

UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 76011-8064

August 28, 2000

Otto L. Maynard, President and Chief Executive Officer Wolf Creek Nuclear Operating Corporation P.O. Box 411 Burlington, Kansas 66839

SUBJECT: WOLF CREEK GENERATING STATION--NRC INTEGRATED INSPECTION

REPORT NO. 50-482/00-07

Dear Mr. Maynard:

The NRC conducted inspections on July 2 through August 12, 2000, at your Wolf Creek Generating Station. The enclosed report presents the results of these inspections which were discussed during meetings on July 14 and August 11, 2000, with you and other members of your staff.

These inspections were an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of these inspections, the NRC has identified an issue that was evaluated under the risk significance determination process as having very low safety significance (green). The NRC has also determined that a violation is associated with this issue. This violation is being treated as a noncited violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, 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 a 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 the Wolf Creek Generating Station.

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).

Sincerely,

/RA/

William D. Johnson, Chief Project Branch B Division of Reactor Projects

Docket No: 50-482 License No: NPF-42

Enclosure:

NRC Inspection Report No. 50-482/00-07

cc w/enclosure: Chief Operating Officer Wolf Creek Nuclear Operating Corp. P.O. Box 411 Burlington, Kansas 66839

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SRI, Callaway (VGG)

Branch Chief, DRP/B (WDJ)

Senior Project Engineer, DRP/B (RAK1)

Branch Chief, DRP/TSS (LAY)

RITS Coordinator (NBH)

Only inspection reports to the following:

David Diec (DTD)

NRR Event Tracking System (IPAS)

WC Site Secretary (SLA2)

Dale Thatcher (DFT)

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RIV:SRI:DRP/B	RI:DRP/B	SPE:DRP/B	PSI:DRS/PSB	C:DRS/PSB
FLBrush;sa	JSDyke	RAKopriva	ABEarnest	GMGood
WDJohnson for	WDJohnson for	/RA/	DWSchaefer for	WAMaier for
8/21/00	8/21/00	8/24/00	8/24/00	8/24/00

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C:DRP/B		
WDJohnson		
/RA/		
8/28/00		

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Docket Nos.: 50-482

License Nos.: NPF-42

Report No.: 50-482/00-07

Licensee: Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station

Location: 1550 Oxen Lane NE

Burlington, Kansas

Dates: July 2 through August 12, 2000

Inspectors: F. L. Brush, Senior Resident Inspector

J. S. Dyke, Resident Inspector

R. A. Kopriva, Senior Project Engineer

A. B. Earnest, Physical Security Inspector, Plant Support Branch

Approved By: W. D. Johnson, Chief, Project Branch B

ATTACHMENTS: 1. Supplemental Information

2. NRC's Revised Reactor Oversight Process

SUMMARY OF FINDINGS

Wolf Creek Generating Station NRC Inspection Report No. 50-482/00-07

IR05000482-00-07; on 7/5-8/12/2000; Wolf Creek Nuclear Operating Corporation; Wolf Creek Generating Station. Integrated Resident/Regional Report. Access Control

The report covers a 6-week period of resident inspection and announced inspections by Region IV inspectors. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the significance determination process in Inspection Manual Chapter 0609.

Cornerstone: Physical Protection

• Green. The inspector identified that security officers manning the x-ray search equipment were not visually searching hand-carried packages which contained material that could not be identified. The licensee's failure to adequately search packages being processed through the x-ray machine was a violation of paragraphs 1.6.1 and 1.6.8 of the Physical Security Plan, Revision 31, and paragraph 6.3.3.2 of Security Procedure SEC 01-202, Revision 37. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation was entered into the licensee's corrective action program as Performance Improvement Request 2000-1939 (Section 3PP2).

The issue was of very low safety significance because no similar findings had occurred during the previous four quarters.

Report Details

Summary of Plant Status

The plant operated at essentially 100 percent power for the report period, with the following exception. On July 29, 2000, the licensee reduced plant power to 82 percent when a 345 kV transmission line faulted. The licensee returned the plant to 100 percent power the following day after the line was repaired.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial walkdown of residual heat removal System B during a residual heat removal System A outage and of safety injection System B during a safety injection System A outage to verify equipment alignment and identify discrepancies that could impact redundant system operability. The inspectors used the following procedures and documents to perform the walkdowns:

- CKL EJ-120, "Residual Heat Removal System Lineup," Revision 25
- CKL EM-120, "Safety Injection System Lineup Checklists," Revision 18
- Piping and Instrument Drawing M-12EM01, high pressure coolant injection system
- Piping and Instrument Drawing M-12EJ01, residual heat removal system
- Technical Specifications and Updated Safety Analysis Report

b. Findings

There were no findings identified.

