October 15, 1999

Virginia Electric and Power Company
ATTN: Mr. J. P. O'Hanlon
Senior Vice President--Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: MID-CYCLE PLANT PERFORMANCE REVIEW (PPR) - NORTH ANNA

Dear Mr. O'Hanlon:

On September 30, 1999, the NRC staff completed the mid-cycle PPR of the North Anna Power Station. The staff conducted these reviews for all operating nuclear power plants to integrate performance information and to plan for inspection activities at your facility over the next five months. The focus of this performance review was to identify changes in performance over the past six months, and to allocate inspection resources accordingly.

Based on this review, we did not identify any new areas that warranted more than the core inspection program over the next five months. It is still our intention, however, to continue our regional initiative inspections of open items associated with the Safety System Engineering Inspection and operation of the Independent Spent Fuel Storage Installation. In addition, the safety issue inspection addressed in Temporary Instruction 2515/142, "Draindown During Shutdown and Common-Mode Failure (Generic Letter 98-02)," will be performed.

Enclosure 1 contains a historical listing of plant issues, referred to as the Plant Issues Matrix (PIM), that were considered during this PPR process to arrive at an integrated review of licensee performance trends. The PIM includes items summarized from inspection reports or other docketed correspondence between the NRC and Virginia Electric and Power Company from October 1, 1998, to September 30, 1999. As noted above, greater emphasis was placed on those issues identified in the past 6 months during this performance review. The NRC does not attempt to document all aspects of licensee programs and performance that may be functioning appropriately. Rather, the NRC only documents issues that the NRC believes warrant management attention or represent noteworthy aspects of performance. In addition, the PPR may also have considered some predecisional and draft material that does not appear in the attached PIM, including observations from events and inspections that had occurred since the last NRC inspection report was issued, but had not yet received full review and consideration. Once this predecisional material is finalized it will be placed in the public document room as part of normal issuance of NRC inspection reports and other correspondence.

This letter advises you of our plans for future inspection activities at your facility so that you will have an opportunity to prepare for these inspections and to provide us with feedback on any planned inspections that may conflict with your plant activities. Enclosure 2 details our inspection plan through March 2000 to coincide with the scheduled implementation of the

IE20

revised reactor oversight process in April 2000. The rationale or basis for each inspection outside the core inspection program is discussed above so that you are aware of the reason for emphasis in these program areas. Routine resident inspections are not listed due to their ongoing and continuous nature.

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at 404-562-4550 with any questions you may have.

Sincerely,

Orig signed by Robert C. Haag

Robert C. Haag, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket Nos. 50-338, 50-339, 72-16
License Nos. NPF-4, NPF-7, SNM-2507

Enclosures: 1. Plant Issues Matrix
2. Inspection Plan

cc w/encls:
J. H. McCarthy, Manager
Nuclear Licensing and
Operations Support
Virginia Electric and Power Company
Electronic Mail Distribution

W. R. Matthews
Site Vice President
North Anna Power Station
Virginia Electric and Power Company
Electronic Mail Distribution

E. S. Grecheck
Site Vice President
Surry Power Station
Virginia Electric and Power Company
Electronic Mail Distribution

Executive Vice President
Old Dominion Electric Cooperative
Electronic Mail Distribution

cc w/encls.: Continued see page 3

cc w/encls.: Continued

County Administrator
Louisa County
P. O. Box 160
Louisa, VA 23093

Donald P. Irwin, Esq.
Hunton and Williams
Electronic Mail Distribution

Attorney General
Supreme Court Building
900 East Main Street
Richmond, VA 23219

cc w/encls: Continued
Donald P. Irwin, Esq.
Hunton and Williams
Electronic Mail Distribution

Attorney General
Supreme Court Building
900 East Main Street
Richmond, VA 23219

Distribution w/encls:
N. Kalyanam, NRR
W. Dean, Chief, NRR/DIPM/IIPB
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OFFICE	RII:DRP	RII:DRS	RII:DRS	RII:DRS	RII:DRS		
SIGNATURE							
NAME	LGarner	ABelisle	KLandis	KBarr	CChristensen		
DATE	10/ /99	10/13/99	10/13/99	10/13/99	10/13/99	10/ /99	10/ /99
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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Distribution w/encls.:
S. Collins, NRR
J. Zwolinski, NRR
W. Dean, Chief, NRR/DIPM/IIPB
R. Borchardt, OE
R. Emch, NRR
J. Yerokun, Regional Coordinator, EDO
G. Edison, NRR
PUBLIC

* FOR PREVIOUS CONCURRENCE SEE ATTACHED

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SIGNATURE							
NAME	LGarner	ABelisle *	KLandis *	KBarr*	CChristensen *		
DATE	10/15/99	10/ /99	10/ /99	10/ /99	10/ /99	10/ /99	10/ /99
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Region II
NORTH ANNA

Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
08/28/1999	1999005-01	**Pri:** OPS	Licensee	NCV	**Pri:** 1A	**Placement of Unit 2 Deborating Demineralizer (2-CH-I-3A) in Service for One Hour**
		Sec:			**Sec:** 3C	A non-cited violation of Technical Specification 6.8.1 was identified for failure to follow procedures which required operating personnel to minimize distractions during reactivity changes. The control board operator was distracted by other activities and left the Unit 2 deborating demineralizer in service for one hour rather than the planned 10 minutes. A minor increase in reactor power to 100.15 percent resulted. In addition, an extra control board operator and the unit senior reactor operator, who had verified the proper system lineup, were also distracted by other activities and failed to notice the problem.
Dockets Discussed:					**Ter:** 3A	
05000339 NORTH ANNA 2						
08/28/1999	1999005	**Pri:** OPS	NRC	NEG	**Pri:** 2A	**Service Water System Pond Spray Array Walkdown Inspection**
		Sec: ENG			**Sec:** 4B	The inspectors performed service water system spray pond area walkdowns and assessed conditions of the pond's service water spray array piping and nozzle assemblies. During the initial walkdown, pin hole leaks and clogged nozzles were identified to the licensee. During a subsequent walkdown at the end of the report period, the inspectors observed acceptable system component performance with only minor deficiencies. Engineering evaluated a removed section of service water spray array piping which had general and localized pitting on the pipe's interior. Based upon this assessment, the licensee considered the spray array piping to be degraded but was capable of performing its intended safety function
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** OPS	NRC	POS	**Pri:** 2A	**1H Emergency Diesel Generator Starting Air System General Walkdown**
		Sec:			**Sec:** 1A	The starting air system for the 1H emergency diesel generator was in good condition. All system components were properly positioned and labeled as compared to plant drawings and procedures. No system air leaks were identified.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** OPS	NRC	POS	**Pri:** 2A	**Internal Flood Protection Readiness**
		Sec:			**Sec:** 4B	Flood protection equipment and instrumentation were operable and were maintained in good condition. Internal flooding procedures were of good quality and operators demonstrated knowledge of flood protection actions.
Dockets Discussed:					**Ter:** 3B	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** OPS	NRC	POS	**Pri:** 3A	**Observation of Spent Fuel Cask Operation**
		Sec:			**Sec:** 4B	The procedures used for loading and testing of a spent fuel dry cask and related activities provided adequate details for craft personnel to conduct the work. Craft personnel followed procedures and properly performed work. Radiation control personnel constantly monitored the radiation levels around the cask. The records for cask loading and related activities were adequate.
Dockets Discussed:					**Ter:** 1C	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** OPS	NRC	POS	**Pri:** 5C	**Service Water System Pipe Leak in Unit 2 Control Room Ventilation Chiller Room**
		Sec:			**Sec:** 1A	Corrective actions to repair a service water system leak in the Unit 2 control room chiller room was timely. Operations response to the identified leak and actions taken to realign plant equipment to comply with Technical Specifications requirements were appropriate.
Dockets Discussed:					**Ter:** 2A	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						

