APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-482/88-24 Operating License: NPF-42

Docket: 50-482

Licensee: Wolf Creek Nuclear Operating Corporation (WCNOC)
P.O. Box 411
Burlington, Kansas 66839

Facility Name: Wolf Creek Generating Station (WCGS)

Inspection At: Wolf Creek Site, Coffey County, Burlington, Kansas

Inspection Conducted: September 1-30, 1988

Inspectors: Bruce L. Bartlett 10-7-88
B. L. Bartlett, Senior Resident Inspector, Date
Projects Section A, Division of Reactor Projects

M L Skow 10/9/88
M. L. Skow, Resident Reactor Inspector, Date
Project Section A, Division of Reactor Projects

Approved: Dwight D. Chamberlain 10/27/88
D. D. Chamberlain, Chief, Project Section A, Date
Division of Reactor Projects

Inspection Summary

Inspection Conducted September 1-30, 1988 (Report 50-482/88-24)

Areas Inspected: Routine, unannounced inspection including plant status, followup on a previously identified NRC item, review of licensee event reports, operational safety verification, monthly surveillance observation, monthly maintenance observation, onsite event followup, preparation for refueling, physical security verification, and radiological protection.

Results: Untimely corrective action continues to be a problem (paragraphs 4 and 6), the licensee continues to find instances of failure to perform Technical Specification (TS) surveillances properly (paragraph 4), engineering is still not adequately involved in operability determinations (paragraph 5), the licensee failed to understand the significance of certain TS (paragraphs 5d and 5e), and an accident occurred resulting in the death of one worker (paragraph 8). Within the areas inspected, two violations (failure to implement prompt corrective action, paragraphs 4 and 6, and procedure inappropriate to the circumstances, paragraph 4) were identified.

DETAILS

1. Persons Contacted

Principal Licensee Personnel

B. D. Withers, President and CEO
*F. T. Rhodes, Vice President, Operations
*R. M. Grant, Vice President, Quality Assurance (QA)
*J. A. Bailey, Vice President, Engineering and Technical Services
*G. D. Boyer, Plant Manager
R. W. Holloway, Manager, Maintenance and Modifications
O. L. Maynard, Manager, Licensing
C. M. Estes, Manager, Operations
*M. G. Williams, Manager, Plant Support
C. E. Parry, Manager, QA
*A. A. Freitag, Manager, Nuclear Plant Engineering (NPE)
*K. Peterson, Supervisor, Licensing
*G. Pendergrass, Licensing
*C. J. Hoch, QA Technologist
E. Lehmann, NSE Engineer
*J. Pippin, Manager, NPE
C. J. Patrick, Supervisor, Quality Systems
*R. L. Gourley, Maintenance and Modification
R. H. Belote, Manager, Nuclear Safety Engineering
J. L. Blackwell, Fire Protection Coordinator
S. D. Austin, Operations Support
*T. S. Morrill, Health Physicist
*R. L. Lodgson, Chemist

The NRC inspectors also contacted other members of the licensee's staff during the inspection period to discuss identified issues.

*Denotes those personnel in attendance at the exit meeting held on October 4, 1988.

2. Plant Status

The plant operated in Mode 1, 100 percent power, during the inspection period.

On September 10, 1988, the licensee isolated the 7B, 6B, and 5B high pressure feedwater heaters due to an apparent tube leak in the 5B heater. The high pressure feedwater heaters are used to increase the thermodynamic efficiency of the secondary side of the plant and are not safety-related. The 5B heater can not be completely isolated so repairs will have to be completed during the upcoming refueling outage. Due to the loss of the heaters, the licensee has lost approximately 20 MW electric. On September 30, 1988, the licensee had 225 days of continuous power production.

3. Followup on a Previously Identified Inspection Finding (92701)

(Closed) Violation (482/8634-02): Violation of TS-Fire Suppression System Surveillance - This violation concerned missing damper actuation requirements from Procedures STS MT-032, STS MT-036, and STS MT-037. These STS procedures have been replaced by: STN FP-400, Revision 0, "Single-Zone Halon System Checkout"; STN FP-401, Revision 0, "Two-Zone Halon System Checkout;" and STN FP-402, Revision 0, "Six-Zone Halon System Checkout." These procedures now verify actuation of associated ventilation system fire dampers. As discussed in the closeout of LER 87-038, fire protection requirements have been deleted from Technical Specifications, but remain in fire protection procedures.

