



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064**

September 18, 2000

Craig Anderson, Vice President  
Operations  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, Arkansas 72801-0967

SUBJECT: NRC INSPECTION REPORT NO. 50-313/00-09; 50-368/00-09

Dear Mr. Anderson:

This refers to the integrated inspection conducted on July 2 through August 19, 2000, at the Arkansas Nuclear One, Units 1 and 2, facility. The enclosed report presents the results of this inspection. The results of this inspection were discussed with you and members of your staff in exit meetings on July 21 and August 22, 2000.

The inspection was an examination of activities conducted under your licenses as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your licenses. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on reactor safety and radiation safety.

Based on the results of this inspection, the NRC has identified issues that were evaluated under the risk significance determination process as having very low safety significance (green). The NRC has also determined that violations are associated with these issues. These issues are being treated as noncited violations (NCVs), consistent with Section VI.A of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violation or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region IV, the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and the NRC resident inspector at Arkansas Nuclear One.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Entergy Operations, Inc.

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Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

*/RA/*

P. Harrell, Chief  
Project Branch D  
Division of Reactor Projects

Docket Nos.: 50-313  
50-368  
License Nos.: DPR-51  
NPF-6

Enclosure:  
NRC Inspection Report No.  
50-313/00-09; 50-368/00-09

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Entergy Operations, Inc.

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 David Diec (**DTD**)  
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 Dale Thatcher (**DFT**)

DOCUMENT NAME: R:\\_ANO\2000\AN2000-09RP-RLB.wpd

RIV:DRP/D	SRI:DRP/D	SRI:DRP/A	PE:DRP/D	C:PSB
KDWeaver	RLBywater	JLDixon-Herrity	LMWilloughby	GMGood
<b>E-KMKennedy</b>	<b>E-KMKennedy</b>	<b>E-KMKennedy</b>	<b>/RA/</b>	<b>WBJones for</b>
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PHHarrell				
<b>/RA/</b>				
9/18/00				

**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket Nos.: 50-313; 50-368

License Nos.: DPR-51; NPF-6

Report No.: 50-313/2000-09; 50-368/2000-09

Licensee: Entergy Operations, Inc.

Facility: Arkansas Nuclear One, Units 1 and 2

Location: 1448 S. R. 333  
Russellville, Arkansas 72801

Dates: July 2 through August 19, 2000

Inspectors: R. Bywater, Senior Resident Inspector  
K. Weaver, Resident Inspector  
L. Ricketson, Senior Health Physicist  
L. Willoughby, Project Engineer  
J. Dixon-Herrity, Senior Resident Inspector

Approved by: P. Harrell, Chief, Project Branch D  
Division of Reactor Projects

**ATTACHMENTS:**

Attachment 1: Supplemental Information  
Attachment 2: NRC's Revised Reactor Oversight Process

## SUMMARY OF FINDINGS

Arkansas Nuclear One, Units 1 and 2  
NRC Inspection Report 50-313/2000-09; 50-368/2000-09

50-313/00-09, 50-368/00-09; on 07/2-08/19/00; Entergy Operations, Inc., Arkansas Nuclear One, Units 1 & 2. Integrated Resident & Regional Report; Surv. Testing, Rad. Mon. Inst.

This inspection report covers a 7-week period of inspection by resident and region based inspectors.

The significance of issues is indicated by their color (green, white, yellow, or red) and was determined by the significance determination process in Inspection Manual Chapter 0609. The body of the report is organized under the broad categories of Reactor Safety, Safeguards, and Other Activities as reflected in the summary below.

### **Mitigating Systems**

- Green. On July 22, 2000, the licensee conducted a reverse flow test of Unit 2 high pressure injection system hot leg injection Valve 2SI-26A and found that the valve was inoperable. This Borg-Warner pressure seal bonnet check valve was determined to have been reassembled incorrectly during maintenance on November 11, 1999. Postmaintenance reverse flow testing did not identify this condition because the valve had not been exercised in the open direction first. The valve maintenance procedure was not of a type appropriate to the circumstances of its use because it did not ensure correct vertical orientation of the valve bonnet during reassembly. This was determined to be a violation of 10 CFR Part 50, Appendix B, Criterion V and is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy. It is in the licensee's corrective action program as Condition Report ANO-2-2000-270.