Enclosure 1

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Region II
NORTH ANNA

Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
07/17/1999	1999004-01	**Pri:** OPS **Sec:**	Licensee	NCV	**Pri:** 1A **Sec:** 3A **Ter:**	**Painting With a Safeguards Area Ventilation System Iodine Filter in Service** A Non-Cited violation of Technical Specification 6.8.1, "Procedures and Programs," was identified for painting in a ventilation zone that directly communicated with the auxiliary building iodine filter while the filter was in service.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003	**Pri:** OPS **Sec:**	NRC	NEG	**Pri:** 2A **Sec:** 1A **Ter:**	**Auxiliary Service Water System General Walkdown** Material condition of several supports associated with the auxiliary service water system was poor due to corrosion caused by ineffective sump pump operation. All valves were in their required position; however, three component labeling issues were identified. There was mild surface rusting of carbon steel components, none affecting component integrity. Housekeeping issues identified included inoperable lighting, wet flooring, groundwater inleakage and the presence of rust scale and smaller trash items.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1A **Sec:** 3A **Ter:** 2A	**Unit 1 Power Reduction** Plant operators properly reduced load to 60% to support modifications to the main generator's bus duct cooling system. Procedure usage, annunciator response, communications, and management oversight of the evolution were appropriate. The unit properly responded to the load decrease and no unusual secondary plant equipment performance issues were identified.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1B **Sec:** 2A **Ter:** 3A	**Controller Malfunction Caused Opening of Unit 2 Power Operated Relief Valve** Operator response to a transient caused by a malfunction of the pressurizer pressure master controller was good. The operators terminated the transient by immediately closing the power operated relief valve (PORV) and the pressurizer spray valves and placing the pressurizer master pressure controller in manual. Applicable actions required by Technical Specification 3.4.3.2, "Safety and Relief Valves - Operating," were properly executed.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 2A **Sec:** 1A **Ter:**	**Boron Injection Flow Path General Walkdown** The boron injection flow path from the A boric acid tank via the A boric acid transfer pump was properly aligned for operation. System material condition and housekeeping in the vicinity of system components were good. No conditions were identified that would have prevented boron injection to the reactor coolant system via this flow path.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003-01	**Pri:** OPS **Sec:**	Licensee	NCV	**Pri:** 1A **Sec:** **Ter:**	**Switch Mispositioned for Supply Dampers to Control Room Emergency Fan** A non-cited violation was identified for the failure to maintain the local control switch for the Unit 1 control room emergency fan in the required "Lockout" position. The "Lockout" position ensures that, during the first hour after a safety injection signal, air in the control room envelope is recirculated and filtered though the system's charcoal filter and that outside air is not drawn into the control room.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Region II
NORTH ANNA

Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	NEG	**Pri:** 2A **Sec:** **Ter:**	**Detailed Safeguards Area Ventilation Walkdown Inspection** Although the condition of the safeguards area ventilation system was adequate, the inspectors identified several deficiencies, such as a small tear in a flexible joint and a mispositioned damper. However, the inspectors concluded that the system would have responded as designed to maintain the safeguards area at a negative pressure with the required flow rate and to direct exhaust air through the iodine filter banks.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	NEG	**Pri:** 3B **Sec:** 4C **Ter:**	**Training for Technical Specifications** Although operators were generally knowledgeable of recent Technical Specification (TS) changes, operator knowledge of a recent TS change which increased the Emergency Diesel generator (EDG) allowed outage time from 72 hours to 14 days needed improvement. Senior reactor operators were unsure of available options and restoration priorities should an additional EDG or the station blackout diesel become inoperable during the 14 day allowed outage time.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1A **Sec:** 2A **Ter:**	**Review of Heating, Ventilation, and Air Conditioning Configuration B** The heating, ventilation, and air conditioning system alignment that supports movement of spent fuel and associated items in the fuel building was in accordance with operating procedure requirements. With one exception, fuel building and control room differential pressures were maintained within their normal operating values. When one of the control room differential pressure readings was noted to be outside the required value, the senior reactor operator appropriately stopped work in the fuel building.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1A **Sec:** 3A **Ter:** 2A	**Response to Unit 1 Battery Charger 1-I Failure** Operators properly responded to a failed battery charger and placed the swing charger in service within the required Technical Specification (TS) allowed outage time. Good pre-job briefings, appropriate procedure execution, and well thought out contingency planning contributed to the success of the battery charger failure response.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1B **Sec:** 3A **Ter:** 2A	**Unit 2 Steam Generator (SG) Water Level Instrument Card Failure** Operator response to an increase in the Unit 2 A steam generator water level caused by a faulty power supply card was good. The operator quickly diagnosed the transient and took manual control of the main feedwater regulating valve (MFRV) to terminate the level increase. Once the faulty card was replaced, the operators successfully returned the MFRV to automatic control.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 1A **Ter:**	**Observations During 1J Emergency Diesel Generator Unavailability** TS 3.8.1.1, "A.C. Sources," requirements were satisfied while the 1J emergency diesel generator (EDG) was removed from service for major maintenance. The 1H EDG, the opposite unit's EDGs, and station blackout diesel were available for operation. Proper consideration of maintenance affecting the availability of offsite power was performed during the EDG outage.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

