

Wick - Matrix 1-12



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W., SUITE 2900  
ATLANTA, GEORGIA 30323-0199

MAR 31 1994

MEMORANDUM FOR: Albert F. Gibson, Director  
Division of Reactor Safety  
  
Jon R. Johnson, Acting Director  
Division of Reactor Projects  
  
FROM: Thomas A. Peebles, Chief  
Operations Branch  
Division of Reactor Safety  
  
SUBJECT: SIEMENS FUEL QUESTIONS, PER MR. EBNETER MARCH 4, 1994,  
REVISION 1

Mr. Ebneter had the following four questions in his letter. Curt Rapp compiled the information contained in the enclosed matrix, which is intended to answer the questions. Additionally, comments have been included for Robinson and St. Lucie facilities.

1. Which plants use Seimens fuel in Region II?
2. How long have they been using Seimens?
3. What have these utilities done in the way of QA oversight of the vendors?
4. What is the extent of problems we are aware of--(Robinson, Crystal River, Harris, others)?

Thomas A. Peebles

Enclosure:  
Vendor Fuel Matrix

cc w/encl:  
C. Rapp, DRS

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ENCLOSURE

VENDOR FUEL MATRIX

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
Browns Ferry 1	BWR				
Browns Ferry 2	BWR	GE			18
Browns Ferry 3	BWR	GE			18
Brunswick 1	BWR	GE			14-18
Brunswick 2	BWR	GE			14-18
Catawba 1	PWR	B&W/W			going to 24
Catawba 2	PWR	B&W/W			going to 24
Crystal River	PWR	B&W			24
Farley 1	PWR	W (LL/V5)			20; going to 24
Farley 2	PWR	W (LL/V5)			20; going to 24
Grand Gulf	BWR	Seimens (since cycle 2)	One bundle replaced-2 fuel pins elongated	Corporate fuels group independently checks core calcs On-line core monitoring would identify problems  SRI has not inspected this area	18
Harris	PWR	W/ Seimens-1st load	On-site receipt inspection found several QA problems	Fuels group and NAD observe fabrication process  Independent review of fuel design  Detailed receipt inspection on-site	18
Hatch 1	BWR	GE			18
Hatch 2	BWR	GE			18
McGuire 1	PWR	B&W- about 36 months W			18

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
McGuire 2	PWR	B&W-about 36 months W			18
North Anna 1	PWR	W			18
North Anna 2	PWR	W			18
Oconee 1	PWR	B&W			18
Oconee 2	PWR	B&W			18
Oconee 3	PWR	B&W			18
Robinson	PWR	Seimens	Recent refueling found several bundles with incorrectly located poison rods; resulted in significant core performance problem.  Miscalculated initial NI calibration constants; resulted in indicated power 10% below actual.	Same as Harris	
St. Lucie 1	PWR	Seimens-> 5 fuel cycles	SRI found grit in fuel bundle during receipt inspection  Seimens failed to verify fuel weights w/i TS limits (1990)	Escalated vendor inspections by QA and fuels group  Included contractual requirement for Seimens to increase self-assessment	
St. Lucie 2	PWR	CE			
Sequoyah 1	PWR	W			18; going to 24
Sequoyah 2	PWR	W			18; going to 24
Summer	PWR	W			18
Surry 1	PWR	W			18
Surry 2	PWR	W			18
Key Point 3	PWR	W			18

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
Turkey Point 4	PWR	W			18
Vogtle 1	PWR	W			18
Vogtle 2	PWR	W			18
Watts Bar	PWR	W			18

March 30, 1994

SURVEY FOR B&W OR SIEMENS FUEL USERS

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
Browns Ferry 1	BWR				
Browns Ferry 2	BWR	GE			18
Browns Ferry 3	BWR	GE			18
Brunswick 1	BWR	GE			14-18
Brunswick 2	BWR	GE			14-18
Catawba 1	PWR	B&W/W			going to 24
Catawba 2	PWR	B&W/W			going to 24
Crystal River	PWR	B&W			24
Farley 1	PWR	W (LL/V5)			20; going to 24
Farley 2	PWR	W (LL/V5)			20; going to 24
Grand Gulf	BWR	Seimens (since cycle 2)	One bundle replaced-2 fuel pins elongated	Corporate fuels group independently checks core calcs On-line core monitoring would identify problems  SRI has not inspected this area	18
Harris	PWR	W/ Seimens- 1st load	On-site receipt inspection found several QA problems	Fuels group and NAD observe fabrication process  Independent review of fuel design  Detailed receipt inspection on-site	18
Hatch 1	BWR	GE			18
Hatch 2	BWR	GE			18

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
McGuire 1	PWR	B&W- about 36 months W			18
McGuire 2	PWR	B&W- about 36 months W			18
North Anna 1	PWR	W			18
North Anna 2	PWR	W			18
Oconee 1	PWR	B&W			18
Oconee 2	PWR	B&W			18
Oconee 3	PWR	B&W			18
Robinson	PWR	Seimens	Recent refueling found several bundles with incorrectly located poison rods; resulted in significant core performance problem. Also, miscalculated initial NI calibration constants; resulted in indicated power 10% below actual.	Same as Harris	
St. Lucie 1	PWR	Seimens- > 5 fuel cycles	SRI found grit in fuel bundle during receipt inspection;		
St. Lucie 2	PWR	CE			
Sequoyah 1	PWR	W			18; going to 24
Sequoyah 2	PWR	W			18; going to 24
Summer	PWR	W			18

Facility	Reactor Type	Fuel Vendor	Problems	Oversight	Cycle length
Surry 1	PWR	W			18
Surry 2	PWR	W			18
Turkey Point 3	PWR	W			18
Turkey Point 4	PWR	W			18
Vogtle 1	PWR	W			18
Vogtle 2	PWR	W			18
Watts Bar	PWR	W			18

## X.X Procurement Engineering Qualification/Certification and Experience

This portion of the inspection was conducted to evaluate the qualification and experience of personnel currently assigned to the procurement engineering organization at St. Lucie. The Organization is currently staffed with a supervisor and ten engineers and technicians, some of which are on temporary assignments. This evaluation was conducted by a review of certification records and interviews with personnel within the group. Personnel in procurement engineering are required to complete a certification program which is outlined in FPL Standard STD-PE-001, Rev. 4, Nuclear Engineering Standard Procurement Engineering Responsibility. The standard provides for a management evaluation of personnel experience and training. This certification process evaluates personnel in a blend of areas including industry standards (e.g. ASME Code, IEE standards, ANSI and ASTM Standards, EPRI standards, etc), reactor plant systems, St. Lucie technical specifications, corporate and site Quality Assurance Instructions, and all of the current guidance regarding the dedication of commercial grade materials. Most of the certification process is based on a combination of work experience and self study in these areas. The inspectors determined that all of the personnel currently assigned to the group have technical college degrees except two materials analysts. One of these analysts has a non technical college degree, and extensive nuclear navy and industry experience in procurement engineering. The other individual has an associates degree from a technical school, and extensive industry experience in the procurement engineering function. All of the individuals in the group have at least three years of experience in procurement engineering at St. Lucie, and other industry experience which establishes an adequate basis for their qualifications. Based on a review of certification records and interviews with these individuals, as well as, the technical review of their work discussed in para RANDY reference the Para on review of the packages, the inspectors concluded that the procurement engineering organization is appropriately staffed with well qualified personnel.