4. Review of Licensee Event Reports (LER) (92700)

During this inspection period, the NRC inspectors performed followup on Wolf Creek LERs. The LERs were reviewed to ensure:

- Corrective action stated in the report has been properly completed or work is in progress.
- Response to the event was adequate.
- Response to the event met license conditions, commitments, or other applicable regulatory requirements.
- The information contained in the report satisfied applicable reporting requirements.
- Generic issues were identified.

The LERs discussed below were reviewed and closed:

- 87-002, "Engineered Safety Features Actuation - Safety Injection and Reactor Trip." The LER states that the cause of the event was personnel error during calibration testing. The LER also discusses problems with a power operated relief valve following the reactor trip. The NRC inspector reviewed STS IC-507A, Revision 2, "Calibration Steam Line Pressure Transmitters," and found clarification had been made for the performer to verify that no partial trips were in prior to placing the channel in test. Work Request (WR) 00087-87 was accomplished to repair the valve and WR 00105-87 adjusted the trip settings on the circuit breaker to the valve. This LER is closed.
- 87-004, "Reactor Trip Caused By Main Turbine High Vibration." This event appeared to have occurred due to a spike in the vibration at the No. 12 bearing. The spike was of such short duration that it was not shown on the chart recorder. The licensee has performed a temporary modification to the high vibration, turbine trip circuitry to provide an alarm function rather than a trip function. During the

next refueling outage, the licensee intends to install a modified trip feature with a 3-second time delay. This LER is closed.

- 87-011, "Operations Above The Power Level In Operating License 2.C(1)." The LER stated that thermal power exceeded the licensed limit of 3411 megawatts by less than 1.0 percent. The NRC inspector reviewed STS SE-002, Revision 0, "Manual Calculation of Reactor Thermal Power," as changed by Temporary Procedure Change MA87-047 that was performed on February 5, 1987. Also reviewed STS SE-001, Revision 6, "Power Range Adjustment to Calorimetric," that was performed on February 5, 1987. These procedures verified reactor thermal power was within licensed limits. This LER is closed.

- 87-019, "Engineered Safety Features Actuation - Containment Purge Isolation and Control Room Ventilation Isolation Due to Faulty Cable Causing Signal Spike on Radiation Monitor." The coaxial cable flexed when opening the radiation monitor cabinet door. This caused noise spikes which actuated the system. The cable was repaired by WR 01640-87 on May 8, 1987. This LER is closed.

- 87-028, "TS Violation - Due To Inoperable Class 1E Batteries." This LER concerned two occasions when quarterly surveillance tests on Class 1E 125 volt batteries indicated certain parameters were outside their TS limit, yet corrective action was not taken. This issue was first raised in NRC Inspection Report 50-482/86-32 issued February 11, 1987. Violation 482/8632-01 was issued identifying a failure of post test review to identify an out-of-specification value and a failure to institute proper corrective action. The licensee's response to this violation (dated March 13, 1987) stated that the surveillance personnel involved in that instance had been counseled, that another posttest review step had been added, and that Violation 482/8632-01 had been added to the required reading for maintenance personnel. However, the response to the Notice of Violation did not address whether or not this had occurred previously. The licensee discovered the two additional examples that were reported in this LER in response to a review of industry information from another plant. In response to the additional information presented by this LER, the licensee revised the quarterly surveillance test in order to eliminate the confusion over acceptance criteria that was contributing to missed TS criteria. This LER is closed.

- 87-030, "Reactor Trip Caused By Potential Transformer Failure." This LER concerned a reactor trip caused by a partial loss of offsite power which resulted from a potential transformer failure. The licensee implemented Plant Modification Request (PMR) 00935 which installed a diverse power supply to the buses which power the main feedpump controllers. This LER is closed.

- 87-038, "TS Violation - Failure to Properly Verify Operability of Fire Pumps Due to Procedural Inadequacy." This LER concerned TS surveillance requirements that were not included in Procedure STS FP-004. This STS has been replaced by STN FP-204, Revision 0, "Fire System Flow Test, Pump Sequential Start, and Annual Fire Pump Test." This procedure included the proper pressure and time delay verifications that were discussed in the LER. These requirements are no longer included in TS but are included with the fire protection procedures. This LER relates to Violation 482/8634-02 which is discussed in paragraph 3 of this report. This LER is closed.