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Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
03/13/1999	1999001	Pri: OPS Sec:	NRC	NEG	Pri: 1A Sec: 3A Ter:	**Unit 1 "A" Safety Injection Accumulator Depressurization** The licensee inadvertently momentarily caused the Unit 1 SI "A" accumulator to depressurize one psig below the technical specification required limit. The depressurization was caused by inadequate communications during shift turnover, absence of an equipment status entry and ineffective procedure execution.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	Pri: OPS Sec:	NRC	POS	Pri: 1A Sec: 2A Ter: 3C	**Service Water Piping Replacement for Units 1 and 2 Control Room Ventilation Chillers** Replacement of Units 1 and 2 service water piping to the control room ventilation chillers was properly performed. Associated Technical Specification actions statements were executed as required. After some uncertainty was observed concerning the control room pressure boundary status, a status board was prominently displayed for personnel. Fire protection was properly addressed.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	Pri: OPS Sec:	NRC	POS	Pri: 1B Sec: 3A Ter:	**Loss of Unit 1 Electrical Inverter 1-III** The plant responded as designed to the loss of the 1-III electrical inverter power source to the associated 120 VAC vital bus. Technical specification 3.8.2.1 was properly executed. Operator response to the main feedwater transient which occurred as a result of the power loss was excellent. The operator quickly responded to the transient by taking manual control of the main feedwater regulating valves.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	Pri: OPS Sec:	NRC	POS	Pri: 5A Sec: 5C Ter:	**Management Review Board Meeting** Management review board activities continued to provide a positive management forum for self-assessment of station activities and were an effective contributor to the licensee's corrective action program.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001-01	Pri: OPS Sec:	Licensee	NCV	Pri: 1A Sec: 3A Ter: 2B	**Failure to Perform a Reactor Coolant System Leak Rate Test When Required** A non-Cited violation was identified for the failure to perform a valid reactor coolant system leak rate calculation which resulted in a missed technical specification surveillance. Operators who performed the leak rate test displayed an inadequate attention to detail, in that, they failed to initiate an evaluation when the leak rate increased to approximately one third of that allowed by Technical Specifications.
Dockets Discussed: 05000338 NORTH ANNA 1						
01/30/1999	1998011	Pri: OPS Sec:	NRC	POS	Pri: 1A Sec: Ter:	**Tagouts for Maintenance Activities** Tag outs for battery chargers 1-III and 1-IV, instrument air compressor 1-1A-C-1, emergency diesel generator 2H, and component cooling water pump 2-CC-P-1A, were properly performed. The tag outs properly reflected the work scope and all equipment was appropriately tagged in the correct positions.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

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Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
01/30/1999	1998011	**Pri:** OPS	NRC	POS	**Pri:** 1A	**Initiation of Extreme Cold Weather Procedure**
		Sec:			**Sec:** 2A	The decision-making process to initiate the extreme cold weather procedure was reasonable and the procedure was properly implemented. The licensee's actions to correct a frozen casing cooling tank level instrument were appropriate.
Dockets Discussed:					**Ter:** 5C	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** OPS	NRC	POS	**Pri:** 2A	**Inspection of Risk Significant Portions of the Instrument Air System**
		Sec:			**Sec:** 2B	The overall condition of risk significant portions of the instrument air system was good. Components were properly aligned, labeled, and maintained. The running air compressor operated within normal operating limits. The area around the air compressors was clean. The licensee properly implemented maintenance rule requirements.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** OPS	NRC	POS	**Pri:** 2A	**Housekeeping in the Service Water Pump Building**
		Sec:			**Sec:** 2B	Housekeeping in the service water pump building was good and was a marked improvement when compared to conditions previously observed. The diesel-driven fire pump and its support equipment were also in good condition and properly aligned for automatic operation.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
01/30/1999	1998011-01	**Pri:** OPS	Licensee	NCV	**Pri:** 1A	**Failure to Test the Unit 1 Boron Injection Tank Outlet Valves**
		Sec:			**Sec:** 3A	A Non-Cited Violation was identified for failure to test the Unit 1 boron injection tank outlet valves in accordance with Technical Specification 4.0.5 requirements. The cause of the missed surveillance test was due to personnel error during a procedure change.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
12/19/1998	1998010	**Pri:** OPS	NRC	POS	**Pri:** 1C	**Station Nuclear Safety and Operating Committee meeting.**
		Sec:			**Sec:**	Technical Specifications were satisfied for a Station Nuclear Safety and Operating Committee meeting. The meeting was effective because there was sufficient detail presented and discussed to properly disposition the issues.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
12/19/1998	1998010	**Pri:** OPS	NRC	POS	**Pri:** 1A	**Component Cooling System Inspection**
		Sec: MAINT			**Sec:** 2A	The component cooling system was properly aligned and in good condition. Selected risk significant system components were properly labeled and well maintained. System operation was consistent with the Updated Final Safety Analysis Report description and operator knowledge of the system was excellent. Maintenance rule requirements for system monitoring were satisfied.
Dockets Discussed:					**Ter:** 3B	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						

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Region II
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Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
12/19/1998	1998010	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 1A **Sec:** 2A **Ter:** 4B	**Inspection of Freeze Protection Procedures and Systems** Freeze protection procedures were comprehensive and effectively implemented. The overall condition of freeze protection systems was acceptable. Engineering had evaluated long standing heat trace system deficiencies and initiated efforts to improve system performance. A design change package had not yet been initiated,
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
12/19/1998	1998010	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 1C **Sec:** 2A **Ter:**	**Auxiliary Building Ventilation** Equipment needed for establishing auxiliary building ventilation for a control room fire was in place, properly labeled, and in good condition.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
12/19/1998	1998010	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 3B **Sec:** 2A **Ter:**	**Auxiliary Building Operator Rounds** The operator conducted auxiliary building rounds in a thorough and professional manner and was knowledgeable of plant systems. Housekeeping conditions in the auxiliary and fuel handling buildings were good as evidenced by proper lighting, proper storage of equipment, proper control of foreign material, and general cleanliness.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	**Pri:** OPS **Sec:**	NRC	NEG	**Pri:** 4A **Sec:** **Ter:**	**Improper References as Bases in UFSAR Change Packages Report** A negative observation was identified for including improper references as bases in Updated Final Safety Analysis Report (UFSAR) change packages. Recent UFSAR change packages have showed a noticeable improvement in this area.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1A **Sec:** **Ter:**	**Unit 1 Startup and Ascension to Full Power** The Unit 1 startup and ascension to full power were carefully controlled. The licensee continued to assign operators to specific tasks such as pulling rods, turbine roll and unit synchronization, and extra supervisors for these tasks. This operating practice continued to represent a sound operating philosophy towards safe plant operation.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	**Pri:** OPS **Sec:**	NRC	POS	**Pri:** 1A **Sec:** 2A **Ter:**	**Quench Spray System for Unit 2 and EDG Fuel Oil Transfer System Inspection** The Quench Spray System for Unit 2 was properly aligned in accordance with correct procedures and drawings. The emergency diesel generator (EDG) fuel oil transfer system was properly aligned and in good condition. The fire protection system for the EDG fuel transfer pump rooms was verified to be operable based on discussions with a fire protection specialist and a review of completed surveillance tests.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