This noncited violation was characterized as a green finding using the significance determination process. It was determined to have very low safety significance because other non-leaking valves precluded reverse flow through Valve 2SI-26A and high pressure safety injection system overpressurization. Therefore, the safety function of the associated systems was not affected (Section 1R22).

### **Occupational Radiation Safety**

- Green. The inspectors determined that the licensee's training procedure for the use of self contained breathing apparatuses was inadequate. The training did not address air bottle changeout. This could be risk significant if events caused emergency response workers, such as operations personnel, to be in an atmosphere that is immediately dangerous to life or health for an extended time. The failure to establish an adequate training procedure is a violation of 10 CFR 20.1703(c)(4)(ii), which requires the licensee to implement and maintain a respiratory protection program that includes written procedures regarding training of respirator users. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Condition Report CR-ANO-C-2000-0207.

This noncited violation was characterized as a green finding based on the use of the emergency preparedness significance determination process. It was determined to have a very low safety significance because it did not involve the failure to implement or meet an emergency preparedness planning standard and there had been no actual event.

- Green. The problem identification and resolution process did not correct the self contained breathing apparatus training inadequacy. Despite discussions of similar problems in NRC Information Notice 98-20 and a quality assurance surveillance that alerted the licensee to a missing element in its training program, the licensee failed to correct the problem. This issue was characterized as a green finding because the significance of the related technical issue (Section 2OS3).

## Report Details

### Summary of Plant Status

Unit 1 operated at or near 100 percent power throughout this inspection period.

At the beginning of this inspection period, Unit 2 was at approximately 96.5 percent power. On July 16, Unit 2 operations personnel reduced reactor power to approximately 80 percent following a manual trip of Main Feedwater Pump A. On July 17, operations personnel returned Unit 2 to approximately 96.5 percent power following maintenance activities on the feedwater pump. On July 21, Unit 2 operations personnel commenced a plant shutdown to perform steam generator tube inspections. On August 16, Unit 2 operations commenced a reactor startup and took the reactor critical. On August 17, Unit 2 achieved approximately 98 percent power. Unit 2 remained at or near approximately 98 percent power at the end of this inspection period.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R04 Equipment Alignment - Routine Inspection

##### a. Inspection Scope

The inspectors performed a partial walkdown of the Unit 2 low pressure safety injection system. Plant procedures and drawings were used to verify the correct lineup for the system.

##### b. Issues and Findings

No significant findings were identified.

#### 1R05 Fire Protection - Monthly Routine Inspection and Fire Drill Observation

##### a. Inspection Scope

The inspectors performed fire protection walkdowns to assess the material condition of plant fire protection equipment, proper control of transient combustibles, and operational status of fire barriers used to prevent fire propagation. The following risk significant areas were inspected:

- Units 1 and 2 Control Rooms
- Unit 1 Emergency Diesel Generator Rooms
- Unit 2 Engineered Safety Features Rooms

The inspectors also observed a fire drill on July 6, 2000, in the Unit 1, Vital Switchgear Room A3. The inspectors reviewed the Unit 1 Pre-Fire Plan, Revision 0, for this fire zone prior to the drill and attended the fire brigade training instructor's critique of the drill after its completion.



b. Issues and Findings

No significant findings were identified.

1R06 Flood Protection

a. Inspection Scope

The inspectors performed tours of the plant to determine if adequate protection existed to protect safety-related equipment from external and internal flooding events. Specific risk significant areas included the Unit 1 emergency diesel generator rooms and the Unit 1 vital switchgear room.

b. Issues and Findings

No significant findings were identified.

1R11 Licensed Operator Requalification - Quarterly

a. Inspection Scope

The inspectors reviewed and attended the following classroom and simulator training activities conducted for Cycle 2-2001-01, Operations Crew A Requalification:

- Steam generator replacement documentation (D210)/Steam generator differences
- Simulator - primary to secondary leak - Original steam generators

b. Issues and Findings

No significant findings were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed two safety-related systems with performance problems to assess the effectiveness of the implementation of the maintenance rule. Specifically, the inspectors reviewed Condition Report CR-ANO-2-1999-0669, which documented excessive leakage during testing of High Pressure Injection Hot Leg Injection Check Valve 2SI-26A, and Condition Report CR-ANO-1-1999-178, which documented the failure of the Unit 1 Emergency Diesel Generator No. 2 as a result of stub shaft bracket bolting failure.

b. Issues and Findings

No significant findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors evaluated the effectiveness of the plant impact statement that documented the controls and contingencies that would be established to reduce plant risk during troubleshooting and repairs of the Startup Transformer No. 3 voltage regulator controls.

