



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

January 17, 2014

MEMORANDUM TO: Eddy Crowe  
Senior Resident Inspector, Oconee  
Division of Reactor Projects

FROM: Victor M. McCree /*Leonard D. Wert RA for*/  
Regional Administrator

SUBJECT: SPECIAL INSPECTION CHARTER TO EVALUATE THE  
FAILURE OF "B" TRAIN SOLID STATE PROTECTION SYSTEM  
(SSPS) OPERABILITY SURVEILLANCE TEST AT FARLEY  
UNIT 2

You have been selected to lead a Special Inspection to assess the circumstances surrounding the failure of the "B" train SSPS operability surveillance test on January 10, 2014, at Joseph M. Farley Nuclear Plant. Your onsite inspection should begin on January 21, 2014. Marcus Riley will be assisting you in this inspection. Norbert Carte, Senior Electronics Engineer, NRR, will also be available to assist you in this inspection via telephone.

A. Basis

On January 10, 2014, the Unit 2 "B" train SSPS operability surveillance per FNP-2-STP-33.0B, "Solid State Protection System Train B Operability Test," could not be completed satisfactorily due to unexpected indications during the logic testing portion of the surveillance. The licensee could not restore operability of the "B" train and shut down Unit 2 in accordance with the applicable technical specification action statements. The licensee placed the Unit in Mode 5 on January 12, 2014. Troubleshooting revealed a "stray" termi-clip shorting across pins 16 and 17 of the A516 safeguards driver output card. In this condition, the "B" train of SSPS would not have actuated the master relay (K501) for a safety injection signal from the "B" train, including "B" train charging pump, residual heat removal pump, service water pump, component cooling water pump, containment fan coolers, motor driven auxiliary feedwater pump. This event was reported to the NRC as Event Notification EN 49715 dated January 11, 2014.

In accordance with Management Directive (MD) 8.3, "NRC Incident Investigation Program," deterministic and conditional risk criteria were used to evaluate the level of NRC response for this operational event. Through review of the MD 8.3 deterministic criteria, the staff concluded that this event led to multiple failures in systems used to mitigate an actual event. The conditional core damage probability (CCDP) for this event met the criterion for a Special Inspection. Region II determined that the appropriate level of NRC response is a Special Inspection.

CONTACT: Frank Ehrhardt, RII/DRP  
404-997-4611

This Special Inspection is chartered to identify the circumstances surrounding the failure of the "B" train SSPS operability surveillance test, review the licensee's actions following discovery of the condition, assess the licensee's maintenance practices regarding SSPS integrated circuit cards (cards), evaluate the history of related card failures at Farley, and evaluate operating experience.

## B. Scope

The inspection is expected to perform data gathering and fact-finding in order to address the following:

1. Develop history of SSPS issues including a detailed sequence of events from time of surveillance failure until the system was declared operable (including a list of CRs related to SSPS card issues for Unit 2.)
2. Review and evaluate the licensee's troubleshooting activities related to this event.
3. Review and assess the licensee's testing and maintenance practices of the SSPS cards and other similar type cards on both units.
4. Review and evaluate the licensee's compliance with vendor recommendations regarding maintenance of SSPS cards and other similar type cards and modifications implemented to the SSPS system.
5. Assess licensee effectiveness in identifying previous safety-related and other similar type card problems, evaluating the cause of these problems, and implementation of corrective actions to resolve identified problems.
6. Review and evaluate the licensee's immediate corrective actions taken related to the issue and the extent of condition completed for Unit 2 "A" train and Unit 1 SSPS system.
7. Assess the licensee's actions resulting from vendor technical bulletins and industry operating experience concerning SSPS and similar type cards.
8. Collect data necessary to support completion of the significance determination process, if applicable.
9. Identify any potential generic safety issues and make recommendations for appropriate follow-up action (e.g., Information Notices, Generic Letters, and Bulletins).

## C. Guidance

Inspection Procedure 93812, "Special Inspection," provides additional guidance to be used during the conduct of the Special Inspection. Your duties will be as described in Inspection Procedure 93812. The inspection should emphasize fact-finding in its review of the circumstances surrounding the event. Safety or security concerns identified that

are not directly related to the event should be reported to the Region II office for appropriate action.

You will report to the site, conduct an entrance, and begin inspection no later than January 21, 2014. A daily status briefing of Region II management will be provided beginning the second day on-site at approximately 4:00 p.m., Eastern Daylight Time (EDT). In accordance with IP 93812, you should promptly recommend a change in inspection scope or escalation if information indicates that the assumptions utilized in the MD 8.3 risk analysis were not accurate. A report documenting the results of the inspection should be issued within 45 days of the completion of the inspection. The report should address all applicable areas specified in section 3.02 of Inspection Procedure 93812. At the completion of the inspection you should provide recommendations for improving the Reactor Oversight Process baseline inspection procedures and the Special Inspection process based on any lessons learned.

This Charter may be modified should you develop significant new information that warrants review. Should you have any questions concerning this Charter, contact Frank Ehrhardt at 404-997-4611 or Jannette Worosilo at 404-997-4685.

Docket No. 50-364  
License No. NPF-8

are not directly related to the event should be reported to the Region II office for appropriate action.

You will report to the site, conduct an entrance, and begin inspection no later than January 21, 2014. A daily status briefing of Region II management will be provided beginning the second day on-site at approximately 4:00 p.m., Eastern Daylight Time (EDT). In accordance with IP 93812, you should promptly recommend a change in inspection scope or escalation if information indicates that the assumptions utilized in the MD 8.3 risk analysis were not accurate. A report documenting the results of the inspection should be issued within 45 days of the completion of the inspection. The report should address all applicable areas specified in section 3.02 of Inspection Procedure 93812. At the completion of the inspection you should provide recommendations for improving the Reactor Oversight Process baseline inspection procedures and the Special Inspection process based on any lessons learned.

This Charter may be modified should you develop significant new information that warrants review. Should you have any questions concerning this Charter, contact Frank Ehrhardt at 404-997-4611 or Jannette Worosilo at 404-997-4685.

Docket No. 50-364  
 License No. NPF-8

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
 ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:ORA	RII:ORA	
SIGNATURE	Via email	Via email	FJE /RA/	WBJ /RA for/	LDW /RA/	LDW /RA for/	
NAME	ECrowe	JWorosilo	FEhrhardt	RCroteau	LWert	VMcCree	
DATE	01/14/2014	01/14/2014	01/14/2014	01/14/2014	01/14/2014	01/14/2014	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\DRP\IRPB2\FARLEY\CHARTERS\FARLEY SIT CHARTER SSPS CARDS.DOCX