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11/07/1998	1998009	**Pri:** OPS	NRC	POS	**Pri:** 1A	**Unit 1 Transition from Mode 4 to Mode 3**
		Sec:			**Sec:** 3A	The Unit 1 transition from Mode 4 to Mode 3 was performed well. Numerous operations and maintenance activities were carefully controlled as evidenced by proper procedure usage, communications, and appropriate management oversight. Several Technical Specification requirements were verified by the inspectors and no problems were found.
Dockets Discussed:					**Ter:** 3C	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
11/07/1998	1998009-02	**Pri:** OPS	Licensee	NCV	**Pri:** 1A	**Failure to Vent Casing Cooling Pump 1-RS-P-3B**
		Sec:			**Sec:** 5C	A non-cited violation of Technical Specifications 3.0.4 and 3.6.2.2 was identified for failure to ensure that the casing cooling pump 1-RS-P-3B was operable before Unit 1 entered Modes 4 and above and for operation in these modes longer than allowed by technical specification action 3.6.2.2(a). The licensee's reporting efforts, initial cause determination and corrective actions were comprehensive in that evaluations were well thought out and understood.
Dockets Discussed:					**Ter:** 5B	
05000338 NORTH ANNA 1						
11/07/1998	1998009	**Pri:** OPS	NRC	POS	**Pri:** 1A	**Pre-job Briefing for Zero Power Physics Testing**
		Sec: MAINT			**Sec:** 4B	The pre-job briefing for zero power physics testing was thorough. Special test exception requirements of TS 3.10.1 were satisfied. A good team effort by operators, engineers, and supervision contributed to zero power physics testing evolutions being satisfactorily completed.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
11/07/1998	1998009-01	**Pri:** OPS	Licensee	NCV	**Pri:** 3A	**Failure to Properly Perform Testing of the Solid State Protection System**
		Sec: MAINT			**Sec:** 2B	A non-cited violation was identified for failure to perform testing of the Solid State Protection System in accordance with plant procedures. Because the evolution was performed out-of-sequence, an inadvertent engineered safety feature actuation occurred. The event was significant because there was a loss of test control.
Dockets Discussed:					**Ter:** 1A	
05000338 NORTH ANNA 1						
10/03/1998	1998008	**Pri:** OPS	NRC	POS	**Pri:** 1A	**TS Requirements for Core Alterations During the Upper Internals Removal**
		Sec:			**Sec:**	Technical specification (TS) requirements for core alterations were satisfied during the upper internals removal from the reactor vessel. The core alterations checklist properly reflected TS requirements.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** OPS	NRC	POS	**Pri:** 1A	**Unit 1 Shutdown for Refueling**
		Sec:			**Sec:** 3B	The Unit 1 shutdown for refueling was carefully performed. Shutdown activities were performed in accordance with plant procedures. Operators had received special shutdown training which prepared them well.
Dockets Discussed:					**Ter:**	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						