The inspectors reviewed the licensee's Shutdown Operations Protection Plan, Revision 2, for the Unit 2 steam generator inspection outage to determine if the licensee adequately implemented shutdown risk considerations.

The inspectors reviewed Shutdown Operations Protection Plan score cards on a daily basis and compared them to actual plant conditions to ensure that the licensee implemented acceptable defense-in-depth strategies for critical safety functions.

The inspectors reviewed the licensee's controls of emergent work identified during the Unit 2 steam generator inspection outage associated with reactor coolant system pressure boundary leakage. The licensee initiated Condition Report 2-2000-292 to document the identification and repair of pressurizer heater sleeve leakage and Condition Report 2-2000-293 to document identification and repair of a reactor coolant system hot leg instrument nozzle leak.

b. Issues and Findings

No significant findings were identified.

1R14 Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors reviewed and observed operator performance and response during the following planned nonroutine plant evolutions:

Unit 2 - Plant cooldown and transfer to the shutdown cooling system for decay heat removal

Unit 2 - Draining the reactor coolant system to reduced inventory/midloop conditions in preparation for steam generator nozzle dam installation

Unit 2 - Extended operation in reduced inventory conditions for steam generator tube inspections and reactor coolant system pressure boundary leakage repairs

b. Issues and Findings

No significant findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations for technical adequacy:

Condition Report CR-ANO -2-2000-311, evaluation of the Unit 2 2VSF-1B containment cooler partially clogged condensate water drains.

Condition Report CR-ANO-2-1999-710, evaluation of the physically degraded condition of the Unit 2 containment cooler units.

Condition Report CR-ANO-2-2000-261, evaluation of a degraded air inlet damper in the No. 2 emergency diesel generator room ventilation system.

Condition Report CR-ANO-2-2000-335, evaluation of leakage from the tell tale leakoff line for Low Pressure Safety Injection Pump 2P-60B.

Condition Report CR-ANO-2-2000-291, evaluation of degrading performance of High Pressure Safety Injection Pump 2P-89A.

Condition Report CR-2-2000-290, evaluation of a nonqualified electrical connection found on an environmentally qualified core exit thermocouple.

b. Issues and Findings

No significant findings were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the design controls associated with the control room emergency ventilation system boundary.

b. Issues and Findings

The licensee initiated Condition Report ANO-C-2000-190 regarding the inspectors' issue concerning administrative controls for maintaining the Unit 1 and Unit 2 shift superintendent office ventilation boundary doors propped open.

No significant findings were identified.

1R19 Postmaintenance Testing

a. Inspection Scope

The inspectors observed the postmaintenance testing activities following maintenance

on the Unit 1, Train A high pressure injection system motor operated valves to determine whether the testing activities adequately confirmed equipment operability. The testing activities were performed in accordance with Procedure 1104.002, Supplement 1, "Reactor Coolant System High Pressure Injection Motor Operated Valves Quarterly Test," Revision 53.

b. Issues and Findings

No significant findings were identified.

1R20 Refueling and Outage

a. Inspection Scope

Throughout the Unit 2 outage for steam generator tube inspection activities, the inspectors reviewed weekly and daily work schedules to identify risk significant evolutions and maintenance activities. The inspectors reviewed the Unit 2 Shutdown Operations Protection Plan prior to the outage to ensure that the licensee had considered risk, developed mitigation strategies to losses of key safety functions, and adhered to operating license and Technical Specification requirements. The inspectors observed portions of and monitored the plant shutdown, cooldown, drain to midloop, heatup, and plant startup activities.

b. Issues and Findings

No significant findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed portions of and reviewed data from the following surveillance test activities:

Procedure 1104.002, Supplement 1, "Reactor Coolant System High Pressure Injection Motor Operated Valves Quarterly Test," Revision 53 (Unit 1)

Procedure 1104.036, Supplement 1, "Emergency Diesel (DG1) Monthly Test," Revision 39 (Unit 1)

Procedure 2104.039, Supplement 8, "HPSI Header #1 Hot Leg Injection Valve Test," Revision 39 (Unit 2)

Procedure 2104.039, Supplement 9, "HPSI Header #2 Hot Leg Injection Valve Test," Revision 39 (Unit 2)