- 87-039, "Breaker Switch Mispositioned." This LER concerned control room operators discovering that the power had been removed to Pressurizer Block Valve BB HV-8000B. Investigation by the licensee revealed that the probable cause for the switch, which controls power to the valve, being mispositioned was contractor personnel unknowingly bumping the switch with their equipment. Discussions with contractor personnel were held and the need to be careful when working around energized equipment was emphasized. This LER is closed.

- 87-040, "TS Violation - Personnel Oversight Results In Nonconservative Error In Containment Purge Radiation Monitors Setpoint For Isolating Containment Purge." The LER discussed containment purge radiation monitors that were set at a value less conservative than permitted by TS. Temporary Procedure Change MA87-308 was issued on September 18, 1987, to adjust the monitor bistable trip setpoints. Procedures CHM 02-152, Revision 10, "Use of the ND 6700 LRW/GRW System for Containment Purges," and CHM 03-161, Revision 5, "Preparation of Radioactive Gas Release Permit for Containment Purges," have been revised to reflect the current bistable trip setpoints. They also ensure that the bistable trip setpoint is reset if calculations result in a more conservative value. This LER is closed.

- 87-042, "Personnel Error Leads To High-High Steam Generator Level Resulting In Feedwater Isolation Signal." The operators in this event failed to compensate for the increasing water level in conjunction with the decreasing steaming rate in the steam generator. The event occurred while the reactor was in hot shutdown and cooling down. The operators were counseled on the importance of attention to detail, being alert to developing conditions, and taking prompt actions to avoid unnecessary challenges to plant safety systems. This LER is closed.

- 87-043, "Surveillances of Power Range Low Setpoint and P-8, P-9, and P-10 Interlocks Not Performed Per TS Due to Procedural Deficiencies." The licensee stated in this LER that the "Mode change checklist for entry into Mode 2 is being revised to require the performance of specific portions of STS IC-241, STS IC-242, STS IC-243, and

STS IC-244 if the portions have not been performed within the previous 31 days with the unit in shutdown condition. The event date was September 29, 1987. On September 16, 1988, the NRC inspector found that the mode change checklist still had not been revised to reflect the stated changes. This was discussed with licensee personnel and on September 20, 1988, the licensee revised the mode change checklist. At the request of the NRC inspector, the licensee verified that the proper actions had been performed for the three entries into Mode 2 from Mode 3 since this LER event. The failure to promptly implement identified corrective action is an apparent violation (482/8824-01). This LER is closed.

- 87-044, "Personnel Error Leads To Omission Of Snubber From Inspection Procedure Resulting In TS Violation." The LER stated the a typographical error caused a snubber to be omitted during the snubber visual inspection in the first refueling outage. The NRC inspector reviewed Procedure STS MT-011, Revision 4, "Snubber Visual Inspection." The snubber was included in the procedure. This LER is closed.

- 87-059, "Reactor Trip Caused By Loss Of a Main Feedwater Pump." This LER concerned a partial loss of feedwater flow which resulted in a plant trip. The cause of the loss of feedwater flow was a fitting becoming loose and separating. This fitting was in an instrument sensing line which monitored main feed pump header pressure. The licensee reconnected the fitting and inspected all similar fittings on both main feed pumps. This LER is closed.

- 88-014, "TS Violation - Caused by Channel Check Requirements Being Changed in Surveillance Procedure." This LER discussed a surveillance requirement to perform a channel check of the auxiliary feedwater pump, suction pressure-low, at least once every 12 hours. The surveillance requirement had not been met from May 2, 1985, until August 22, 1988, because the wrong instruments were listed in Procedure STS CR-001, "Shift Logs for Modes 1, 2, & 3." The safety significance of this is mitigated because the licensee successfully performed the required monthly channel operational tests and 18-month channel calibration tests during this time. The NRC inspectors recognized that this was identified by the licensee. However, it went unidentified for over 3 years and there have been previous similar occurrences. Failure to have a procedure appropriate to the circumstances is an apparent violation (482/8824-02).