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Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
10/03/1998	1998008-01	**Pri:** OPS **Sec:**	Licensee	NCV	**Pri:** 3A **Sec:** 1A **Ter:**	**Failure to Properly Position Valves Associated with the RCS Standpipe** A non-cited violation was identified for failure to properly position two isolation valves associated with the reactor coolant system (RCS) level standpipe. The valves were closed when they should have been open which caused RCS standpipe level to be faulty. Although the licensee had not begun the drain down evolution when the problem was identified and corrected, the inspectors were concerned with the event because two operators had signed the procedure as completed when the action to ensure the valves were open was not performed.
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10/03/1998	1998008	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 1A **Sec:** **Ter:**	**Unit 1 Residual Heat Removal System Walkdown Inspection** The Unit 1 residual heat removal system was properly aligned and in good condition. System components reflected plant drawings and operating procedures and were properly labeled.
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10/03/1998	1998008	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 1B **Sec:** 2A **Ter:**	**Unit 2 Reactor Trip and Subsequent Startup Activities** The Unit 2 reactor trip and subsequent startup activities were carefully controlled. The operating crew was well-prepared for the unit restart. All systems and components operated as designed.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 1B **Sec:** 2B **Ter:**	**Operator Response to Erratic Automatic Operation of a Main FW Regulating Valve** Operator response to erratic automatic operation of the B steam generator main feedwater regulating valve (MFRV) was prompt and effectively stabilized feedwater flow. Subsequent troubleshooting and repair activities were effective as evidenced by continued satisfactory automatic operation of the MFRV for the remainder of the inspection period.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** OPS **Sec:** MAINT	NRC	POS	**Pri:** 2A **Sec:** **Ter:**	**Containment Conditions at the Beginning of the Unit 1 Refueling Outage** At the beginning of the Unit 1 refueling outage, containment conditions were good in that containment coatings were intact, boron deposits were minimal and areas were typically free of dirt and debris.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
08/28/1999	1999005	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 4B **Ter:**	**Unit 2 Urgent Failure Alarm** Maintenance activities associated with repairing rod control system problems were meticulously performed with good support from other organizations such as operations and engineering.
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07/17/1999	1999004	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 1C	**Miscellaneous 480V Breaker Maintenance** Preventive maintenance on several 480V breakers was properly performed by knowledgeable workers. The workers followed their procedures and were properly trained. Radiological work practices for these slightly contaminated breakers were good. The work area was properly controlled to prevent the spread of contamination and health physics support was evident.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 2A	**Unit 2 Protection Channel III Periodic Test** Applicable Technical Specifications 4.3.1.1.1 and 4.3.2.1.1 requirements were satisfied during a routine periodic test of Unit 2 protection channel III. The workers followed their procedure, used proper self-check techniques, and effectively communicated. The test cabinet was properly labeled and housekeeping around the cabinet was good as evidenced by general cleanliness and proper lighting.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
07/17/1999	1999004	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 4C **Ter:**	**Unit 2 Control Room Emergency Ventilation System Test** Technical Specification 4.7.7.1.a, "Control Room Emergency Habitability Systems," requirements were satisfied during the monthly test of the control room emergency ventilation fan and associated heaters. The system ran for the required ten hours and the required heater kilowatt output was maintained.
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06/05/1999	1999003	**Pri:** MAINT **Sec:** ENG	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 1A	**Periodic Test Observations** A routine periodic test for Unit 2 engineered safety feature actuation system slave relays was properly performed by knowledgeable workers. The test was approved by station management and technical specifications requirements were satisfied. Unit 1 core flux map activities were properly performed by a knowledgeable reactor engineer. The engineer demonstrated a thorough understanding of operation of the incore detector system and associated Technical Specifications (TSs). TS 3.2.2 and 3.3.3.2 were satisfied during the flux map activities.
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06/05/1999	1999003	**Pri:** MAINT **Sec:** PLTSUP	NRC	NEG	**Pri:** 1C **Sec:** 2B **Ter:**	**1H Emergency Diesel Generator Maintenance Observations** Fire protection program implementation was identified as an area of needed improvement. Several problems involving fire watch requirements and control and storage of combustible materials occurred during maintenance on the 1H emergency diesel generator.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 1A	**Miscellaneous Periodic Test (PT) Observations** Periodic tests for the solid state protection systems, the Unit 1 auxiliary feedwater system, the 2H emergency diesel generator, and the station blackout diesel were properly performed. Test procedures were properly followed by knowledgeable workers. The tests were properly approved by station management and included in the licensee's evaluation for online maintenance. Associated Technical Specification requirements were satisfied.
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04/24/1999	1999002	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 2A	**Observation of Maintenance Activities** Maintenance on the Unit 2 C main feedwater regulating valve, steam generator (SG) A power operated relief valve and channel III SG A water level power supply card; the Unit 1 1-IV inverter power supply breaker; and the service air compressor were properly performed. Personnel performing these activities were knowledgeable and followed work package instructions. The licensee evaluated the impact of this work on plant risk in accordance with their maintenance rule program.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 1A	**Miscellaneous Periodic Tests (PT) Observations** Routine periodic tests for Unit 1 and 2 quench spray subsystems and the Unit 2 turbine driven auxiliary feedwater system were properly performed. Test procedures were properly followed by knowledgeable workers. The tests were properly approved by station management and included within the licensee's evaluation for on-line maintenance. Technical specifications requirements were also satisfied.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 3C	**Observation of Maintenance Activities** Unit 1 maintenance activities for the 1A component cooling water heat exchanger, 1C charging pump lube oil cooler, and the 1-III inverter power supply breaker were properly performed. The personnel conducting the activities were knowledgeable and properly followed work package instructions. Use of photographs to help workers better understand the work environment was noteworthy.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001-02	**Pri:** MAINT **Sec:**	NRC	NCV	**Pri:** 2B **Sec:** 3A **Ter:**	**Failure to Perform Inservice Testing or Post Maintenance Testing on Unit 2 CC Valves** A non-cited violation was identified for the failure to perform inservice testing or post maintenance tests (PMTs) following vent cap replacement on component cooling (CC) water valves. The licensee subsequently justified deferring testing for some CC valves until the first available opportunity, i.e., when plant conditions allow.
Dockets Discussed: 05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 3B	**Planned Maintenance Operations** Planned maintenance on the Unit 1 instrument air compressor cooling water heat exchangers, 2H stub bus relays, and 1A process vent blower expansion joint was properly performed. Workers were knowledgeable and followed work package instructions. The work was properly approved and risk significant activities were properly evaluated for their impact on the plant's core damage frequency.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:** 3B	**Periodic Tests Observations** Periodic tests associated with Unit 1 control rods, Unit 2 solid state protection system, and the Unit 2 quench spray system were properly performed. The tests satisfied TS requirements and were performed by knowledgeable individuals who properly followed their procedures. Systems and components were properly returned to their normal plant configuration.
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12/19/1998	1998010	Pri: MAINT	NRC	POS	Pri: 3A	**Observation of Maintenance Work Activities**
		Sec:			Sec: 3B	Maintenance work activities observed on Service Water Pump 1- SW- P-1A, Charging Pump 1-CH-P-1B, the Unit 2 Train A solid state protection system and a casing cooling tank recirculation spray temperature element were conducted in a thorough manner by skillful technicians.
Dockets Discussed:					Ter:	
05000338 NORTH ANNA 1						
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11/07/1998	1998009	Pri: MAINT	NRC	POS	Pri: 2A	**Testing of Slave Relays in the Solid State Protection System**
		Sec:			Sec: 3A	Testing of slave relays associated with the Solid State Protection System met Technical Specification requirements. All relays actuated as required and appropriate action statements were executed. The test was carefully performed, in that, the test procedure was followed and coordination of test activities between the technicians and operators was effective.
Dockets Discussed:					Ter:	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
11/07/1998	1998009	Pri: MAINT	NRC	POS	Pri: 2B	**Miscellaneous Preplanned Maintenance Activities**
		Sec:			Sec: 2A	Miscellaneous preplanned maintenance activities were properly performed. The activities were approved by station management and operations personnel. Risk significant structures, systems, and components were evaluated to determine their effects on the overall plant risk profile. Workers were knowledgeable of their assignments and followed work package instructions.
Dockets Discussed:					Ter: 3B	
05000338 NORTH ANNA 1						
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11/07/1998	1998009	Pri: MAINT	NRC	POS	Pri: 2B	**Unit 2 Hydrogen Recombiner Quarterly Flow Test**
		Sec:			Sec: 2A	The Unit 2 hydrogen recombiner quarterly flow test to verify operabilityof system check valves was properly performed. Test instruments were properly configured and procedure execution was appropriate. There were zero maintenance preventable functional failures for the recombiner which indicated to the inspectors that maintenance efforts had been effective.
Dockets Discussed:					Ter: 3B	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
10/03/1998	1998008	Pri: MAINT	NRC	POS	Pri: 2A	**Slow Start Surveillance Test of the 2H Emergency Diesel Generator**
		Sec:			Sec: 2B	A slow start test surveillance of the 2H emergency diesel generator met procedural and technical specification requirements. Overall testing was carefully and properly performed. A work request to repair a fuel oil day tank switch was appropriately issued.
Dockets Discussed:					Ter:	
05000338 NORTH ANNA 1						
05000339 NORTH ANNA 2						
10/03/1998	1998008	Pri: MAINT	NRC	POS	Pri: 2B	**New 1J EDG Fan and Hub Assembly**
		Sec:			Sec:	Observation of the new 1J EDG fan/hub assembly and review of the completed work package and associated test results indicated that the fan/hub replacement was properly performed.
Dockets Discussed:					Ter:	
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10/03/1998	1998008	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 2B **Sec:** 3A **Ter:**	**Inservice Examination Activities** Inservice examination activities were performed in a skillful manner. Discontinuities were properly recorded and evaluated by knowledgeable examiners using approved procedures. Records for the C steam generator tube eddy current examinations and piping component flow accelerated corrosion ultrasonic examinations were complete, and evaluations/acceptance of examination results were conducted in accordance with applicable procedures, technical specifications and industry standards.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** MAINT **Sec:**	NRC	POS	**Pri:** 4B **Sec:** 5B **Ter:** 2A	**Licensee Inspections of Service Water System Stainless Steel Piping** The licensee performed walkdown inspections of service water system stainless steel piping as required to identify through-wall leakage caused by microbiological induced corrosion (MIC). Radiographs were taken as required to monitor MIC growth in the system. Improvements in chemical addition were being investigated and four four-inch diameter 316L stainless steel lines on both units were planned to be replaced with improved materials in late 1998 and during 1999.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
08/28/1999	1999005	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 4C **Sec:** 2B **Ter:**	**Year 2000 Unit 2 High-Capacity Blowdown Modification Review** The inspectors, using Temporary Instruction (TI) 2515/141, "Review of Year 2000 (Y2K) Readiness of Computer Systems at Nuclear Power Plants." performed a review of a Y2K modification performed on the Unit 2 High-Capacity Steam Generator (S/G) Blowdown System. The modification, including all testing and validation, was successfully completed. The work was in accordance with the guidance contained in TI 2515/141.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
08/28/1999	1999005-03	**Pri:** ENG **Sec:**	NRC	NCV	**Pri:** 2B **Sec:** 3A **Ter:** 1C	**Improper Sampling During ISFSI Operation** A non-cited violation of Independent Spent Fuel Storage Installation (ISFSI) Technical Specification (TS) surveillance requirement 3.2.1.1 was identified. Prior to the first fuel assembly being loaded into the ISFSI cask, the boron concentration measurements of the water in the spent fuel pool and cask pit were not independent measurements as required. Subsequent independent measurements confirmed that the boron concentration met the TS acceptance criterion (NCV 72-016/99005-01).
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
06/05/1999	1999003	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 5C **Sec:** 5B **Ter:** 4B	**Engineering Corrective Action Review** Based on a review of two deficiency reports on the auxiliary feedwater and emergency diesel generator systems, the licensee corrected these identified problems in a timely manner commensurate with their risk significance.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 5B **Sec:** 4B **Ter:** 5C	**Review of Continued 125 VDC Breaker Thermography Efforts** Continuing efforts for examination and evaluation of elevated connection temperatures on 125 VDC breakers were appropriate. Prudent action was taken to determine the scope of the problem and efforts were scheduled accordingly to determine the root cause.
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03/13/1999	1999001	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 4A **Sec:** 1A **Ter:**	**Switch-Over From a Unit 2 Steam Flow-Based to a Feedwater (FW) Flow-Based Calorimetric** The Unit 2 conversion from a steam flow-based calorimetric to a feedwater flow-based calorimetric was performed in accordance with the associated design change package. Although the unit produced approximately 20 megawatts more power, the revised calorimetric demonstrated that the unit was operating within licensed and core operating limits report allowable values.
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03/13/1999	1999001	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 5B **Sec:** 5C **Ter:** 2A	**Trip of General Electric (GE) Molded Case Circuit Breaker Supplying Unit 1 1-III Inverter** The licensee, through thermography, determined that the breaker which tripped and caused a loss of the Unit 1 120 VAC vital bus 1-III had an elevated temperature at the breaker's electrical connection. The actions to temporarily correct the condition and the licensee's plans to monitor the breaker and perform a more in-depth root cause analysis were acceptable. The licensee is evaluating the need to perform preventive maintenance on this and similar breakers.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001-03	**Pri:** ENG **Sec:**	Licensee	NCV	**Pri:** 2B **Sec:** 2A **Ter:**	**Failure to Adhere to Material Specifications for the Unit 2 B Charging Pump Motor Lead Lugs** A non-cited violation of 10 CFR 50, Appendix B, Criterion V was identified for use of a motor lead lug on the B charging pump that was not in conformance with material specifications.
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01/30/1999	1998011	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 5A **Sec:** 5C **Ter:**	**Response to Service Water System (SWS) Microbiologically Induced Corrosion** The licensee has been proactive in identifying and repairing service water system (SWS) microbiologically induced corrosion (MIC) pinhole leaks and has followed the NRC-approved generic relief request for resolving these SWS leaks. Development of long-term plans to correct the MIC leaks has been ongoing yet the licensee has not determined the overall scope of these plans.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
01/30/1999	1998011-02	**Pri:** ENG **Sec:**	Licensee	NCV	**Pri:** 4A **Sec:** 5A **Ter:** 5C	**Design Deficiencies of the Auxiliary Building Ventilation System** A non-cited violation was identified for design deficiencies of the auxiliary building ventilation system which involved seismic qualifications of the control air supply and electrical power supply qualifications. Initial corrective actions, which included a justification for continued operation that placed strict limits on the emergency core cooling system leakage operational limits and planned actions to satisfy the design requirements were commensurate with safety.
Dockets Discussed: 05000338 NORTH ANNA 1						
12/19/1998	1998010	**Pri:** ENG **Sec:**	NRC	POS	**Pri:** 4A **Sec:** 4C **Ter:**	**Modifications of the Outside Recirculation Spray Pump (2-RS-P-2A) Seal Water Head Tank Vent Pathway** Modifications of the outside recirculation spray pump (2-RS-P-2A) seal water head tank vent pathway met design change package requirements. Actions taken were appropriate in response to recurring high head tank level alarm conditions. Head tank level alarm frequency since performance of the modifications had significantly decreased.
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12/19/1998	1998010	Pri: ENG Sec: MAINT	NRC	POS	Pri: 4A Sec: 4C Ter:	**North Anna Reservoir Spillway Diesel Generator Control Panel Modification** A modification of the North Anna reservoir spillway diesel generator control panel met design change package requirements.
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12/19/1998	1998010	Pri: ENG Sec: OPS	NRC	POS	Pri: 4C Sec: Ter:	**System Engineer Training Program Requirements** The system engineer training program met 10 CFR 50.120 requirements. The program included the necessary elements of a systems approach to training. Periodic evaluations and revisions and management review of training effectiveness were being performed.
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11/07/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 2B Sec: 4B Ter:	**Unit 1 First Stage Turbine Impulse Pressure Rescaling/Normalization Efforts** The Unit 1 first stage turbine impulse pressure rescaling/normalization efforts were satisfactorily performed. Implementation of the design change was successful as evidenced by satisfactory performance of affected control/protection circuitry.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	Pri: ENG Sec:	NRC	POS	Pri: 4B Sec: 3A Ter:	**Safety-Related Material Receipt Inspections** Safety-related material receipt inspections on schedule 80 piping were performed in a thorough and acceptable manner and in accordance with approved procedures. The piping was properly tracked, inspected, and tagged.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	Pri: ENG Sec:	NRC	NEG	Pri: 4C Sec: 5C Ter:	**Maintenance Rule Recovery Plan PRA Negative Observations** In the Maintenance Rule recovery plan, the limited discussions of condition monitoring of select systems, the omission of certain components in the PRA model and, the poor technical justification of the recirculation system's success criteria were negative observations.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	Pri: ENG Sec:	NRC	POS	Pri: 5C Sec: 2B Ter:	**Modification to Address the Thermo-Lag in Unit 1 Containment** Radiant energy shields in the Unit 1 containment were properly modified to address the Thermo-Lag combustibility issue.
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10/03/1998	1998008	Pri: ENG Sec:	NRC	STR	Pri: 4C Sec: 5C Ter:	**Maintenance Rule Recovery Plan Goal Setting and Performance Criteria** The licensee accomplished sufficient corrective actions under the Maintenance Rule recovery plan to conclude that the Maintenance Rule goal setting and performance criteria for the systems in the probabilistic risk assessment (PRA) model were consistent with their safety significance. The risk ranking methodology was a strength. **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2
10/03/1998	1998008-02	Pri: ENG Sec:	Licensee	NCV	Pri: 2B Sec: Ter:	**Reactor Vessel Level Dynamic Range Indication Inoperable on A Train Due to Procedural Error** A non-cited violation was identified for Unit 1, Train A reactor vessel level indication system (RVLIS) dynamic flow range indication not being properly normalized. **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2
08/28/1999	1999005	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Security Facilities and Equipment** The testing and maintenance program for security related equipment met the requirements specified in the Physical Security Plan (PSP). Compensatory measures required by the PSP were implemented effectively. Revision 5 to the PSP met the requirements of 10 CFR 50.54(p). **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2
08/28/1999	1999005	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 3B Ter:	**Security Training and Qualification** Observed weapons requalification met the requirements of the Training and Qualification Plan. The licensee is conducting enhanced training in this area to assist officers to better respond to contingencies. **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2
07/17/1999	1999004	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Radioactive Effluent Control Program** The consistently low doses from the plant effluents, relative to regulatory limits, were indicative of overall good performance by the licensee's effluent control program. The licensee had maintained an effective program for the control of liquid and gaseous radioactive effluents from the plant. **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2
07/17/1999	1999004	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Radiological Environmental Monitoring Program** The licensee conducted an effective program for monitoring radioactivity in the surrounding environment that met regulatory requirements. The dose consequences of radioactivity levels found in the environment were well below regulatory limits. **Dockets Discussed:** 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2