## X.X Material Identification, Storage and Control

The inspectors conducted an inspection of material storage areas in accordance with the requirements of ANSI N45.???. This inspection included walkthroughs of warehouses 1, G-1 and G-2. The inspection included verification of the segregation of acceptable from unacceptable materials, segregation of safety related materials from non-safety related materials, proper identification (tagging) and traceability, proper use of pipe caps, segregation of stainless steel from other materials, maintenance of cleanliness and environmental conditions, etc. In addition, issuance of material from the issue station was observed and materials personnel were interviewed concerning their responsibilities at the time of issue. Also, a sample of commercial grade materials dedicated for safety related applications, which required field dedication testing, were

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reviewed to verify that the appropriate "dedication testing required" tags (applied to alert maintenance personnel that field testing is required prior to installation) had been applied at the time of receipt inspection and had been maintained during storage. No deficiencies were observed by the inspectors during the warehouse walkthroughs.

#### X.X Problem Identification and Resolution

##### RANDY WE NEED AN INTRODUCTORY PARAGRAPH

X.X.1 STARS reviewed

##### RANDY

X.X.2 Supplier Deviation Notices

Supplier Deviation Notices are used at St. Lucie to resolve vendor exceptions to contract/purchase order requirements prior to material shipment. As such, these notices serve as corrective action documents. The inspectors requested the licensee to provide a copy of all SDNs issued in the last two months in order to support a review for appropriateness of corrective actions. The following Supplier Deviation Notices were provided by the licensee and reviewed by the inspectors during the inspection:

SL-95-006-0	SL-95-033-5
SL-95-034-4	SL-95-034-5
SL-95-033-4*	SL-95-033-5*
SL-95-027-4*	

\* Not resolved as of December 8, 1995.

The inspectors' review of these SDNs determined that vendor exceptions were being appropriately dispositioned with the exception of SDN SL-95-034-5:

Upon receipt of purchase order 12173, the vendor advised St. Lucie site purchasing that the fuses to be supplied (stock codes 0199809-1 and 0036616-1) did not meet the purchase order requirements for over-current testing as specified, i.e., testing of a sample of the fuses had determined that the fuses would not break the circuit in the required amount of time when subjected to 200% and 250% of the rated current. SDN SL-95-034-5 was written on November 21, 1995 to obtain a resolution to this vendor exception. The SDN was resolved on November 25, 1995, allowing the vendor to ship the fuses based on PE evaluations 040129 (for stock code 0036616-1) and 040130 (for stock code 0199809). Review of these evaluations and walkthrough of the material in warehouses 1 and G-2 revealed two problems which were presented to the licensee for resolution:

- PE evaluation 040130 concluded that the fuses (stock code 0199809-1) were acceptable for non-safety related application, however, no action was taken to downgrade the material to the

licensee's non-safety Procurement Classification PC-3 or PC-4. As a result, the fuses were found in a ready for issue status in warehouse G-2 tagged with a safety related (PC-1) tag. The end use of these fuses was, however, specified as non-safety in the Passport computer program, which would have prevented their use in safety related equipment. The licensee took action prior to the end of the inspection to downgrade and tag these fuses as PC-3 material.

- PE evaluation 040129 concluded that the vendor should ship the fuses (stock code 0036616-1), and that further engineering evaluation of the specific safety related application would be required prior to installation in plant equipment. As a result, the procurement engineer took action via a computer message to place the fuses "on QC hold" upon receipt. Investigation into this material by licensee personnel and the inspector determined that the fuses had not been placed "on QC hold" as directed by the PE evaluation, but had been received, QC receipt inspected, and made ready for issue as safety related (PC-1) material. Additionally, it was discovered that two of the fuses had been drawn, and installed in a non-safety related application (main feedwater regulating valve circuitry). Once this condition was discovered, the licensee took action to place the fuses in stock "on hold pending PE evaluation," and issued STAR 952127 to identify the root cause of this problem and to document corrective actions. Further investigation of this problem by the licensee determined that the computer message to place the material "on QC hold" was never transmitted to the QC receipt inspection group due to a computer (Passport) programming error. This programming error was generic to both the Turkey Point site and to the St. Lucie site. This error resulted in twenty three additional potential problems at St. Lucie and seventeen potential problems at Turkey Point. The licensee took immediate action to correct the programming error, and investigate all forty potential problems at both sites. No additional material deficiencies at either site were caused by this computer programming error. The failure to follow engineering instructions to place safety related material "on QC hold" pending further PE evaluation is identified as another example of Violation 50-335,389/95-17, for Failure to Follow Procedures for Proper Control of Safety Related Materials.

### X.X.3 Receipt Inspection Deficiency Reports

Receipt Inspection Deficiency Reports are used at St. Lucie to resolve deficiencies discovered during receipt inspection of materials by QC inspection. As such, these deficiency reports serve as corrective action documents. The inspectors requested the licensee to provide a copy of all deficiency reports issued in the last two months in order to support a review for appropriateness of corrective actions. The following deficiency reports were provided by the licensee and reviewed by the inspectors during the inspection:

D0030404	D0032240	D0035584	D0034715
D0034107	D0033907	D0036609	D0037769
D0036163	D0037771	D0037601	D0037398
D0037720	D0029153	D0037668	D4348432
D0031742	D4348411	D4348433	D4348034
D0029916	D0031743	D0030389	D0030719
D0029302	D0029005	D0028011	D0034015
D0030715	D0031729	D003874	D003875
D003879	D0029922	D0036520	D0034972
D0032839	D0031626	D0031626A	D0037649
D0029005	D0031605	D0027431	D0029155

The inspectors' review of these deficiency reports did not identify any weaknesses concerning corrective action for deficiencies identified during the receipt inspection process.

#### X.X Procurement Process

This inspection included a review of all phases of the material requisitioning, pre-screening, engineering, procurement, receipt inspection, identification, storage, and issue control process. The inspection included a review of site and corporate procedures controlling the process, interviews with personnel from maintenance, pre-screening, procurement engineering, purchasing, warehousing, and QC receipt inspection, as well as, a review of documentation generated from each of these groups. As a result, several general observations were made by the inspectors:

- During several of the interviews, the "old" procurement process was discussed. The inspectors learned that in the "old" process, technical changes to the materials catalog (which included the ordering data for material purchases) could be made by pen and ink annotation on a hard copy of the catalog, without any technical justification being provided for the change. As a result, a concern developed that unauthorized or unsupported changes in technical requirements could have occurred. To resolve this concern, the inspectors reviewed a sample of these changes focusing on the technical justification for the changes. Changes made by the material pre-screeners and procurement engineering were reviewed during this effort. Changes to the following M&S stock codes were reviewed by the inspectors:

570-28480-7	570-03490-8	570-24336-1	570-13137-7
772-74237-0	772-72872-5	579-61445-1	579-05308-5
578-14250-5	578-93550-5	578-92076-1	578-36850-3
579-38918-1	579-63676-5		

Review of the changes to these stock codes determined that all of the changes were supported by adequate technical justification, and no unauthorized or unsupported changes had been made. The inspectors' concern in this area was adequately resolved.