Procedure 2104.039, Supplement 6, "Full Flow HPSI Test," Revision 39 (Unit 2)

b. Issues and Findings

During performance of Procedure 2104.039, Supplement 8, on July 22, 2000, the licensee identified excessive reverse leakage through high pressure safety injection hot leg check Valve 2SI-26A and concluded that the valve was inoperable. During troubleshooting efforts, this Borg-Warner pressure seal bonnet check valve was determined to have been reassembled incorrectly during maintenance on November 11, 1999. The bonnet of the valve was found cocked from side to side a total of 0.017 inches. Postmaintenance reverse flow testing in 1999 did not identify this condition because the valve had not been exercised in the open direction first. When the valve was stroked in the open direction in 1999, the valve disc settled in a misaligned configuration with respect to the seat due to the cocked bonnet. This condition was not identified until the July 22, 2000, surveillance test.

The inspectors determined that Procedure 2402.044, "Disassembly, inspection, and reassembly of 2SI-26 A&B, 27 A&B, & 28 A&B," Revision 3, was not of a type appropriate to the circumstances in that the procedure did not ensure correct vertical orientation of the valve bonnet during reassembly of Valve 2SI-26A on November 11, 1999. The failure of Procedure 2402.044 to be of a type appropriate to the circumstances is a violation of 10 CFR Part 50, Appendix B, Criterion V. This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. This violation was entered into the licensee's corrective action program as Condition Report ANO-2-2000-270 (50-368/2000-09-01).

The inspectors also reviewed the licensee's operating experience assessment, dated September 20, 1989, for NRC Information Notice 89-62, "Malfunction of Borg-Warner Pressure Seal Bonnet Check Valves Caused by Vertical Misalignment of Disk." The inspectors determined that lessons learned from this NRC Information Notice had not been implemented with respect to maintenance and testing issues of these check valves. However, no additional operability concerns were identified. According to the licensee's check valve component engineer, these maintenance and testing issues were to be addressed in the corrective action program as part of Condition Report 2-2000-270.

The inspectors used the significance determination process to evaluate the risk significance of this issue and consulted with the regional senior reactor analyst. The safety significance of this issue was very low because other nonleaking valves precluded reverse flow through Valve 2SI-26A and overpressurization of the high pressure safety injection system. Therefore, the safety function of the associated systems was not affected (green).

**2. RADIATION SAFETY**  
**Cornerstone: Occupational Radiation Safety**

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors interviewed cognizant licensee personnel and reviewed the following items to ensure that the licensee's activities conformed to regulatory requirements:

- Calibration, operability, and alarm setpoint, when applicable, of portable radiation detection instrumentation, area radiation monitors, continuous air monitors, containment high range monitors, main steam line monitors, whole-body counting equipment, electronic alarming dosimeters, and personnel contamination monitors.
- Calibration expiration and source response check currency on radiation detection instruments staged for use.
- The status and surveillance records of self contained breathing apparatuses staged and ready for use in the plant.
- The licensee's capability for refilling and transporting self contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions.
- Control room operator and emergency response personnel training and qualifications for use of self contained breathing apparatus.
- Licensee self assessments and audits, focusing on radiological incidents that involved personnel internal exposures.
- Selected exposure significant radiological incidents that involved radiation monitoring instrument deficiencies or self contained breathing apparatuses since the last inspection in this area.

b. Issues and Findings

Self Contained Breathing Apparatus Training

The inspectors determined that the licensee's general employee training in the use of self contained breathing apparatuses was inadequate. The training did not instruct workers how to replace air supply bottles. This situation could be risk significant if events caused emergency response workers, such as operations personnel, to be in an atmosphere that was immediately dangerous to life or health for an extended time. Such an event was described in NRC Information Notice 99-05, "Inadvertent Discharge of Carbon Dioxide Fire Protection System and Gas Migration." Another potential event is referenced in the licensee's Procedure OP 2104.007, "Control Room Emergency Air Conditioning and Ventilation," Change No. 021-05-0. Section 5.3 of the procedure stated, in part, that in the event of a control room isolation on high chlorine [air concentration], all control room operators should don self contained breathing apparatuses within 2 minutes of determination that the actual high chlorine concentration caused the isolation. An individual air supply bottle contained enough air to breathe for approximately 30 minutes, depending on the individual user and the activities in which the user was involved. If events continued longer than this time, the

user would need to replenish the air supply.