5. Operational Safety Verification (71707)

The NRC inspectors verified that the facility was being operated safely and in conformance with regulatory requirements by direct observation of licensee facilities, tours of the facility, interviews and discussions with licensee personnel, independent verification of safety system status and limiting conditions for operations, and review of facility records. The NRC inspectors, by observation of randomly selected activities and

interview of personnel, verified that physical security, radiation protection, and fire protection activities were controlled.

By observing accessible components for correct valve position and electrical breaker position, and by observing control room indication, the NRC inspectors confirmed the operability of selected portions of safety-related systems. The NRC inspectors also visually inspected safety components for leakage, physical damage, and other impairments that could prevent them from performing their designed functions. Selected NRC inspector observations are discussed below:

a. NRC Inspection Report 50-482/88-22, paragraph 4.a, discussed a licensee engineering evaluation on the control room ventilation isolation system (CRVIS). This evaluation had shown that without the air conditioner (AC), CRVIS was unable to meet its design basis. Prior to this evaluation, whenever the AC units were inoperable, the licensee did not enter TS 3.7.6 (CRVIS operability requirements). The licensee stated that the reason they did not consider themselves in TS 3.7.6 was that the AC unit was not specifically called out in TS. The NRC inspector was concerned that the initial (incorrect) TS interpretation had been made without input from engineering. Engineering involvement with operational decisions has been an ongoing NRC concern at Wolf Creek.

   On August 29, 1988, when the CRVIS AC operability determination was made, the NRC inspector asked the licensee about all other safety-related coolers that were not specifically called out in TS. The licensee stated that those coolers would be reviewed for operability determination.

   On September 26, 1988, during a routine review of the control room logs, the NRC inspector determined that Ventilation Unit SGK05B (Class 1E switchgear cooler) had tripped at 7:36 a.m. CDT on September 25, 1988. The shift supervisor stated that even though SGK05B was inoperable, no TS action statement had been entered. Discussions with the Manger of Operations and Vice President-Nuclear Operations, later that day, revealed that the operability determination had been made without input from engineering. In response to NRC concerns, the licensee requested engineering to evaluate the need to have the Class 1E switchgear coolers operable. In order to keep the temperatures acceptable, the licensee supplied temporary cooling to the areas served by SGK05B, as needed. This area will be reviewed further during future NRC inspections.

b. When SGK05B was lost on September 25, 1988, the control room dispatched an operator to the NB02 (yellow train) switchgear room to verify that the room temperature was within TS limits. However, the operator was unable to enter the room when Door 33012 failed to open. Failure of this vital barrier door to open resulted in loss of access to both switchgear rooms (Class 1E) and both emergency diesel generators. There is an emergency door, but it cannot be accessed

from the outside. The same situation, of failure of one door denying access to an entire area, exists for the vital batteries, direct current switchgear rooms, and both cable spreading rooms. The licensee was able to get Door 33012 operating again within 30 minutes and then issued a request to engineering to modify certain doors so that an alternate path in to the areas discussed above would be available.

c. On September 28, 1988, at 4:58 p.m. (CDT), the control room operators determined that both containment humidity detectors (GN AI-27 and 28) were reading less than zero. Upon checking, the licensee determined that Breakers PG2ONBR238 and -239 were in the off position. At the end of this report period, the licensee had not determined how long the breakers had been off, who turned them off, or whether or not security would investigate the incident. The containment humidity detectors are not TS items, are not required for accident analysis or recovery, and are only one of several methods available for determination of a leak inside containment. The resident inspectors will continue to monitor licensee actions in this area.

d. During a routine review of the licensee schedule for the upcoming refueling outage, the NRC inspector developed a concern. The licensee had scheduled maintenance on the residual heat removal (RHR) system in the latter part of the outage. This maintenance would have required one train to be inoperable at that time. During the time the train would have been inoperable and the reactor would have been in Mode 6 (refueling) with less than 23 feet of water over the fuel (half-pipe). TS 3.9.8.2 requires two independent RHR loops to be operable and one in operation during these conditions. Action "a" to TS 3.9.8.2 requires immediate corrective action when less than the required RHR loops are operable. Deliberate entry into an action statement requiring immediate corrective action is not conservative. The licensee modified the refueling schedule prior to the NRC inspector bringing up his concern. The schedule was modified to meet the intent of a generic letter on refueling requirements about to be issued by the NRC. As part of this schedule change, the reactor will be totally defueled while performing maintenance on the RHR system. This alleviates the NRC inspector concern for this particular situation.