- A relatively detailed review of the capabilities of the computer based Passport system was conducted during the inspection. The inspectors concluded that the implementation of this system was an overall strength of the licensee's material procurement and control program. The Passport system provides for easy and direct communication between the various material groups, speeds the procurement process, minimizes material errors, and allows easy access to technical information on material purchasing, stocking and usage.
  
- During the course of the inspection, the inspectors observed the existence of Bill of Materials (BOMs) for many of the plant components. These BOMs included a pre-engineered listing of piece parts used in assembly of components, which included the technical description of the part, the safety classification of the part, the stock code assigned, and stocking information. During personnel interviews it was learned the development of these BOMs was undertaken some time ago, and BOMs have been developed for approximately 50% of the high use equipment in the plant. The inspectors considered BOM development to be a strength of the licensee's material program, due to the fact that it pre-engineers the piece parts, makes identification of piece parts easier and faster, maintains a minimum amount of high use parts available, and minimizes the chance for unqualified parts being installed in the plant. Efforts in BOM development should be continued and supported by plant management.

\*\*\*\*\*RANDY\*\*\*\*\*

I REVIEWED THE FOLLOWING ENGINEERING PACKAGES OUT OF THAT LAST BATCH THAT WE ASK FOR-PLEASE MAKE SURE THEY ARE ON YOUR LIST:

038082 CGD  
039626 EVAL PC III ITEM  
040298 EVAL PC III ITEM  
038781 EVAL PC IV ITEM  
037931 EVAL PC IV ITEM  
040101 EQIV EVAL  
038966 EQIV EVAL  
038962 EQIV EVAL  
038956 EQIV EVAL  
038942 EQIV EVAL  
038941 EQIV EVAL  
038928 EQIV EVAL  
038344 EQIV EVAL

Pre-wit notes

IR 96-13

GIBBS/TAYLOR

10 CFR 50.65 "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as described in 10 CFR 50.65 b(1), in part, requires that the scope of the monitoring program shall include safety related structures systems or components. Additionally, 10 CFR 50.65 (b)(2), in part, requires that the scope of the monitoring program shall include non-safety related structures systems and components that are relied upon to mitigate accidents or transients or are used in plant emergency operating procedures.

Contrary to the above, as of September 16, 1996 the following safety and non-safety related systems structures and components were not included in the licensee's 10 CFR 50.65 monitoring program scope:

- Unit 1 and 2 Main Steam Line Radiation Monitors, RE-26-62, RE-26-63, RE-26-71, RE-26-72, and the Unit 1 Containment Air Radiation Monitors RE-26-31, and RE-26-32.
- The Unit 1 and 2 Post Accident Sampling System (System 55)
- The Licensee's Communications System (System 61)
- The Unit 1 and Unit 2 Service Air System Compressors which are periodically crosstied to the Instrument Air System.

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Administrative Procedure 17.08, Implementation of 10 CFR 50.65, the Maintenance Rule Administrative Procedure St. Lucie Plant, paragraph 7.8, Cause Determinations, states that a cause determination shall be performed for a performance criteria not being met.

Contrary to the above, no cause determination was performed when RCS unavailability exceeded the PLPC 1 criteria (Unplanned availability less than or equal to 5% for each unit, last twelve months.) Reference Condition Reports 96-1981 and 96-2037.

Administrative Procedure 17.08, Implementation of 10 CFR 50.65, the Maintenance Rule Administrative Procedure St. Lucie Plant, paragraph 7.8.4 requires that cause determinations shall consider any generic implications for SSCs other than the one being evaluated.

Contrary to the above, the generic implications of the failure of the TCV valves in the Turbine Control System, which caused a manual reactor trip on June 6, 1996, were not considered for similar TCV valves in other plant systems. PMAI 96-09-210 was issued by licensee concerning this problem.

St. Lucie Plant Systems and Components Engineering Department Guideline SCEG-006, Rev. 0, Guideline for Monitoring Maintenance Effectiveness by Maintenance Rule System Owners, paragraph 7.3, states: "Each responsible system owner shall monitor and trend actual SSC performance against the established performance criteria"

Contrary to the above, WO 95007753-01 and 95007984-01 performed preventive maintenance on SWGR 2AB-01 and 1AB-01 (the 4.16 KV SBO crosstie breakers), respectively, and no unavailability of these breakers was logged against the Unavailability performance criteria in the licensee's Maintenance Rule Quarterly report dated July 9, 1996.



- WOs 95021809=01 and 95023498-01 appear to be MPFFs for the 4.16 KV breakers for the pressurizer heater electrical supply. These failures are not shown in the licensee's Maintenance Rule Quarterly report dated July 9, 1996. This issue is unresolved.
- PLPC 2a and PLPC 2b provide different performance criteria for plant level maintenance rule failures with no apparent technical maintenance basis.
- Plant level unavailability time should be logged against each system in the quarterly report.
- Program is set up to rely on system owners. To date system owners are not a major part of program implementation. System owners were not involved with the initial review of historical data and as a result there is very little corporate memory in this area. Also performance criteria for some SSCs may need adjustment based on System Owner involvement.
- Operator interviewed (1 RO, 1SS) were weak.
- Monitoring of performance criteria/data gathering is weak
- The plant trip related to starting of the fire pumps remains an unresolved item.
- Implementation of the Matrix for removal of equipment from service and for logging equipment OOS is weak (based on the two operators interviewed).
- + goal setting and monitoring of (a)(1) PORVs were appropriate and focussed on the problem.
- + TCW system engineer excellent Brian Gaffney (He has only had the position for 2 months).

The following are examples were identified where the licensee failed to implement requirements of the maintenance rule as described in Administrative Procedure 17.08. Implementation of 10 CFR 50.65.

- Failure to monitor unavailability and functional failures for certain SSCs. (paragraph 4.4.3) (ex. station blackout bkrs, cvcs, hydrazine pump unit 1, 4.16KV Bkrs)
- Failure to perform cause determinations for SSCs which have exceeded plant unavailability performance criteria (paragraph 7.8) (ex. RCS safeties and rx head o-ring)
- Failure to initiate a condition report for a functional failure of a risk significant SSC. (paragraph 7.8) (ex. 1A Boric Acid Makeup pump, 7/25/96)
- Failure to consider generic implications for temperature control valve failures. (paragraph 7.8.4)

04.1 Operator Knowledge or the Maintenance Rule

a. Inspection Scope (62706)

The inspector interviewed two licensed operators (one RO and one SRO) to determine if they understood the general requirements of the maintenance rule and their particular duties and responsibilities for its implementation.

b. Observations and Findings

Operator knowledge of the rule was very limited and did not indicate an understanding of the purpose of the rule nor any of the details of why the rule exists. Each of the operators had a very general knowledge of the rule and its implementation at the site. Training on the rule was very limited (approximately one hour during requalification) and was focussed mainly on the licensee's matrix for removal of equipment from service. There was also very limited knowledge on their specific duties and responsibilities for implementation of the rule. The matrix was not well understood by either operator; they were not aware of what systems were included under the rule, nor how to determine that information; they did not understand that they were an integral part in the logging of system unavailability for performance monitoring; and neither of them had read the procedure for implementation of the rule.

c. Conclusions

Based on the interview of these two operators, the operations duties and responsibilities for implementation of the maintenance rule was very weak.

