



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

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

MAR 2 1994

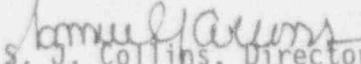
Docket: 50-482
License: NPF-42

Wolf Creek Nuclear Operating Corporation
ATTN: Neil S. Carns, President and
Chief Executive Officer
P.O. Box 411
Burlington, Kansas 66839

SUBJECT: NRC INSPECTION REPORT 50-482/93-20

Thank you for your letter dated February 4, 1994, in response to the six emergency preparedness weaknesses identified in NRC Inspection Report 50-482\93-20 dated December 22, 1993. We have examined your reply and find it responsive to the concerns raised in our inspection report. We will review the implementation of your corrective actions during a future inspection.

Sincerely,


S. J. Collins, Director
Division of Radiation Safety
and Safeguards

cc:
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Wolf Creek Nuclear
Operating Corporation

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Wolf Creek Nuclear
Operating Corporation
cc to DMB (IE35)

-3-

bcc w/copy of licensee's letter dated February 4, 1994:

DMB (IE35)

L. J. Callan

Branch Chief (DRP/B)

Section Chief (RIII, DRP/3C)

SRI, Callaway, RIII

Lisa Shea, RM/ALF, MS: MNBB 4503

Branch Chief (DRP/TSS)

W. L. Holley, DRSS/FIPB

Resident Inspector

DRSS-FIPB

RIV File

MIS System

Project Engineer (DRP/B)

C. A. Hackney, SLO

RIV:FIPB <i>all</i>	C:FIPS <i>g</i>	ADD:DRSS	D:DRSS	
WLHolley:nh	BMurray <i>g</i>	LWCamper	SCollins	
3/1/94	2/11/94	1/94	2/2/94	

Wolf Creek Nuclear
Operating Corporation

-3-

bcc to DMB (IE35)

bcc w/copy of licensee's letter dated February 4, 1994:
DMB (IE35)

L. J. Callan Branch Chief (DRP/B)	Resident Inspector DRSS-FIPB
Section Chief (RIII, DRP/3C)	RIV File
SRI, Callaway, RIII	MIS System
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W. L. Holley, DRSS/FIPB	C. A. Hackney, SLO

RIV:FIPB <i>ALZ</i>	C:FIPS <i>J</i>	ADD:DRSS	D:DRSS	
W LHolley:nh	BMurray	LWCamper	SJCollins	
3/1/94	2/11/94	1/94	3/2/94	

WOLF CREEK

NUCLEAR OPERATING CORPORATION

February 4, 1994

Neil S. "Buzz" Carns
President and
Chief Executive Officer

WM 94-0007

U. S. Nuclear Regulatory Commission
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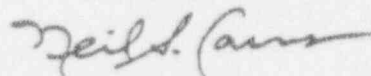
Reference: Letter dated December 22, 1993, from
D. D. Chamberlain, NRC, to N. S. Carns, WCNOG
Subject: Docket No. 50-482: Reply to Weaknesses 482/9320-01,
482/9320-02, 482/9320-03, 482/9320-04, 482/9320-05
and 482/9320-06

Gentlemen:

Attached is Wolf Creek Nuclear Operating Corporation's (WCNOG) reply to Weaknesses 482/9320-01, 482/9320-02, 482/9320-03, 482/9320-04, 482/9320-05 and 482/9320-06. Weakness 482/9320-01 concerns inappropriate ALERT classification and the subsequent errors in recognition of initiating conditions during the 1993 Annual Emergency Preparedness Exercise. Weakness 482/9320-02 concerns communication and information flow problems which occurred during the Exercise. Weakness 482/9320-03 concerns proficiency problems with personnel assigned to man the Operations Control Center causing delays in dispatching teams to the field during the Exercise. Weakness 482/9320-04 concerns several examples of poor radiological protection practices identified during the Exercise. Weakness 482/9320-05 concerns the communication of information to offsite authorities which contained significant inconsistencies relative to recommended protective actions during the Exercise. Weakness 482/9320-06 concerns week Exercise preparation, control and simulation. WCNOG trusts this reply is responsive to the NRC and will prevent recurrence of the applicable weaknesses. This response is being submitted after the thirty day due date with the concurrence of Greg Werner, Acting NRC Section Chief, Region IV, per a telecon on January 26, 1994, with Terry Riley, Supervisor Regulatory Compliance at Wolf Creek Nuclear Operating Corporation (WCNOG).