e. On September 16, 1988, the manager of nuclear safety engineering (NSE) informed the NRC inspectors that one of the engineers in his group had turned in his resignation. With one other engineer having previously turned in his resignation, this meant that the group would soon be down to four engineers. TS 6.2.3.2 requires, in part, "The independent safety engineering group shall be composed of at least five dedicated, full-time engineers located on site." TS 6.2.3.2 has no action statement. The licensee informed the NRC inspectors that job announcements were being posted and the jobs would be filled as soon as possible, but that it was likely that NSE would be understaffed for several weeks. After consultation with Region IV, the NRC inspectors informed the licensee that failure to

meet TS 6.2.3.2 would be an apparent violation. The licensee informed the NRC inspectors that if permanent personnel could not be found, prior to the engineer leaving, temporary engineers would be utilized as an interim measure.

f. On September 2, 1988, the licensee briefly experienced a loss of both fire protection water pumps. At approximately 9:35 a.m. (CDT), a small pressure drop in the fire main header resulted in the automatic starting of the motor driven fire pump and then the diesel fire pump. The resulting surge in pressure caused a section of discharge piping to separate at a joint. The resulting spray of lake water caused the motor driven pump motor to trip on an indicated overcurrent condition, the wetting down of several other control cabinets, and the roof of the building to be damaged. The diesel fire pump was manually secured. With the pipe failed, both fire pumps were temporarily unable to perform their function. However, after some minor valve manipulations, the licensee succeeded in returning the diesel fire pump to service. TS Amendment 15 dated February 24, 1988, and effective April 6, 1988, removed the fire protection requirements from the TS. However, the licensee maintained their program requirements in the Updated Safety Analysis Report. Due to the loss of both fire pumps, the licensee entered a 24-hour administrative limiting condition for operation (LCO). After the diesel was returned to service, the licensee entered a 7-day administrative LCO. The licensee exited the 7-day LCO on September 8, 1988, when the motor driven fire pump was restored to service and a rented fire pump was tied into the header. The licensee's internal written report has not been issued yet; however, corrective action to date includes a 100 percent check of all fire protection bolted connections in the circulating water screen house.

6. Monthly Surveillance Observation (61726)

The NRC inspectors observed selected portions of the performance of surveillance testing and/or reviewed completed surveillance test procedures to verify that surveillance activities were performed in accordance with TS requirements and administrative procedures. The NRC inspectors considered the following elements while inspecting surveillance activities:

- Testing was being accomplished by qualified personnel in accordance with an approved procedure.
- The surveillance procedure conformed to TS requirements.
- Required test instrumentation was calibrated.
- TS LCOs were satisfied.

- Test data was accurate and complete. Where appropriate, the NRC inspectors performed independent calculations of selected test data to verify accuracy.

- The performance of the surveillance procedure conformed to applicable administrative procedures.

- The surveillance was performed within the required frequency and the test results met the required limits.

Surveillances witnessed and/or reviewed by the NRC inspectors are listed below:

- STS KJ-005A, Revision 11, "Manual/Auto Start, Synchronization, and Loading of Emergency Diesel Generator NE01," performed on September 4, 1988

- STS IC-615A, Revision 3, "Slave Relay Test K615A, Safety Injection," performed on September 4, 1988

- STS AE-201, Revision 6, "Feedwater System Inservice Valve Test," performed on September 24, 1988

Selected NRC inspector observations are discussed below:

During the performance of STS AE-201, Valve AE FV-39 failed to cycle during the 10 percent stroke test. The valve was not declared inoperable because the test was using the red train of the actuation system. The yellow train was not involved in the test and was considered to have remained operable. The valve did not stoke because a four-way valve in the actuation system did not move. Maintenance personnel agitated the "M" four-way valve. It then operated properly and the licensee considered the valve operable.