M1.1 Scope of Structures, Systems, and Components Included Within the Rule

a. Inspection Scope (62706)

Prior to the onsite inspection, the inspectors reviewed the ST. Lucie Final Safety Analysis Report, Licensee Event Reports, the Emergency Operating Procedures, previous NRC Inspection Reports, the site integrated matrix, and other information provided by the licensee. The team selected an independent sample of structures, systems, and components that the team believed should be included within the scope of the rule, which was not classified as such by the licensee. During the onsite portion of the inspection, the inspectors used this list to determine if the licensee had adequately identified the structures, systems, and components that should be included in the scope of the rule in accordance with 10 CFR 50.65 (b).

b. Observations and Findings

The licensee appointed an expert panel to perform several maintenance rule implementation functions including establishing the scope of the Maintenance Rule. The panel reviewed 106 systems in the plant and determined that 72 were in the scope of the rule. In addition, 54 structures were placed within the scope of the rule.

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The inspectors reviewed the licensee's data base and verified that all required structures, systems, and components were included in the rule with the exception of the following:

- The licensee had not included the Post Accident Sampling System in the scope of the Maintenance Rule. Further review of this system determined that the system would be used during the performance of the sites Emergency Operating Procedures to aid in determination of offsite evacuation. Specific examples of this were found in the Emergency Operating Procedures for a Loss of Coolant Accident (EOP-03, Revision 14) and Steam Generator Tube Rupture (EOP-04, Revision 12). This is contrary to 10 CFR 50.65, which requires inclusion of SSCs that mitigate the consequences of an accident and are included in plant EOPs. The licensee issued Condition Report 96-2278 during the inspection to re-evaluate this system for inclusion in the Maintenance Rule.
- The licensee had not included the site Communications System in the scope of the Maintenance Rule. Further review of this system determined that the system is used to mitigate accidents or transients, and is vital in the proper performance of all Off-Normal and Emergency Operating Procedures. A specific reference to the use of the plants Communications System was found in the Station Blackout Crosstie Emergency Operating Procedure (EOP-99, Revision 17). This is contrary to 10 CFR 50.65, which requires inclusion of SSCs that mitigate the consequences of an accident and are included in plant EOPs. The licensee issued Condition Report 96-2278 during the inspection to re-evaluate this system for inclusion in the Maintenance Rule.
- The licensee had not included the Service Air System in the scope of the Maintenance Rule. Review of operator logs determined that the Service Air System Air compressors on Unit 1 had been crosstie to the Instrument Air System on July 13, 1996 in support of plant shutdown conditions. The Instrument Air System is included under the scope of the rule. Discussion of this issue with licensee personnel determined that it was licensee policy to routinely crosstie the Service Air System Compressors to the Instrument Air System during outage conditions. Further investigation determined that this configuration could affect the operation of the Low Pressure Safety Injection System operating in the shutdown cooling mode, and therefore, the Service Air System compressors were required to be included in the scope of the rule. This is contrary to 10 CFR 50.65, which requires inclusion of non-safety related systems whose failure could prevent safety related SSCs from fulfilling their safety function. The licensee issued Condition Report 96-2278 during the inspection to re-evaluate this system for inclusion in the Maintenance Rule.
- The inspection team was aware of a history of problems with radiation monitors, and, as a result, a review of the Radiation Monitoring System for scoping within the Maintenance Rule was conducted, even though the Radiation Monitoring System was included in the rule by the licensee. This review resulted in the

determination that the Main Steam Radiation Monitors had not been included in the scope of the Maintenance Rule, even though both the Main Steam System and the Radiation Monitoring System had been included in the rule. This deficiency was the result of the lack of specific definition of the boundaries between the two systems. Upon discovery of the deficiency the licensee issued Condition Report 96-2264. Preliminary investigation by the licensee also identified the fact that the Unit 1 Containment Air Radiation Monitors were also not included in the scope of the rule. The Main Steam Radiation Monitors are used to mitigate the consequences of an accident and are included in plant EOPs. A specific example of their use is in the Steam Generator Tube Rupture EOP (EOP-04, Revision 12). This is contrary to 10 CFR 50.65, which requires inclusion of SSCs that mitigate the consequences of an accident and are included in plant EOPs.

c. Conclusions

10 CFR 50.65 (b) establishes the scoping criteria for selection of safety related and non-safety related structures, systems, or components to be included within the Maintenance Rule program. Scoping criteria includes safety-related structures, systems, or components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the 10 CFR part 100 guidelines; and non-safety related structures, systems, or components that are relied upon to mitigate accidents or transients or are used in the plant emergency operating procedures, or whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function, or whose failure could cause a reactor scram or actuation of a safety-related system. The deficiencies concerning scoping discussed above are included as examples of a Violation of these requirements, and are cited as Violation 50-335, 389/96-13-01, Failure to Include Structures, Systems, and Components in the Scope of the Maintenance Rule as Required by 10 CFR 50.65 (b).

M1.6 Goal Setting and Monitoring for (a)(1) SSCs

a. Inspection Scope

Bill, use the Palo Verde boiler plate to describe what we looked at

b. Observations and Findings

Unit 1 Power Operated Relief Valves (PORVs)

The licensee had experienced two Maintenance Preventable Functional Failures (MPFFs) on the Unit 1 Pressurizer PORVs in August 1995, which resulted in the valves being inoperable for a period of nine months (Reference LER 95-05). As a result of these failures and the PORV unplanned unavailability associated with these failures, the licensee had put the Unit 1 PORVs in a (1) status. The inspector reviewed the

corrective action for these failures, and the goals and monitoring under the a (1) status, and concluded that the corrective action, goals, and monitoring were appropriate.

During the review of the PORVs, the inspector noted that the plant performance criteria for unit unplanned unavailability had been exceeded due to Reactor Coolant System deficiencies. The licensee was questioned concerning this issue, and it was determined that a cause determination for exceeding this criteria had not been performed in accordance with Licensee procedure ADM 17.08, Revision 7, paragraph 7.8.1.B. Further investigation determined that a condition report (96-2037) had been issued with regard to exceeding this criteria, but had not been resolved. The licensee completed resolution of this condition report during the inspection. The untimely documentation of the cause determination for exceeding the unit unplanned unavailability was considered a weakness in the implementation of the licensee's Maintenance Rule program.