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07/17/1999	1999004	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 2B Ter:	**Radiological Effluent Monitors & Radiation Monitoring Training** Effluent instrumentation calibrations were performed in accordance with applicable procedures. The training courses provided to plant staff for maintenance and operation of the effluent monitoring instrumentation were adequate. The calibration procedures for the A and B stack monitors were sufficient to calibrate the instrumentation.
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06/05/1999	1999003	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Emergency Preparedness Drill Observations** An off-hours emergency plan drill was properly performed. Operators exhibited command and control, properly classified the event, and notified off-site agencies during the initial phases of the drill. The initial call-out of responders was effective as evidenced by their timely response to the site. Information flow between the various control centers was evident by the proper assignment of drill priorities.
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06/05/1999	1999003	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 2A Ter:	**Self-Contained Breathing Apparatus Inspection** Material condition of the self-contained breathing apparatus used for the plant's fire brigade was good. There was sufficient breathing air onsite and fire protection equipment was properly staged to accommodate the fire brigade's needs.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
04/24/1999	1999002	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 3C Ter:	**Technical Support Center (TSC) Manning and Condition of Workstations** Command and control of technical support center (TSC) operations during a drill was good as evidenced by effective briefings and management of drill priorities. Communications between TSC work groups was appropriate. Work stations were properly manned and in good working order.
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03/13/1999	1999001	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Inspection of Fire Brigade Equipment** Personal protective fire fighting equipment provided to the fire brigade was in good condition and provided a sufficient level of personal safety needed for onsite fire emergencies. Backup lighting in the dressout areas provided an adequate level of lighting in support of fire brigade operations.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Fire Brigade Pre-fire Strategies** Fire brigade pre-fire strategies provided clear and sufficient instructions and met the requirements of the fire protection program.
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03/13/1999	1999001	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 2A **Ter:**	**Combustible Material and Housekeeping Controls/Fire Hazards Reduction** Implementation of the fire protection program requirements for control of combustible fire hazards was good. Plant personnel followed combustible control procedures to manage the use and temporary storage of transient combustibles in safety-related areas. Plant housekeeping and trash control were in accordance with procedure requirements. The licensee's administrative controls for ignition source control were being implemented in accordance with the fire protection program.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
03/13/1999	1999001	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 5A **Ter:**	**Fire Brigade Drill Program** Fire drill critique data indicated that the fire brigade's response time and performance were good. All the fire brigade members were at the fire drill site and ready to attack the fire in an average of ten minutes.
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03/13/1999	1999001	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 2A **Sec:** 1C **Ter:** 5C	**Fire Reports and Investigations** Eleven incidents of smoke or equipment overheating were identified in the past three years which were caused by electrical component faults within safety-related areas. These fire related conditions were properly identified and mitigating actions were taken in a timely manner. No trends were identified.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 2A **Ter:**	**Control and Surveys of Radiation and High Radiation Areas and All Areas** The licensee's surveys accurately measured radiation and high radiation areas and all areas were properly posted. All locked high radiation areas were properly secured. Good use of posted radiation dose rate information in the auxiliary building was observed. Overall, housekeeping within the auxiliary building was good with some exceptions.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 2A **Ter:**	**Radiation Detection and Measurement Instrumentation** In general, radiation detection and measurement instrumentation was found in good operating condition. Periodic source checks and instrument calibrations were being performed. Calibration records documented appropriate calibration methods and were in satisfactory order.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
01/30/1999	1998011	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 2A **Ter:**	**Security Posts** Security posts were properly manned, lighting conditions were appropriate, security personnel were attentive and the perimeter material condition was properly maintained.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