The NRC inspectors reviewed all previous STS AE-201 performances and found one other occasion when a stuck four-way valve prevented a main feedwater isolation valve from passing a 10 percent stroke test. On June 25, 1988, AE FV-39 failed to cycle because the yellow train four-way valve stuck. Maintenance personnel agitated the four-way valve and it then operated properly. STS AE-201 requires that when the feedwater valves do not operate properly, a work request (WR) must be issued. WR 02575-88 was issued on June 25, 1988. The NRC inspectors found that WR 02575-88 had not been completed. The surveillance test routing sheet indicated that the four-way valve was agitated and reset. It then operated properly and was considered operable. Failure to determine the cause of the four-way valve sticking on June 25, 1988, and to take prompt corrective action is another example of the violation (482/8824-01) noted in paragraph 4 of this report.

7. Monthly Maintenance Observation (62703)

The NRC inspectors observed maintenance activities performed on safety-related systems and components to verify that these activities were conducted in accordance with approved procedures, TS, and applicable industry codes and standards. The following elements were considered by the NRC inspectors during the observation and/or review of the maintenance activities:

- o LCOs were met and, where applicable, redundant components were operable.
- o Activities complied with adequate administrative controls.
- o Where required, adequate, approved, up-to-date procedures were used.
- o Craftsmen were qualified to accomplish the designated task and technical expertise (i.e., engineering, health physics, operations) was made available when appropriate.
- o Replacement parts and materials used were properly certified.
- o Required radiological controls were implemented.
- o Fire prevention controls were implemented where appropriate.
- o Required alignments and surveillances to verify post-maintenance operability were performed.
- o Quality control hold points and/or checklists were used when appropriate and quality control personnel observed designated work activities.

Selected portions of the maintenance activities accomplished on the WR listed below were observed and related documentation reviewed by the NRC inspector:

No.	Activity
WR 51856-88	Safety Injection Pump B motor semi-annual oil change
WR 51857-88	Safety Injection Pump B-2 year maintenance
WR 51858-88	Safety Injection Pump B-semiannual oil change

Selected NRC inspector observations are discussed below:

- o WR 51856-88 was observed during its performance by several NRC inspectors. All comments on this WR have been discussed in NRC Inspection Report 50-482/88-27.

No violations or deviations were identified.

8. Onsite Event Followup (92700)

At 1:45 p.m. on September 13, 1988, a contract electrician was electrocuted. The event occurred while an electrical crew was pulling new cable to an electrical panel for a 480-volt lighting circuit. Another electrician was also injured due to electrical shock when he tried to dislodge the worker from the electrical source. A third electrician heard the electrocution and tripped all the circuit breakers in the breaker panel deenergizing the shorted circuit. First aid was given the victim, first by the less injured electrician, then by responding personnel. Both electricians were taken to the Coffey County Hospital. One electrician was pronounced dead on arrival. The other electrician was treated and released.

The accident occurred at the 2000-foot level of the auxiliary building in the overhead of the hallway outside of the south penetration room. This was in a radiologically controlled area, but not a contaminated area. The electrical crew was pulling new cables through an existing conduit which contained other energized wires. There was vapor barrier material in the conduit near a pullbox. The vapor barrier material prevented the electricians from pushing their "fish tape" through the conduit. The electricians disconnected the ends of the 3-foot section of conduit to dig out the vapor barrier material. At one end of the conduit section, the wires inside apparently worked against the edge of the conduit and the insulation of one wire was scraped open to expose the conductor. This apparently energized the conduit and caused the electrocution.

The senior resident inspector responded to the event location and the resident inspector responded to monitor control room activities. As the event developed, the licensee anticipated later issuing a press release and notifying the occupational safety and health administration (OSHA). Thus, the shift supervisor made a nonemergency 4-hour report to the NRC in accordance with 10 CFR 50.72(b)(2)(vi). Later, the press release was issued and OSHA was notified. The licensee has assembled a safety team to investigate this incident and the resident inspectors will monitor licensee actions. This event is also being reviewed by an NRC Region IV specialist inspector.

No violations or deviations were identified.