### Conclusions

The Maintenance Rule had been effectively implemented for the Unit 1 Pressurizer PORVs. The untimely documentation of the cause determination for unit unplanned unavailability was considered a weakness.

### 4.16 KV Switchgear and Breakers

The licensee had experienced several repeat Maintenance Preventable Functional Failures (MPFFs) involving failure of 4.16 KV breakers due to floor tripper and latch switch misadjustments. As a result of these failures the licensee had put these breakers in the Maintenance Rule a (1) category. The inspector reviewed the corrective action for these failures, and the goals and monitoring under the a (1) status, and concluded that the corrective action, goals, and monitoring were appropriate. The inspector also reviewed additional work order data concerning performance of these breakers for the period January 1995 to the beginning of the inspection. This review determined that there were two additional repeat MPFFs, and a significant number of breaker unavailability hours, which had not been identified in the licensee's Maintenance Rule Quarterly Report as follows:

- Work Orders 95007753-01 and 95007984-01 performed preventive maintenance on the 4.16 KV Station Blackout Crosstie Breakers, and no unavailability of these breakers was trended against the unavailability performance criteria for these breakers in the licensee's Maintenance Rule Quarterly report dated July 9, 1996.
- WOs 95021809-01 and 95023498-01 reported repetitive maintenance preventable functional failures for the 4.16 KV breakers for the pressurizer heater electrical supply which were not shown in the licensee's Maintenance Rule Quarterly report dated July 9, 1996.

This is contrary to licensee procedure ADM 17.08, Revision 7, paragraph 7.6.4 and 7.11.2.A, which require performance monitoring be accomplished by tracking specific (SSC Level) and/or Plant Level Performance Criteria and repetitive maintenance preventable functional failures, and the

documentation of this information the licensee's Maintenance Rule Quarterly Reports. Failure to track repeat MPFFs and SBO unavailability hours against their performance criteria are included as examples of a Violation 50-335, 389/96-13-03, Failure to Follow Procedures for Implementation of the Maintenance Rule.

### Conclusions

Based on the above, the inspector concluded that implementation of the Maintenance Rule for 4.16 KV breakers was weak.

#### M1.7 Preventive Maintenance and Trending for (a)(2) SSCs

##### a. Inspection Scope

Bill, use the Palo Verde boiler plate to describe what we looked at

##### b. Observations and Findings

#### Turbine Cooling Water System

The licensee had experienced two failures in the Turbine Cooling Water (TCW) System on Unit 2, which caused manual reactor trips during the first six months of 1996. This was below the performance criteria (less than or equal to two failures causing manual reactor trips within the past twelve months) established by the licensee in order to keep the system in Maintenance Rule category a (2). However, the team determined that this criteria had no technical basis as discussed in paragraph XXX. (Bill - reference the para on the vio for less than or equal to 2 failures) Even though the TCW System had been classified as a (2), the system had been reported to management as a system requiring "heightened awareness" in the Maintenance Rule Quarterly Report dated July 9, 1996. Review of the TCW failures determined that they were caused by the failure of the same temperature control valve (TCV-13-15), but the failures were due to two different causes (one failure involving electrical logic and one failure involving disconnect of the operator actuator feedback arm from the valve). The inspector reviewed the work order history for valve TCV-13-15 during the previous twelve months, and no additional failures of the valve were found. In addition, the inspector reviewed the corrective action for these two failures. The inspector determined that corrective action was appropriate with the one exception: The corrective action for the actuator arm failure had considered similar valves in the TCW system for both units, however, it had not considered similar valves in other plant systems. This is contrary to licensee procedure ADM 17.08, Revision 7, paragraph 7.8.4, which requires that cause determinations for failures shall consider any generic implications for structures, systems and components other than the one being evaluated. The licensee issued Plant Managers Action Item (PMAI) 96-09-210 when advised of this deficiency. Failure to consider the generic implications of a Maintenance Preventable Functional Failure is included as an example of a Violation 50-335, 389/96-13-03, Failure to Follow Procedures for Implementation of the Maintenance Rule.

### Conclusions

The inspector concluded that The Maintenance Rule had been adequately implemented for the Turbine Cooling Water System. On example of failure to follow procedure for implementation or the Maintenance Rule was observed.

#### Main Feedwater System

Review of the Main Feedwater System determined that appropriate performance criteria had been established and monitoring was being accomplished against those criteria. Review of the problems associated with the system determined that appropriate corrective actions had been taken for failures. Operating experience was being used in system monitoring. No deficiencies were noted concerning this system.

#### Conclusions

The Maintenance Rule had been effectively implemented for the Main Feedwater System.

### M2.1 Maintenance and Material Conditions of Facilities and Equipment

#### a. Inspection Scope

In the course of verifying the implementation of the Maintenance Rule using inspection procedure 62706, the inspector performed walkdowns to examine the material condition of the Main Feedwater System and the Turbine Cooling Water System.

#### b. Observations and Findings

The inspector found that the systems inspected appeared to be free of corrosion; oil leaks; water leaks; trash; and based on external inspection, well maintained, especially considering the corrosive conditions that exist at St. Lucie.

#### c. Conclusions

In general, the material condition of systems inspected was satisfactory.

### E2.1 Review of UFSAR Commitments

Bill, use the boiler plate in the Palo Verde inspection - I have reviewed the FSAR for my assigned systems - Main Feedwater, Turbine Cooling Water, U1 PORVs, and 4.16 KV breakers.

### E4.1 Engineer Knowledge of the Maintenance Rule

#### a. Inspection Scope

Bill, use Palo Verde boiler plate - I interviewed 1 component engineer who was well experienced and 4 systems engineers, 2 of which had been recently assigned

#### b. Observations and Findings



The licensee had assigned nearly one half of the staff to the systems engineering organization within the last month and one half prior to this inspection. The design of the licensee's program for implementation of the Maintenance Rule is heavily dependent on systems engineers for implementation. As a result, the knowledge and experience of the newly assigned personnel was very limited. One exception to this observation was made involving the systems engineer for the Turbine Cooling Water System. This individual, in a month and a half, was already familiar with the issues on his assigned system, was in the process of initiating necessary corrective actions, and was very responsive to concerns raised by the NRC inspector.

c. Conclusions

The fact that the licensee assigned systems engineers so late in the process for implementation of the rule is viewed as the major contributing factor to the deficiencies noted during this inspection.