1R05 Fire Protection (71111.05)

a. <u>Inspection Scope</u>

The inspectors performed a walkdown of the following areas to determine that the licensee implemented a fire protection program for the control of combustibles, maintained the fire detection and suppression equipment and passive fire protection features, and adequately compensated for inoperable or degraded fire protection equipment, systems, or features:

- Auxiliary building 2026 foot Corridors 1 and 2, component cooling water pumps, and Heat Exchanger Areas A & B
- Auxiliary building 2026 foot north electrical penetration room
- Auxiliary building 2026 foot south electrical penetration room
- Auxiliary Building 2026 foot and 2042 foot main steam enclosure

The inspectors used the area fire preplans during the walkdown. The inspectors also reviewed applicable portions of the Updated Safety Analysis Report.

b. Findings

There were no findings identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors reviewed the licensee's response plan for internal flooding for the auxiliary building 1974 foot level and the vital switchgear rooms to verify that the licensee's flood mitigation equipment is consistent with the design requirements. The inspectors reviewed the following:

- Applicable portions of the Updated Safety Analysis Report
- Specification 104666-C107-1, Technical Specifications for purchase of water stops and expansion joint filler
- Calculation 194 for Job 10466001, no crack zone maximum stress levels
- Calculation AN-96-126, Wolf Creek Generating Station PSA flooding analysis
- Calculation FL-01, flooding of the auxiliary building
- Generating Station, individual plant examination summary report, Section 3.3.7, internal flooding analysis
- Drawings for piping isometrics and hanger locations for the essential service water system control building diesel generator cooler Trains A and B supply and return piping

b. Findings

There were no findings identified.

1R11 <u>Licensed Operator Requalification (71111.11)</u>

a. <u>Inspection Scope</u>

The inspectors observed control room operator simulator training to verify that the licensed operator requalification program ensures safe operation of the plant by adequately evaluating how well the operators and crews have mastered the training objectives. The scenario included loss of shutdown cooling during reduced inventory.

b. Findings

There were no findings identified.

1R12 <u>Maintenance Rule Implementation (71111.12)</u>

a. <u>Inspection Scope</u>

The inspectors reviewed the licensee's maintenance rule implementation for the following:

- Feedwater isolation valves
- Main steam atmospheric relief valves
- Chemical and volume control system high pressure injection
- Control building vital switchgear and control room ventilation systems

The inspectors assessed the effectiveness of maintenance efforts that apply to scoped structures, systems, and components. The inspectors' review included the following information:

- Maintenance rule bases information
- Maintenance Rule (a)(1) disposition checklist and documentation summary
- Maintenance rule expert panel meeting minutes
- Maintenance rule performance evaluations
- Functional failure determination checklists

b. Findings

There were no findings identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. <u>Inspection Scope</u>

The inspectors reviewed the licensee's risk assessment for equipment outages as a result of planned and emergent maintenance to evaluate the licensee's effectiveness in assessing risk for planned and emergent maintenance. The inspectors also discussed

the planned and emergent work activities with planning and maintenance personnel. The inspectors' review included the following:

- Operational risk assessments for planned maintenance for the weeks of July 3, 17, and 31, 2000
- Actual, planned, and emergent work schedules for the same weeks

b. <u>Findings</u>

There were no findings identified.

1R15 Operability Evaluations (71111.15)

a. <u>Inspection Scope</u>

The inspectors reviewed the following operability evaluations to ensure that operability was properly justified and the component or system remained operable:

- Essential service water pump house 480 volt Transformers XNG05 and XNG06
- Auxiliary feedwater Pump B room cooler

The inspectors also discussed the evaluations with licensee personnel and reviewed applicable portions of the Updated Safety Analysis Report.

b. Findings

There were no findings identified.

1R19 Postmaintenance Testing (71111.19)

a. <u>Inspection Scope</u>

The inspectors reviewed or observed postmaintenance testing on the following equipment:

- Motor-driven auxiliary feedwater Pump A
- Safety injection Pump B
- Leak test for Train B hydrogen analyzer and associated piping
- Safety injection system Train A
- STS EM-201A, safety injection system Train A inservice valve test
- STS EM-203A, Train A safety injection system inservice valve test

- Work Order 00-217973-002, postmaintenance test Valve EMHV8821A, safety injection Pump A discharge accumulator injection isolation valve
- Work Order 00-217974-002, postmaintenance test Valve EMHV8923A, safety injection Pump A suction isolation valve

b. <u>Findings</u>

There were no findings identified.