9. Preparation For Refueling (60705)

The NRC inspectors through review of licensee procedures, interviews with licensee personnel, attendance of licensee meetings, and observations of licensee controls, evaluated the licensee's preparation for the upcoming refueling outage (Refuel III). The areas reviewed included:

- Technical adequacy of approved procedures

- Administrative controls for refueling operations
- Administrative controls for plant conditions during refueling
- Implementation of controls

Selected NRC inspector observations are discussed below:

As stated in NRC Inspection Report 50-482/88-14 (SALP), licensee management oversight of Refuel II was less than adequate. Weaknesses in licensee management oversight resulted in an NRC issuance of a Civil Penalty and a performance Category 3 in the SALP outage functional area. The licensee's response to the SALP report (Letter WM 88-0207 dated August 19, 1988) states that, in order to ensure the events of Refuel II do not repeat themselves, organizational relationships and personnel changes had been implemented. During the performance of this inspection, the NRC inspectors verified that, as stated in WM 88-0207, two senior supervisors had been added to the outage group, the outage group now reports to the plant manager, and scheduling personnel receive direction directly from the outage group. In addition, containment outage coordinators have been assigned for the upcoming outage. However, the NRC inspectors also determined that the target dates for outage planning listed in Administrative Procedure ADM 01-108, "Outage Planning," were routinely not met. Step 5.4.1 states that 9 months prior to the outage all PMRs to be implemented during the outage should be identified and approved for implementation. Interviews with licensee personnel stated that a large number of PMRs (safety-related, special scope, and nonsafety-related) did not meet this date. Step 5.4.2 states that 6 months prior to the outage engineering should be complete for outage PMRs. This too was not met. Step 5.4.6 states that 30 days prior to the outage all work packages scheduled for the outage should be complete. During this inspection period, numerous work activities still had not received health physics' as low as reasonably achievable (ALARA) review. Examples include both activities that are not routine for every outage (e.g. control rod ultrasonic inspection activity) and some activities that are performed every outage (e.g. fuel transfer tube blank flange removal/replacement). This failure to comply with the recommendations in ADM 01-108 does not necessarily mean that problems with the outage will result. However, it does cause additional work load at a time when management and staff attention should be devoted to ongoing outage activities.

The NRC inspectors reviewed the following procedures:

- ADM 01-108, Revision 4, "Outage Planning"
- GEN 00-005, Revision 11, "Plant Shutdown From 20% Minimum Load to Hot Standby"

- o GEN 00-006, Revision 12, "Hot Standby to Cold Shutdown"
- o GEN 00-007, Revision 9, "Mode 5-RCS Drain Down"
- o FHP 02-001, Revision 7, "Refueling Procedure"
- o FHP 02-011, Revision 9, "Fuel Shuffle and Position Verification"
- o OFN 00-015, Revision 5, "Loss of Shutdown Cooling (RHR)"
- o OFN 00-018, Revision 2, "Fuel Handling Accident"
- o OFN 00-028, Revision 0, "IDLE RHR Train Temperature Control Modes 1-4"

The resident inspectors will continue to monitor licensee effectiveness during outage activities.

No violations or deviations were identified.

10. Physical Security Verification (71881)

The NRC inspectors verified that the facility physical security plan (PSP) is being complied with by direct observation of licensee facilities and security personnel.

The NRC inspectors by observation of randomly selected activities verified that search equipment was operable, the protected area barriers and vital area barriers were well maintained, access control procedures were followed, and appropriate compensatory measures were followed when equipment was inoperable.

For discussion of a security-related event, see paragraph 5b.

During this month, physical security verification was also verified through an inspection performed by Region IV security personnel. For the results of that inspection, see NRC Inspection Report 50-482/88-29.

No violations or deviations were identified.

11. Radiological Protection (71709)

By performing the following activities, the NRC inspectors verified that radiologically related activities were controlled in accordance with the licensee's procedures and regulatory requirements:

- o Reviewed documents such as active radiation work permits and the health physics shift turnover log.
- o Observed personnel activities in the radiologically controlled area (RCA) such as:

- . Use of the required dosimetry equipment,
- . "Frisking out" of the RCA, and
- . Wearing of appropriate anti-contamination clothing where required.

o Inspected postings of radiation and contaminated areas.

o Discussed activities with radiation workers and health physics supervisors.

During this month, additional inspection in this area was performed by Region IV personnel. For the results of that inspection, see NRC Inspection Reports 50-482/88-27 and 88-28.

No violations or deviations were identified.

12. Exit Meeting

The NRC inspectors met with licensee personnel to discuss the scope and findings of this inspection on October 4, 1988.