INFORMATION ON EMERGENCY OPERATIONS FACILITIES (EOFs) FOR REGION II PLANTS

8  
13  
8  
9/1/96

Site	EOF Location (distance in air miles if offsite)	Distance in miles from staffing organ. (normal wrkg. hours)	Meets criteria of NUREG-0737, Supp. 1? Location* Staffing**		Real-Time Staffing Demonstrated?	NRC Verification of R-T Staffing Documented in IRN	Backup EOF*** Meets NUREG-0737 Location Criteria?	Staff Dist. (mi.)
Browns Ferry	Chattanooga, TN (105)	0	No	Yes (60)	Yes	95-32 (Par. 10)	N/A	N/A
Brunswick	Onsite	0	Yes	No (75)	Yes	94-30 (Par. 9)	Yes - see NOTE A	12
Catawba	Charlotte, NC (17)	17	Yes	No (75)	Yes	96-04 (Par. 9)	N/A	N/A
Crystal River	Crystal River, FL (11)	11	Yes	Yes (60)	Yes	91-08 (Par. 8)	N/A	N/A
Farley	Onsite	0	Yes	No (75)	Yes	94-25 (Par. 9)	Yes	16
Harris	Nearsite (2)	2	Yes	No (75)	Yes	95-07 (Par. 10)	No - see NOTE B	21
Hatch	Onsite	0	Yes	Yes (60)	Yes	95-15 (Par. 10)	No - see NOTE C	21
McGuire	Charlotte, NC (15)	15	Yes	No (75)	Yes	93-21 (Par. 9)	N/A	N/A
North Anna	Onsite	0	Yes	Yes (60)	Yes	94-14 (Par. 9)	No - see NOTE D	0
Oconee	Clemson, SC (9.5)	9.5	No	No (75)	Yes	94-10 (Par. 9)	N/A	N/A
Robinson	Onsite	0	Yes	No (75)	Yes	95-28 (Par. 10)	Yes - see NOTE E	=15
St. Lucie	SR 712 at I-95 (10.5)	10.5	Yes	Yes (60)	Yes	96-02 (Par. 10)	N/A	N/A
Sequoyah	Chattanooga, TN (18)	0	Yes	Yes (60)	Yes	94-32 (Par. 9)	N/A	N/A
Summer	Jenkinsville, SC (3)	3	Yes	Yes (60)	Yes	95-11 (Par. 10)	No - see NOTE F	25
Surry	Onsite	0	Yes	No (90)	Yes	95-10 (Par. 10)	No - see NOTE D	0
Turkey Point	Miami, FL (26)	26	No	Yes (60)	Yes	95-07 (Par. 9)	N/A	N/A
Vogtle	Nearsite (1.5)	1.5	Yes	Yes (60)	Yes	95-02 (Par. 9)	N/A	N/A
Watts Bar	Chattanooga, TN (50)	0	No	Yes (60)	Yes	95-78 (Par. 10)	N/A	N/A

\*Table 1 of Supplement 1 to NUREG-0737 specifies two options for EOFs: (1) a primary facility within 10 miles and a backup facility at 10-20 miles, or (2) a single facility at or beyond 10 miles; if beyond 20 miles, specific Commission approval is required. Exceptions to the location criteria were explicitly granted by the Commission for Browns Ferry, Oconee, Turkey Point, and Watts Bar.

\*\*The number listed in parentheses is EOF staffing time in minutes. Table 2 of Supplement 1 to NUREG-0737 specifies 60 minutes as the goal for staffing an EOF following the event declaration for which staffing is required. In the cases of the facilities whose EOF staffing times are 75 or 90 minutes, the NRC has formally evaluated and accepted the licensee's justification of a "reasonable exception" (as provided for in Supplement 1) to the 60-minute goal.

\*\*\*The sites for which "N/A" (not applicable) is indicated in this column are those not required to have a backup EOF (see the \* footnote above). NOTES referenced in this column will be found on the following page.

INFORMATION ON EOFs FOR REGION II PLANTSNotes on Backup EOFs:

- NOTE A: Although the location (Brunswick County Complex in Bolivia, NC) meets the criterion of 10-20 miles from the plant site, the facility would function only as a temporary meeting place for the EOF staff in the event that radiological conditions were to prevent personnel from traveling to the onsite EOF. A letter dated December 16, 1988 from NRC (R. H. Lo, NRR) to the licensee (E. E. Utley) documented the NRC staff's approval of this arrangement, which is delineated in the licensee's Emergency Plan. The approval was largely based upon the high degree of radiological protection provided by the design of the primary EOF.
- NOTE B: The location (Center Plaza Building in Raleigh, NC), at 26 miles from the plant site, deviates only slightly from the criterion of 10-20 miles, and was not considered by the NRC to be a significant issue. The facility would function only as a temporary meeting place for the EOF staff in the event that radiological conditions were to prevent personnel from traveling to the nearsite EOF. A letter dated December 16, 1988 from NRC (R. H. Lo, NRR) to the licensee (E. E. Utley) documented the NRC staff's approval of this arrangement, which is delineated in the licensee's Emergency Plan. The approval was largely based upon the high degree of radiological protection provided by the design of the primary EOF.
- NOTE C: A memorandum dated February 4, 1993 (re: SECY-93-004) from the Secretary to J. M. Taylor documented Commission approval of the licensee's request to relocate the backup EOF to its Emergency News Center Complex in Vidalia, GA, 21 miles from the plant site.
- NOTE D: A letter dated January 13, 1984 from NRC (D. G. Eisenhower, NRR) to the licensee (W. L. Stewart) documented the NRC staff's acceptance of the licensee's use of its corporate EOF in Glen Allen, VA as the backup EOF for both North Anna and Surry. The corporate EOF is located 29 and 58 miles, respectively, from the plant sites.
- NOTE E: Although the location (National Guard Armory in Darlington, SC) meets the criterion of 10-20 miles from the plant site, the facility would function only as a temporary meeting place for the EOF staff in the event that radiological conditions were to prevent personnel from traveling to the onsite EOF. A letter dated December 16, 1988 from NRC (R. H. Lo, NRR) to the licensee (E. E. Utley) documented the NRC staff's approval of this arrangement, which is delineated in the licensee's Emergency Plan. The approval was largely based upon the high degree of radiological protection provided by the design of the primary EOF.
- NOTE F: A letter dated May 9, 1984 from NRC (D. G. Eisenhower, NRR) to the licensee (O. W. Dixon, Jr.) documented the Commission's acceptance of the licensee's use of its corporate office in Columbia, SC as the location of the backup EOF for the Summer plant. The corporate office is located 25 miles from the plant site.

PLANT RANKINGS IN PLANT SUPPORT (HP & EP only)

HEALTH PHYSICS

TOP THIRD (ABOVE AVE)	MIDDLE THIRD (AVERAGE)	LOWER THIRD (BELOW AVE)
BFNP	CR3	BRU
HAR	MCG	CAT
OCO	NA	FAR
SUM	ROB	HAT
TP	SUR	SQN
VOG	WBN	STL

EMERGENCY PREPAREDNESS

TOP THIRD (ABOVE AVE)	MIDDLE THIRD (AVERAGE)	LOWER THIRD (BELOW AVE)
BFNP	BRU	HAT
HAR	CAT	MCG
OCO	CR3	ROB
SUM	FAR	SQN
SUR	NA	STL
VOG	WBN	TP

MAJOR RATING CRITERIA

HEALTH PHYSICS

Radiation dose (including 3yr. average)  
Alara Program initiatives and results  
HP Violations and severity level  
Events

EMERGENCY PREPAREDNESS

Response to actual EP events  
EP exercise findings  
EP inspection findings/violations  
EP Plan review issues

II. Functional Area Assessments

1. Plant Support

A. The last SALP cycle ended 1/6/96. Plant Support was Category 1. The licensee continues to maintain a satisfactory level of performance in the area of Plant Support. Some decline in Radiation Protection has been noted due to the loss of control of contaminated tools and exceeding dose goals. Insufficient information is available at this time to assess the Chemistry, Effluent, Waste, Transportation and Emergency Preparedness programs. Hurricane preparations for hurricane Bertha were conservative. Overall, site security has been adequate. Training and qualification noted as a strength and management observed to be aggressive in pursuing issues, but not aggressive in doing indepth review of events. Implementation of the fire protection program continued to be satisfactory. Fire protection activities were primarily monitored by the resident inspectors during the PPR period.