1R22 Surveillance Testing (71111.22)

a. <u>Inspection Scope</u>

The inspectors reviewed or observed all or part of the following surveillance activities to verify that risk significant structures, systems, and components are capable of performing their intended safety functions and assessing their operational readiness:

•	STN PE-037A	Essential service water Train A heat exchanger flow and differential pressure trending
•	STN BG-100B	Centrifugal charging system Train B inservice pump test
•	STS EN-205	Containment spray system inservice valve test
•	STS IC-644A	Slave Relay Test K644 Train A containment spray
•	STS IC-644B	Slave Relay Test K644 Train B containment spray

The inspectors also reviewed the following information:

- Technical Specification Bases Section B3.5.2, emergency core cooling system operating
- Technical Specification Bases Section B3.6.6, containment spray and cooling systems
- Applicable portions of the Updated Safety Analysis Report

b. Findings

There were no findings identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed Temporary Modification 99-007-BB to verify that temporary modifications did not affect system safety functions. The temporary modification lifted a lead on the reactor coolant Pump A lower oil reservoir high alarm.

b. Findings

There were no findings identified.

1EP6 <u>Drill Evaluation (71114.06)</u>

a. <u>Inspection Scope</u>

The inspectors observed an emergency preparedness table-top drill to evaluate the conduct of selected drills and certain training evolutions. The inspectors reviewed the scenario prior to the drill.

b. <u>Findings</u>

There were no findings identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP1 Access <u>Authorization (71130.01)</u>

a. Inspection Scope

The inspector completed the following inspection elements in order to determine if the licensee was meeting regulatory and physical security plan requirements:

- Reviewed licensee event reports and safeguards event logs to identify problems in the access authorization program
- Reviewed procedures, audits, and self-assessments of the following programs/areas: behavior observation, access authorization, fitness-for-duty, supervisor and escort training, and requalification training
- Interviewed five supervisors/managers and four individuals who had escorted visitors into the protected and/or vital areas to determine their knowledge and understanding of their responsibilities in the behavior observation program
- Reviewed condition reports, licensee event reports, safeguards event logs, audits, selected security event reports, and self-assessments for the licensee's access authorization program to determine the licensee's ability to identify and resolve problems

b. <u>Findings</u>

There were no findings identified.

3PP2 Access Control (71130.02)

a. Inspection Scope

The inspector completed the following inspection elements in order to determine if the licensee was meeting regulatory and physical security plan requirements:

- Reviewed licensee event reports and safeguards event logs to identify problems with access control equipment
- Reviewed procedures and audits for testing and maintenance of access control equipment and for granting and revoking unescorted access to protected and vital areas
- Interviewed security personnel concerning the proper operation of the explosive and metal detectors, x-ray devices, and key card readers
- Observed licensee testing of access control equipment and the ability of security personnel to control personnel, packages, and vehicles entering the protected area
- Reviewed procedures to verify that a program was in place for controlling and accounting for hard keys to vital areas
- Reviewed the licensee's process for granting access to vital equipment and vital areas to authorized personnel having an identified need for that access
- Reviewed condition reports, licensee event reports, safeguards event logs, audits, selected security event reports, and self-assessments for the licensee's access control program in order to identify the licensee's ability to identify and resolve problems with the access control program.
- Interviewed key security department and plant support personnel to determine their knowledge and use of the corrective action reports and resolution of problems regarding repair of security equipment

b. <u>Findings</u>

Paragraph 1.6.1 of the Physical Security Plan, Revision 31, stated that access to the protected and vital areas will be strictly controlled. Paragraph 1.6.8 of the plan stated that all packages will be searched for firearms, explosives, incendiary devices, or other contraband by means capable of detecting firearms, explosives, and incendiary devices. The search will be by visual and physical means or by mechanical and electronic means.

Paragraph 6.3.3.2 of Security Procedure SEC 01-202, Revision 37, stated that, if the members of the security force see something that appears to be contraband or is unidentifiable, they shall request that the package be opened and visually inspected.