This finding did not apply to all emergency response workers. Those in the fire brigade received more comprehensive training and were taught to replace empty air supply bottles. However, some emergency response workers, such as shift managers and station technical advisors, were not fire brigade members and did not receive training in bottle changeout.

10 CFR 20.1703(c)(4)(ii) requires that the licensee implement and maintain a respiratory protection program that includes written procedures regarding training of respirator users. The inspector, after conferring with representatives of the Office of Nuclear Reactor Regulation, determined that the licensee's respiratory protection training procedure was incomplete and, therefore, inadequate. The failure to implement and maintain a respiratory protection program that included an adequate written procedure regarding training of respirator users is a violation of 10 CFR 20.1703(c)(4)(ii). This violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report CR-ANO-C-2000-0207. Through use of the emergency preparedness significance determination process, the NRC determined the violation had a very low safety significance because it did not involve the failure to implement or meet an emergency preparedness planning standard, and no actual event required emergency response workers to change self contained breathing apparatus air bottles (50-313;50-368/2000-09-02).

#### Problem Identification and Resolution

The problem identification and resolution process did not work effectively in the situation discussed above. The inspectors concluded that the licensee had the opportunity to correct the problem and failed to do so. The inspectors' conclusion was based on the following information:

- NRC Information Notice 98-20 dated June 3, 1998, alerted the licensee of weaknesses in respiratory protection programs supporting emergency preparedness. Among other problems, the information notice discussed a licensee's failure, in 1997, to train the operators to change out self contained breathing apparatus air supply bottles. The information notice stated that the NRC expected licensees to consider actions to avoid similar problems.
- The licensee's quality assurance personnel conducted a surveillance of the respiratory protection program March 16 - April 26, 2000. Quality Assurance Surveillance Report SR-018-2000 stated, in part, that the general employee training self contained breathing apparatus lesson plan and practical factors training did not include the process or the requirements for personnel to change an apparatus cylinder. Quality assurance personnel recommended that the licensee enhance the training program with the necessary information, but no condition report was initiated and no actions were taken to correct the situation.

Problems related to the requirements of 10 CFR Part 20 are outside the scope of 10 CFR Part 50, Appendix B, Criterion XVI, so this example is not a violation of regulatory requirements. However, it is an issue that merits licensee attention because the facts demonstrate that the problem identification and resolution process was ineffective in this particular case. This issue had very low safety significance (green).

#### **4. OTHER ACTIVITIES**

##### **4OA1 Performance Indicator Verification (71151)**

###### **a. Inspection Scope**

The inspectors verified the accuracy and completeness of the data used to calculate and report the following performance indicators for the first two quarters of 2000:

- Unplanned scrams per 7000 critical hours
- Scrams with loss of normal heat removal
- Unplanned power changes per 7000 critical hours
- Safety system unavailability, high pressure injection system
- Safety system functional failures

The inspectors reviewed corrective action program records, operations department logs, performance indicator technique sheets, monthly operating reports, licensee event reports, and NRC inspection reports to complete the verification of the performance indicators.

###### **b. Issues and Findings**

No significant findings were identified.

##### **4OA5 Performance Indicator Data Collecting and Reporting Process Review**

###### **a. Inspection Scope**

The inspectors reviewed the performance indicator data collecting and reporting process, as specified in Temporary Instruction 2515/144. The following performance indicators were reviewed in detail to determine if the licensee was appropriately implementing NRC and industry guidance for collecting and reporting data:

- a. Initiating Events - unplanned power changes per 7000 critical hours
- b. Mitigation Systems - high pressure injection system unavailability
- c. Emergency Preparedness - ERO drill participation
- d. Occupational Radiation Safety - occupational exposure control effectiveness



e. Physical Protection - protected area security equipment performance

The inspectors interviewed the personnel responsible for data collection and reviewed Procedure LI-107, "NRC Performance Indicator Process," Revision 0 with respect to the indicator definitions, data reporting elements, and calculation methods for consistency with Nuclear Energy Institute Guidance Document NEI-99-02, "Regulatory Assessment Performance Indicator Guideline," dated March 28, 2000.

b. Issues and Findings

No significant findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the preliminary inspection results of the radiation safety inspection to Mr. B. Bement, General Manager, Plant Operations, and other members of licensee management on July 21, 2000.