B. Basis

Radiation Protection

NCV for failure to control contaminated tools used in RCA (96-04, p 45)

Violation (repeat of above NCV) for numerous examples of failure to control contaminated tools. (96-09, p 25)

Internal and external exposures below 10 CFR Part 20 limits. (96-04, p 45 and 96-04, p 23) (1996 dose levels?????????)

1995 dose was 412 person-rem. Unplanned maintenance and rework caused 1995 dose goal of 283 person-rem to be exceeded by 129 person-rem. (96-04, p 50)

Rad Techs decreased from 32 to 30 and 2 supervisors lost (96-04, p 48)

Decon staff reduced from 22 to 12 persons. Levels of contaminated equipment and materials increasing (96-04, p 46)

Good radiological housekeeping and controls. (96-09, p 28)

The total area contaminated was at 250 ft<sup>2</sup>. (96-04, p 47)

Licensee accreditation of the FP&L DADs a good example of Radiation Protection staff's technical capabilities. (96-04, p 44)

Emergency Preparedness

Conservative actions taken to prepare for Hurricane Bertha (96-11, p 3)

Security

Failure to report a confirmed tampering event within one hour, which resulted in a violation.

Two events in prior to the above tampering event were documented as tampered or unauthorized work, but management failed to notify security of these events.

Numerous problems discovered by a QA audit determined the FFD program to be weak.

Fire Protection

A backup fire pump was installed to replace an out of service larger fire pump without an engineering evaluation.

C. Recommended Inspection Effort

Inspections

Health Physics

Operational HP(83750)  
Effl/RadWast(84/86750)  
TI 133 Rad Waste

Rationale

(SALP 1 decline - maintain; watch)  
2-Inspections with focus on procedure compliance; rework doses  
3-inspections with focus on accident/process monitor installation & maintenance  
Combine with 86750

Emergency Preparedness

EP Prog (82701)

1-Inspection with focus on Self Assessment results  
1-Reg Init. inspection on allegation followup(2 weeks)

Security

Security Prog (81700)

Core insp to review security audits, corrective actions, management support and effectiveness, and review protected area detection equipment.

Sec. Prg/FFD (81700/81502)

One regional initiative to followup on tampering and FFD issues.

VBS (TI 2515/132)

Inspection of Vehicle Barrier System TI

Fire Protection

None

Saint Lucie Inspection Activities During The Assessment Period 02/01/96 - 09/30/96

IR 96-01; period 01/07/96 - 02/17/96; issued 03/18/96; IP 71750

Resident Report, Radiological Protection topics (71750) were reviewed by residents.

IR 96-03; period 01/26/96 - 01/30/96; issued 02/22/96

Special inspection of Over Dilution Event of January 22, 1996

IR 96-04; period 02/18/96 - 03/30/96; issued 04/29/96; IPs 71750 and 83750

Resident Report, Emergency Preparedness topics (71750) were reviewed by residents.

PSB Inspection, Radiological Protection (83750) topics were reviewed by Region II inspector

IR 96-05; period 04/30/96 - 05/03/96; issued 05/31/96

Security inspection by Region II inspector

IR 96-06; period 03/31/96 - 05/11/96; issued 06/07/96; IPs 93702

Resident Report, Emergency Preparedness topics (93702) were reviewed by residents.

IR 96-08; period 05/12/96 - 06/08/96; issued 07/08/96; IPs 71750

Resident Report, Radiological Protection topics (71750) were reviewed by residents.

IR 96-09; period 06/09/96 - 07/06/96; issued 08/05/96; IPs 71750 and 83750

Resident Report, Fire Protection topics (71750) were reviewed by residents.

PSB Inspection, Radiological Protection (83750) topics were reviewed by Region II inspector

IR 96-11; period 07/07/96 - 08/03/96; issued 08/05/96; IP 71707

Resident Report, No Plant Support Section in report, preparations for hurricane Bertha (71707) were reviewed by residents.

IR 96-12; 07/12/96; issued 08/26/96;

Special 50.59 Inspection

**St. Lucie Violations**  
02/01/96 - 09/30/96

During the assessment period three violations were identified.

VIO 96-04-01, Failure to Follow Procedures lead to Unit 1 Containment Particulate-Iodine-Noble Gas Monitor In-operability. This violation resulted in a Technical Specification violation during start-up. (IR 96-04, pages 14-15, paragraph O4.2)

NCV 96-04-05, Improper Health Physics Practices, Failure to follow licensee radiation protection procedures. The poor health physics practices identified as an URI in IR 96-01 later resulted in a NCV 96-04-05. (IR 96-04, pages 39 and 40, paragraph M8.1)

NCV 96-04-06, Failure to Follow Contamination Control Procedures for the Control and Use of Contaminated tools in the RCA. (IR 96-04, pages 45 & 46, paragraph R3.1)

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Emergency Preparedness

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Security

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Fire Protection

A backup fire pump was installed to replace an out of service larger fire pump without an engineering evaluation.

C. Recommended Inspection Effort

Inspections

Health Physics

- Operational HP(83750)
- Effl/RadWast(84/86750)
- TI 133 Rad Waste

Rationale

- (SALP 1 decline - maintain, watch)
- 2-Inspections with focus on procedure compliance, rework doses
- 3-inspections with focus on accident/process monitor installation & maintenance
- Combine with 86750

Emergency Preparedness

- EP Prog (82701)

- 1-Inspection with focus on Self Assessment results
- 1-Reg Init. inspection on allegation followup(2 weeks)

Security

- Security Prog (81700)

Core Insp to review security audits, corrective actions, management support and effectiveness, and review protected area detection equipment.

- Sec. Prg/FFD (81700/81502)

One regional initiative to followup on tampering and FFD issues.

- VBS (TI 2515/132)

Inspection of Vehicle Barrier System TI

Fire Protection

None

Saint Lucie Inspection Activities During The Assessment Period 02/01/96 - 09/30/96

IR 96-01; period 01/07/96 - 02/17/96; issued 03/18/96; IP 71750

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Security inspection by Region II inspector

IR 96-06; period 03/31/96 - 05/11/96; issued 06/07/96; IPs 93702

Resident Report, Emergency Preparedness topics (93702) were reviewed by residents.

IR 96-08; period 05/12/96 - 06/08/96; issued 07/08/96; IPs 71750

Resident Report, Radiological Protection topics (71750) were reviewed by residents.