On July 12, 2000, the inspector observed the x-ray search equipment being used to search packages. The security officers operating the access lanes and the x-ray equipment were not visually searching hand-carried packages that contained material that could not be identified. Packages with material too dense for identification were not being searched. The inspector identified several instances where batteries and wiring were identified by the equipment and the officers did not stop the package and visually search the material in order to ascertain if the wiring and batteries were attached to explosives. The inspector called this to the attention of a security supervisor, and the supervisor took immediate corrective actions to ensure that the packages were adequately searched in accordance with the procedure. In addition, the licensee placed the issue into the corrective action program as Performance Improvement Request 2000-1939. The licensee had retrained most of the security force on the procedural requirements prior to the end of the inspection. The inspector observed the package search process on two subsequent days prior to the end of the inspection and observed no further examples of the inadequate search.

The licensee's failure to adequately search packages being processed through the x-ray machine was a violation of paragraphs 1.6.1 and 1.6.8 of the Physical Security Plan, Revision 31, and paragraph 6.3.3.2 of Security Procedure SEC 01-202, Revision 37. This violation was processed through the physical protection significance determination process which indicated that the violation had very low safety significance because it was a human error that was not repeated during the inspection. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation was entered into the licensee's corrective action program as Performance Improvement Request 2000-1939 (50-482/0007-01).

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Resident Inspection

a. <u>Inspection Scope</u>

The inspectors verified the high pressure safety injection system and residual heat removal system performance indicators for the period of April 1997 through June 2000 to determine the accuracy and completeness of the performance indicators. The inspectors reviewed the following:

- Licensee worksheets
- A sampling of control room logs

b. Observations and Findings

There were no findings identified.

.2 <u>Security Inspection</u>

a. Inspection Scope

The inspector completed the following inspection elements in order to determine if the licensee was meeting regulatory and physical security plan requirements:

- Reviewed the licensee's program for collection and submittal of performance indicator data; specifically, a random sampling of security event logs, maintenance logs, and corrective action reports were reviewed for the following program areas:
 - (1) Fitness-for-duty/personnel reliability program performance
 - (2) Personnel screening program performance
 - (3) Protected area security equipment performance index
- Reviewed the license's security tracking, trending, and analysis of perimeter security equipment problems

b. <u>Findings</u>

There were no findings identified.

4OA4 Other

- .1 (Closed) Licensee Event Report (LER) 50-482/1998-001-00: pressurizer code safety valves outside of Technical Specification allowances. This LER was inadvertently left out of NRC Inspection Report 50-482/00-03. This LER is administratively closed.
- .2 (Closed) LER 50-482/2000-002-00: loss of containment total unidentified leak rate computer point operability. The inspectors reviewed the LER. The licensee initiated Performance Improvement Request 2000-1570 for this issue. This LER was a minor violation and was closed.

4OA5 Meetings

.1 Exit Meeting Summary

The inspectors presented results of the security inspection to Mr. Otto Maynard, President and Chief Executive Officer, and other members of licensee management on July 14, 2000.

The inspectors presented the results of the resident inspection to Mr. Otto Maynard, President and Chief Executive Officer, and other members of licensee management on August 11, 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

<u>Licensee</u>

- M. J. Angus, Manager, Licensing and Corrective Action
- J. W. Johnson, Manager, Resource Protection
- O. L. Maynard, President and Chief Executive Officer
- B. T. McKinney, Vice President Plant Operations and Plant Manager
- R. Muench, Vice President Engineering and Information Services
- S. R. Koenig, Manager, Performance Improvement and Assessment
- C. C. Warren, Vice President Operations Support

ITEMS OPENED AND CLOSED

<u>Opened</u>		
50-482/00-07-01	NCV	Inadequate package search (Section 3PP2)
Closed		
50-482/1998-001-00	LER	Pressurizer code safety valves outside of Technical Specification allowances (Section 4OA4)
50-482/2000-002-00	LER	Loss of containment total unidentified leak rate computer point operability (Section 4OA4)
50-482/00-07-01	NCV	Inadequate package search (Section 3PP2)

LIST OF DOCUMENTS REVIEWED

Drill Evaluation

- GE1135662, Team Facility Table-Top Guideline, Revision 2
- Performance Improvement Request 2000-2061
- Performance Improvement Request 2000-2063
- Performance Improvement Request 2000-2067

Fire Protection

•	FPP A-16	Auxiliary building 2026 foot Corridors 1 and 2, component cooling water pumps and Heat Exchanger Areas A & B
•	FPP A-18	Auxiliary building 2026 foot south electrical penetration room
•	FPP A-18	Auxiliary building 2026 foot south electrical penetration room
•	FPP A-23	Auxiliary building 2026 foot and 2042 foot main steam enclosure