The inspectors presented the inspection results of the resident inspections to Mr. C. Anderson, Vice President, Operations, and other members of licensee management on August 22, 2000.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

## ATTACHMENT 1

### PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

C. Anderson, Vice President, Operations  
G. Ashley, Technical Assistant to the Vice President  
R. Bement, General Manager, Plant Operations  
C. Chastain, General Employee Trainer  
M. Chisum, Manager, Unit 2 System Engineering  
M. Cooper, Licensing Specialist  
S. Cotton, Manager, Training/Emergency Preparedness  
G. Damron, Health Physics Technician, Radiation Protection  
C. Eubanks, Manager, Planning & Scheduling/Outages  
J. Hoffpauir, Plant Manager, Unit 2  
B. James, Manager, Maintenance  
D. James, Licensing Manager  
M. Little, Shift Superintendent, Unit 1 operations  
T. Mitchell, Manager, Unit 2 Operations  
T. Nickels, Superintendent, Radiation Protection  
D. Norman, Health Physics Technician, Radiation Protection  
S. Pyle, Licensing Specialist  
J. Smith, Manager, Radiation Protection  
M. Smith, Engineering Programs and Components Manager  
R. Starkey, Supervisor, Radiation Protection Operations Support  
C. Tyrone, Manager, Quality Assurance  
J. Vandergrift, Director, Nuclear Safety  
C. Zimmerman, Plant Manager, Unit 1

### ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened and Closed

50-368/2000-09-01	NCV	Inadequate procedure for maintenance of Borg-Warner check valves (Section 1R22)
50-313; 50-368/2000-09-02	NCV	Inadequate training in the use of self contained breathing apparatus (Section 2OS3)

### PARTIAL LIST OF DOCUMENTS REVIEWED

Procedure 2104.004	Shutdown Cooling System	Revision 27
Procedure 2102.010	Plant Cooldown	Revision 32
Procedure 1015.008	Unit 2 SDC Control	Revision 16
Procedure 2103.011	Draining the Reactor Coolant System	Revision 25
Procedure 1000.015	Station Training Procedure	Revision 22

Procedure 1012.006	Administration of the Radiation Protection Program	Revision 1
Procedure 1012.022	RP Instrumentation	Revision 4
Procedure 1064.021	Training Design	Revision 9
Procedure 1064.031	Training Materials Development	Revision 12
Procedure 1064.062	On the Job Training	Revision 6
Procedure 1304.027	Unit 1 Process Radiation Monitoring system Calibration	Revision 15
Procedure 1304.028	Unit 1 Area Radiation Monitoring System Calibration	Revision 20
Procedure 1304.082	Unit 1 Main Steam Line Radiation Monitor Calibration	Revision 12
Procedure 1304.133	Unit 1 Containment High Range Radiation Monitor Function Test	Revision 16
Procedure 1304.200	Unit 1 Containment High Range Radiation Monitor Calibration	Revision 1
Procedure 1305.001	Radiation Monitoring System Check and Test	Revision 14
Procedure 1313.052	Eberline CAL Portal Monitor Model PM-7	Revision 3
Procedure 1601.209	Whole-Body Counting/Bioassay	Revision 7
Procedure 1601.441	Performance Test of Survey Meters	Revision 1
Procedure 1601.456	Operation of the Portal Monitors	Revision 0
Procedure 1601.457	NE Small Articles Monitor Setup and Operation	Revision 0
Procedure 1601.603	Breathing Air	Revision 2
Procedure 2104.007	Control Room Emergency Air Condition and Ventilation	Revision 21
Procedure 2304.028	Area Radiation Monitoring System Calibration	Revision 12
Procedure 2304.133	Containment High Range Radiation Monitor	Revision 5 and 6
Procedure 2304.148	High Range Containment Radiation Monitor	Revision 2
Quality Assurance Audit Report	Radiation Protection	QAP-3-99

Quality Assurance Surveillance Report	RP Instrument Issue Practices	Surveillance Report 051-99
Quality Assurance Surveillance Report	Respiratory Protection	Surveillance Report 018-2000
Drawing M-2232	Safety Injection System	Revision 105
Drawing M-2236	Containment Spray System	Revision 82
Training Material	Self Contained Breathing Apparatus Training Lesson Plan and Student Handout	

## ATTACHMENT 2

### NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>•Initiating Events</li><li>•Mitigating Systems</li><li>•Barrier Integrity</li><li>•Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>•Occupational</li><li>•Public</li></ul>	<ul style="list-style-type: none"><li>•Physical Protection</li></ul>

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspections so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>