IR 96-09; period 06/09/96 - 07/06/96; issued 08/05/96; IPs 71750 and 83750

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IR 96-11; period 07/07/96 - 08/03/96; issued 08/05/96; IP 71707

Resident Report, No Plant Support Section in report, preparations for hurricane Bertha (71707) were reviewed by residents.

IR 96-12; 07/12/96; issued 08/26/96;

Special 50.59 Inspection

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02/01/96 - 09/30/96

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C. Recommended Inspection Effort

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Health Physics

Operational HP(83750)  
Eff/RadWast(84/86750)  
TI 133 Rad Waste

Rationale

(SALP 1 decline - maintain; watch)  
2-Inspections with focus on procedure compliance; rework doses  
3-inspections with focus on accident/process monitor installation & maintenance  
Combine with 86750

Emergency Preparedness

EP Prog (82701)

1-Inspection with focus on Self Assessment results

1-Reg Init. inspection on allegation followup(2 weeks)

Security

Security Prog (81700)

Core Insp to review security audits, corrective actions, management support and effectiveness, and review protected area detection equipment.

Sec. Prg/FFD (81700/81502)

One regional initiative to followup on tampering and FFD issues.

VBS (TI 2515/132)

Inspection of Vehicle Barrier System TI

Fire Protection

None

*Possible gap in cost  
@ Rad Mon  
Part I - note  
resolute by Ref Sup*

*True?*

*alleg*

*failure of EAP?*

*Outage?*

*No imp*

*Oil barrel  
alleg*

*→ failure to report??  
Self Assessment*

*Inspector  
fact on new  
concerns.*

Saint Lucie Inspection Activities During The Assessment Period 02/01/96 - 09/30/96

IR 96-01; period 01/07/96 - 02/17/96; issued 03/18/96; IP 71750

Resident Report, Radiological Protection topics (71750) were reviewed by residents.

IR 96-03; period 01/26/96 - 01/30/96; issued 02/22/96

Special inspection of Over Dilution Event of January 22, 1996

IR 96-04; period 02/18/96 - 03/30/96; issued 04/29/96; IPs 71750 and 83750

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IR 96-05; period 04/30/96 - 05/03/96; issued 05/31/96

Security inspection by Region II inspector

IR 96-06; period 03/31/96 - 05/11/96; issued 06/07/96; IPs 93702

Resident Report, Emergency Preparedness topics (93702) were reviewed by residents.

IR 96-08; period 05/12/96 - 06/08/96; issued 07/08/96; IPs 71750

Resident Report, Radiological Protection topics (71750) were reviewed by residents.

IR 96-09; period 06/09/96 - 07/06/96; issued 08/05/96; IPs 71750 and 83750

Resident Report, Fire Protection topics (71750) were reviewed by residents.

PSB Inspection, Radiological Protection (83750) topics were reviewed by Region II inspector.

IR 96-11; period 07/07/96 - 08/03/96; issued 08/05/96; IP 71707

Resident Report, No Plant Support Section in report, preparations for hurricane Bertha (71707) were reviewed by residents.

IR 96-12; 07/12/96; issued 08/26/96;

Special 50.59 Inspection

**St. Lucie Violations**  
02/01/96 - 09/30/96

During the assessment period three violations were identified.

VIO 96-04-01, Failure to Follow Procedures lead to Unit 1 Containment Particulate-Iodine-Noble Gas Monitor In-operability. This violation resulted in a Technical Specification violation during start-up. (IR 96-04; pages 14-16, paragraph O4.2)

NCV 96-04-05, Improper Health Physics Practices, Failure to follow licensee radiation protection procedures. The poor health physics practices identified as an URI in IR 96-01 later resulted in a NCV 96-04-05. (IR 96-04, pages 39 and 40, paragraph M8.1)

NCV 96-04-06, Failure to Follow Contamination Control Procedures for the Control and Use of Contaminated tools in the RCA. (IR 96-04, pages 45 & 46; paragraph R3.1)

## ST. LUCIE SPECIAL INSPECTION TEAM

### Team Charter

- A. Develop a chronological sequence of events describing identification of and licensee responses to suspected precursor and known tampering events. (Munday-lead)
- B. Evaluate licensee's response to the recent suspected and known tampering events to determine if:
  - plant components, which have had tampering, have been adequately evaluated and the known degradation has been corrected. (Munday)
  - plant safety systems have been sufficiently evaluated for potential tampering to assure they can perform their intended functions. (Munday-lead; Wiens)
  - plant management adequately responded to the suspected precursor and known tampering events. (Barr)
  - plant management has implemented adequate interim actions to detect new tampering. (Wiens-lead; Thompson-Sec.)
  - plant investigations are sufficiently thorough in attempting to identify the person(s) responsible for the tampering. (Thompson)
  - plant systems/components that experienced tampering have been maintained consistent with the plant licensing basis including location and personnel access to equipment. (Wiens)
  - assess whether personnel access to tampered components was in accordance with approved security plan and other regulatory requirements. (Thompson)
- C. Issue an unclassified, final report by September 11, 1996. A supplemental report which includes safeguards information may also be issued at the same time.
- D. Inspection team will report to the Director, Division of Reactor Safety, Region II.

### Inspection Team Members

- K. P. Barr - Team Leader
- L. A. Wiens
- J. T. Munday
- D. H. Thompson

8/16/96

## 1ST DRAFT DETAILED PLAN

Resident Inspector (Munday)

1. Establish chronology/sequence from operations/maintenance/engineering for events (May 1996 through present).
2. Determine adequacy of licensee actions taken to correct degraded components.
3. For each safety system on each unit, determine adequacy of licensee actions to identify additional tampering. Perform independent walkdown evaluations of several important systems for previously unidentified tampering to independently verify licensee's conclusions.
4. Determine adequacy of licensee actions to evaluate system interactions that may relate to the known tampering (eg. some mechanism that would have forced operators to use the shutdown panels).
5. Determine the adequacy of the licensee's evaluation of any synergistic effects of known and suspected tampering (eg. relation between SI relief valves and SI key switches).

## 1ST DRAFT DETAILED PLAN

Security Inspector (Thompson)

1. Establish security chronology/sequence of events (May 196 through present).
2. Determine adequacy of licensee actions taken to investigate/evaluate the known degraded components and tamper mechanisms to identify the responsible person.
3. Determine adequacy of interim actions of security is sufficient to expeditiously detect new tampering.
4. Determine adequacy of the security response to the events of suspected and known tampering. Include immediate responses by management and any compensatory actions implemented.
5. Determine adequacy of criterion used to decrease security.

## 1ST DRAFT DETAILED PLAN

Project Manager (Wiens)

1. Review installed configuration of components in the Remote S/D Panels to determine whether they meet licensing basis.
2. Determine adequacy of interim actions of operations, maintenance, and engineering is sufficient to expeditiously detect new tampering.
3. As assigned, for each safety system on each unit, determine adequacy of licensee actions to identify additional tampering. As assigned, perform independent walkdown evaluations of several important systems for previously unidentified tampering to independently verify licensee's conclusions.