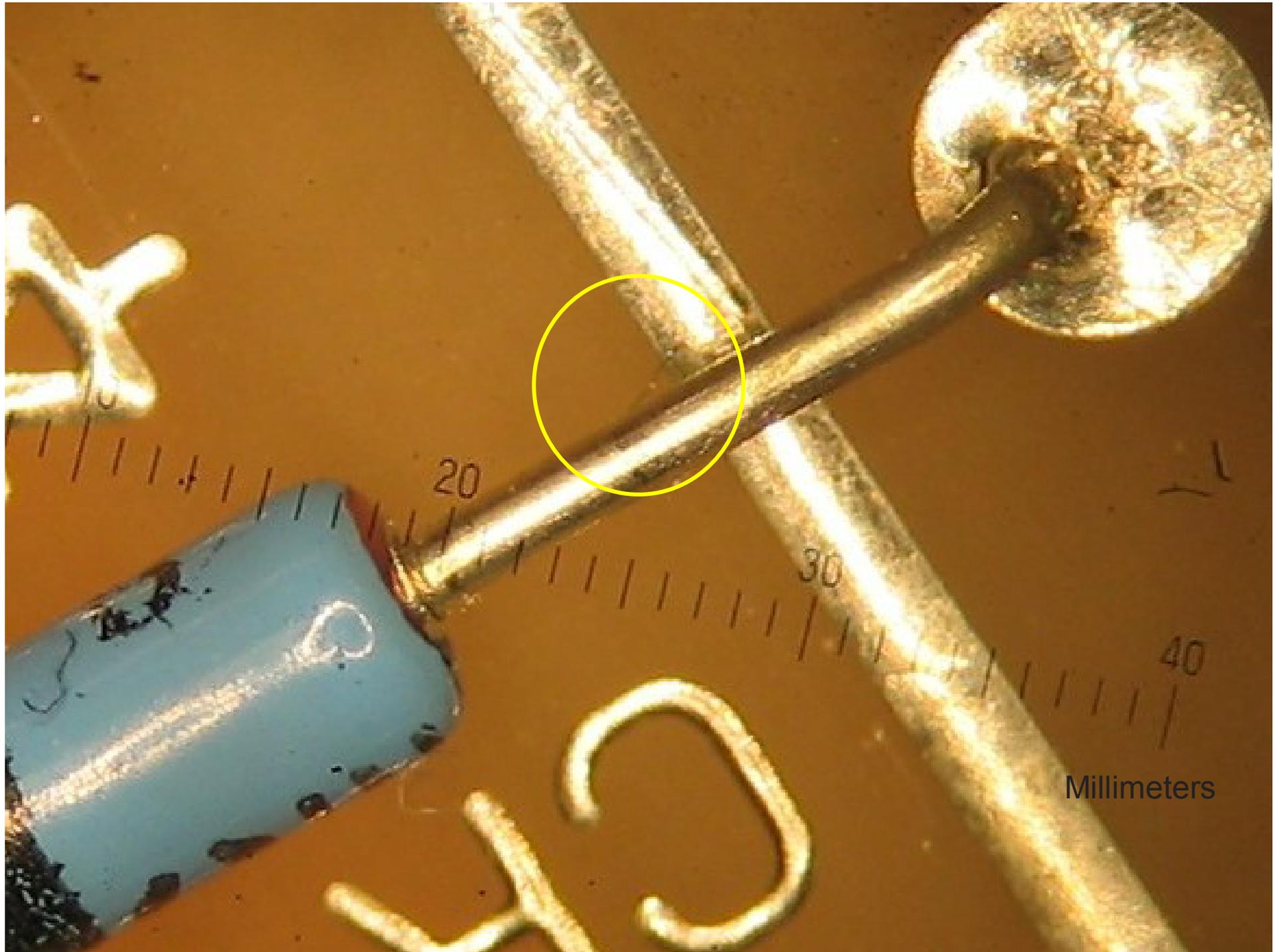
Event Analysis

- Dominion Actions
 - Event Review Team activities initiated
 - Apparent cause promptly identified by I&C – “Tin Whisker”
 - Timely assessment of radiological conditions
 - Multiple corrective actions implemented (cause / equipment related)
 - Additional evaluations initiated



Tin Whisker

**Tin Whisker
Bridging Diode to
Ground Track**



NRC Special Inspection Team Results

- Preliminary Findings
 - Turbine Driven Auxiliary Feedwater Pump
 - Emergency Operating Procedure Implementation Issues
 - Assessment of Plant Conditions
 - Simulator Fidelity
 - Indicator Design Issues
 - Boric Acid Control Program
 - Emergency Response Data System Activation
 - Thoroughness of Event Review Effort

NRC Special Inspection Team Results

- Unresolved items
 - Pressurizer snubber – potential inoperability
 - Charging system issues
 - Simulator issues
 - Root Cause Evaluations

NRC Special Inspection Team Results

- Observations
 - Thoroughness of Event Review Effort
 - Emergency Operating Procedure Documentation and Usage
 - Extent of Condition Review for Non-Solid State Protection System Cards

Radiological Assessment

- Radiological release – well below Regulatory Limits
- No consequence to health or safety of public
- Worker doses were appropriately controlled

Conclusions

- Event
 - Unit was safely shutdown by operators and placed in a stable condition
 - Radiological release well below regulatory limits
 - No consequences to public health and safety