Item Type (Compliance,Followup,Other), From 10/01/1998 To 09/30/1999

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Region II
NORTH ANNA

Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
01/30/1999	1998011	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: 3A Ter:	**Removal of a Reactor Coolant System Letdown Filter** The removal of a reactor coolant system letdown filter was carefully performed. Workers adhered to their radiation work permit requirements and appropriately followed their procedures. Health Physics personnel were effective in supporting the workers by ensuring radiation exposure was kept to a minimum.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
12/19/1998	1998010	Pri: PLTSUP Sec:	NRC	NEG	Pri: 1C Sec: 4C Ter:	**Site Emergency Plan Revisions** Portions of Revisions 19, 20, and 22 to the site emergency plan lacked specificity and were subject to interpretation. Following discussions with the licensee, the inspectors concluded that the changes did not have an adverse impact on the site emergency response program. The licensee plans to revise the parts discussed.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
12/19/1998	1998010	Pri: PLTSUP Sec: OPS	NRC	POS	Pri: 3A Sec: 3B Ter:	**Unannounced Fire Drill in the Fuel Oil Pump House** The fire team properly responded to an unannounced fire drill in the fuel oil pump house. Fire team members responded quickly to the fire scene, were generally familiar with fire fighting equipment, and knowledgeable of standard fire fighting tactics. Support personnel were effective in assisting the fire team.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Procedure for Implementing the Requirements of 10 CFR 19.11** The licensee's procedure for implementing the requirements of 10 CFR 19.11 was comprehensive. Posting locations were of sufficient number and conspicuously located to ensure workers were properly advised of required notices. All required postings were in place.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Security Compensatory Measures Program** The security compensatory measures program effectively compensated for failed or degraded security equipment and was in accordance with Physical Security Plan commitments and regulatory requirements.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	Pri: PLTSUP Sec:	NRC	POS	Pri: 1C Sec: Ter:	**Alarm Stations Were Equipped, Manned, and Operated According to Physical Security Plan** Alarm stations were equipped, manned, and operated according to Physical Security Plan commitments and regulatory requirement. Alarm station personnel were capable of maintaining continuous onsite and offsite communications according to Physical Security Plan commitments and regulatory requirement.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Region II
NORTH ANNA