Maintenance Rule Documents

- Functional failure determination checklist for AE-02, feedwater system
- Functional failure evaluations for the main steam system atmospheric relief valves
- Functional failure evaluations for the control building vital switchgear and control room ventilation systems
- Maintenance rule bases information, chemical and volume control system high pressure injection
- Maintenance rule bases information, control room ventilation system
- Maintenance rule bases information, feedwater isolation valves
- Maintenance rule bases information, main steam atmospheric relief valves
- Maintenance rule bases information, control building vital switchgear ventilation system
- Maintenance Rule (a)(1) disposition checklist and document summary for AB-03, main steam system atmospheric relief valves
- Maintenance rule expert panel meeting minutes for BG-07, chemical and volume control system high pressure injection
- Maintenance rule expert panel meeting minutes for AE-02, feedwater system

- Maintenance rule expert panel meeting minutes for AB-03, main steam system atmospheric relief valves
- Maintenance rule expert panel meeting minutes for GK-01, control building vital switchgear ventilation system
- Maintenance rule expert panel meeting minutes for GK-02, control room ventilation system
- Maintenance rule performance evaluation for AE feedwater system
- Maintenance rule performance evaluation for AB main steam system
- Maintenance rule performance evaluation for BG chemical and volume control system high pressure injection
- Maintenance rule performance evaluations for GK control building heating, ventilation, and air-conditioning system
- Performance Improvement Request 98-1218
- Performance Improvement Request 98-2157
- Performance Improvement Request 98-3947
- Unavailability criteria for BG-07, chemical and volume control system high pressure injection
- Unavailability criteria for AB-03, main steam system atmospheric relief valves
- Unavailability criteria for GK, control building heating, ventilation, and air-conditioning system

Operability Evaluations

- Performance Improvement Request 97-2135, motor-driven auxiliary feedwater pump room cooler inoperable due to low essential service flow through cooler
- Aerofin Corporation performance calculations and curves

Postmaintenance Testing

• STN EM-001B Train B leakage inspection program of safety injection system

STS AL- 101 Motor-driven auxiliary feedwater Pump A inservice pump test

•	STS AL-201A	Auxiliary feedwater system Train A inservice valve test for AL HV-11, motor-driven auxiliary feedwater pump discharge header to Steam Generator C valve
•	STS BN-201B	Train B borated refueling water storage system inservice valve test
•	STS EM-100B	Safety injection Pump B inservice pump test
•	STS PE-100B	Leak test for Train B hydrogen analyzer and associated piping

- Work Order 99-206431-002, Motor-driven auxiliary feedwater pump discharge header to Steam Generator C valve
- Work Order 00-216785-002, Refueling water storage tank to safety injection pump suction valve
- Work Order 00-217278-001, Safety injection Pump B
- Work Order 00-217764-001, Motor-driven auxiliary feedwater pump discharge header to Steam Generator B isolation valve

Security Inspection

- Safeguards Event Logs from July 1, 1999, to June 30, 2000
- Procedure SEC 01-106, "NRC Reporting Requirements," Revision 20
- Procedure Al 26A-001, "WCNOC Reportability Handbook," Revision 3
- Procedure Al 01B-001, "Employee Behavior Reliability," Revision 2
- Procedure AP 01-001, "Access Authorization Program," Revision 1
- Procedure AP 01A-001, "Fitness for Duty Program," Revision 4
- Procedure Al 01A-002, "Fitness for Duty Screening," Revision 3
- Procedure Al 01-001, "Access Authorization Procedure," Revision 5
- Procedure SEC 01-202, "Personnel Access to the Protected Area," Revision 37
- Procedure AI 28B-005, "Hardware Failure Analysis," Revision 1
- Procedure GT 12 450 05, "Plant Access Training," Revision 4
- Surveillance Report UB15-S001, dated March 13, 2000
- Audit K537, dated June 2, 2000
- Audit K-517, dated October 1, 1999
- Audit K-516, dated August 13, 1999
- NEI Audit WB59, dated November 5, 1999
- Audit Report of Noncompliance, dated December 7, 1999
- Audit No. CB30-A007, dated January 7, 2000
- Audit CD-40, dated March 16, 2000
- Audit 1081-A001, dated March 9, 2000
- Audit K-525, dated March 31, 2000
- Audit AC92, dated May 3, 2000
- Performance Improvement Requests PIR 1999-4071, 2000-1939, and 2000-1959

ATTACHMENT 2

NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently 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 and assessing 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:

Reactor Safety

Radiation Safety

Safeguards

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational
- Public

Physical Protection

To monitor these seven cornerstones of safety, the NRC uses 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. 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 inspection 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.