Date	Source	Functional Area	ID	Type	Template Codes	Item Title / Item Description
11/07/1998	1998009	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 3B **Ter:**	**Changes to the Physical Security Plan and Training and Qualification Plan** The Physical Security Plan and Training and Qualification Plan changes did not decrease the effectiveness of the respective plans and had been reported according to regulatory requirements.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 4C **Ter:** 1A	**Protected Area Intrusion Detection Systems** Protected area intrusion detection systems were functional, effective, and in accordance with the Physical Security Plan commitments and regulatory requirements. Protected area assessment aids were functional and effective for both covert and overt penetration attempts.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
11/07/1998	1998009	**Pri:** PLTSUP **Sec:** MAINT	NRC	POS	**Pri:** 2A **Sec:** 1C **Ter:**	**Testing and Maintenance Program for Security Equipment** The testing and maintenance program for security equipment was concise, efficient, effective, thorough, and timely. This area was considered a strength in the security program.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** **Ter:**	**Control of Liquid and Gaseous Radioactive Effluents** The licensee maintained an effective program for the control of liquid and gaseous radioactive effluents from the plant. The amount of activity released from the plant in liquid and gaseous effluents has remained stable over the last several years and the radiation doses resulting from those releases were a small percent of regulatory limits.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** **Ter:**	**Sampling and Analytical and Reporting Requirements for the Radiological Environmental Monitoring Program** The licensee had complied with the sampling, analytical and reporting requirements for the radiological environmental monitoring program, the environmental sampling equipment was being well maintained, and the monitoring program was effectively implemented.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						
10/03/1998	1998008	**Pri:** PLTSUP **Sec:**	NRC	POS	**Pri:** 1C **Sec:** 5C **Ter:**	**Water Chemistry Control Program for Monitoring Primary and Secondary Water** The licensee's water chemistry control program for monitoring primary and secondary water quality had been implemented in accordance with technical specification requirements and the Electrical Power Research Institute guidelines for pressurized water reactor water chemistry. The licensee responded well to unexpected elevated dose rates during the April 1998 refueling outage by developing and implementing an effective program to reduce personnel exposure.
Dockets Discussed: 05000338 NORTH ANNA 1 05000339 NORTH ANNA 2						

United States Nuclear Regulatory Commission
PLANT ISSUE MATRIX
By Primary Functional Area

Legend

Type Codes:

BU	Bulletin
CDR	Construction
DEV	Deviation
EEI	Escalated Enforcement Item
IFI	Inspector follow-up item
LER	Licensee Event Report
LIC	Licensing Issue
MISC	Miscellaneous
MV	Minor Violation
NCV	NonCited Violation
NEG	Negative
NOED	Notice of Enforcement Discretion
NON	Notice of Non-Conformance
OTHR	Other
P21	Part 21
POS	Positive
SGI	Safeguard Event Report
STR	Strength
URI	Unresolved item
VIO	Violation
WK	Weakness

Template Codes:

1A	Normal Operations
1B	Operations During Transients
1C	Programs and Processes
2A	Equipment Condition
2B	Programs and Processes
3A	Work Performance
3B	KSA
3C	Work Environment
4A	Design
4B	Engineering Support
4C	Programs and Processes
5A	Identification
5B	Analysis
5C	Resolution

Functional Areas:

OPS	Operations
MAINT	Maintenance
ENG	Engineering
PLTSUP	Plant Support
OTHER	Other
MISC	Miscellaneous

ID Codes:

NRC	NRC
Self	Self-Revealed
Licensee	Licensee

EEIs are apparent violations of NRC Requirements that are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action" (Enforcement Policy), NUREG-1600. However, the NRC has not reached its final enforcement decision on the issues identified by the EEIs and the PIM entries may be modified when the final decisions are made.

URIs are unresolved items about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. A URI may also be a potential violation that is not likely to be considered for escalated enforcement action. However, the NRC has not reached its final conclusions on the issues, and the PIM entries may be modified when the final conclusions are made.

Item Type (Compliance,Followup,Other), From 10/01/1998 To 09/30/1999

NORTH ANNA
INSPECTION PLAN

INSPECTION PROCEDURE/ TEMPORARY INSTRUCTION	TITLE/PROGRAM AREA	NUMBER OF INSPECTORS	PLANNED INSPECTION DATES	TYPE OF INSPECTION - COMMENTS
IP 84750 IP 86750	Radioactive Waste Treatment and Effluent and Environmental Monitoring Solid Radioactive Waste Management and Transportation of Radioactive Materials	1	November 1999	Core Inspection
IP 37001 IP 37550 IP 92903	10 CFR 50.59 Safety Evaluation Program Engineering Followup - Engineering	3	December 1999	Core Inspection / Regional Initiative - SSEI issues followup
IP 83750 IP 60855 IP 86750	Occupation Radiation Exposure Operation of an Independent Spent Fuel Storage Installation (ISFSI) Solid Radioactive Waste Management and Transportation of Radioactive Materials	1	January 2000	Core Inspection Regional Initiative - ISFSI Radiation Protection Core Inspection
IP 71001	Licensed Operator Requalification Program Evaluation	1	February 2000	Core Inspection

Enclosure 2

INSPECTION PROCEDURE/ TEMPORARY INSTRUCTION	TITLE/PROGRAM AREA	NUMBER OF INSPECTORS	PLANNED INSPECTION DATES	TYPE OF INSPECTION - COMMENTS
IP 81700	Physical Security Program for Power Reactors	1	February 2000	Core Inspection
IP 60855	Operation of an Independent Spent Fuel Storage Installation (ISFSI)			Regional Initiative - ISFSI Security
TI 2515/142	Draindown During Shutdown and Common - Mode Failure (Generic Letter 98-02)	1	To Be Determined	Safety Issue