If you have any questions concerning this matter, please contact me at (316) 364-8831 extension 4000 or Mr. Kevin J. Moles at extension 4565.

Very truly yours,



Neil S. Carns
President and
Chief Executive Officer

NSC/jad

Attachment

cc: L. J. Callan (NRC), w/a
G. A. Pick (NRC), w/a
W. D. Reckley (NRC), w/a
L. A. Yandell (NRC), w/a

9402140097

Reply to 1993 Emergency Preparedness Exercise Weaknesses 482/9320-01, 482/9320-02, 482/9320-03, 482/9320-04, 482/9320-05 and 482/9320-06.

Weakness 482/9320-01: Inappropriate ALERT classification and the subsequent errors in recognition of initiating conditions.

Weakness:

During the exercise, the Shift Supervisor had difficulty with event classification and recognition of initiating conditions.

- At 8:25 a.m., the Shift Supervisor inappropriately classified the fire in the NB01 switchgear event as an Alert under "Fire Challenging a Fission Product Barrier." This interpretation was outside the criteria of Procedure EP 01-2.1, "Emergency Classification," Attachment 2, "Indications of Fuel Cladding Breach or Challenge." The correct classification for the conditions which existed at 8:25 a.m. was an Unusual Event.
- At 9:05 a.m., the Shift Supervisor recommended to the Technical Support Center to escalate the emergency classification to a Site Area Emergency based on offsite dose projections which were run at 8:42 a.m. The actual plant conditions at the time this recommendation was made were a loss of coolant that was much smaller than a design basis accident: loss of coolant, and no release path established or anticipated. The Technical Support Center appropriately disagreed with the recommendation to escalate.
- At 9:20 a.m. the Shift Supervisor again recommended to the Technical Support Center to escalate the emergency classification to a Site Area Emergency based on a loss of coolant accident in progress with both safety injection pumps out of service. The Shift Supervisor considered these conditions to be a challenge to the fuel clad fission product barrier and a defeat of the Reactor Coolant System fission product barrier. This interpretation of fuel clad challenge did not meet the criteria of Procedure EP 01-2.1 "Emergency Classification," Attachment 2, "Indications of Fuel Cladding Breach or Challenge." The actual plant conditions at the time the recommendation was made were a 1000 gpm Loss of Coolant Accident which was being compensated for by the B Centrifugal Charging Pump. The core was covered with no clad damage, and no release from the containment was in progress. The Technical Support Center appropriately disagreed with the Shift Supervisor's recommendations.

Admission of Weakness:

WCNOC agrees that a weakness in the area of "Emergency Classification" occurred.

Reason for Weakness:

An Unusual Event was the correct Emergency Classification. The Shift Supervisor declared an Alert based on potentially rapid degradation of plant conditions. The Alert declaration allowed the Technical Support Center and Operations Support Center to become activated, thereby providing needed support if conditions continued to degrade rapidly.

In the second and third cases cited above there was a common weakness in that the Shift Supervisor was not consistent with the Duty Emergency Director in his interpretation of the Emergency Action Levels (EALs). Even though the discussions with the Technical Support Center were good, they indicated a lack of consistent interpretation of the conditions. Without the Technical Support Center's direction, the Shift Supervisor may have over-classified the event which could have ultimately impacted the public through the evacuation of John Redmond Reservoir.

WCNOC recognizes that differing interpretations of its present EALs have resulted in inconsistent classifications during past drills and Exercises. To correct this inconsistency, WCNOC submitted for NRC review and approval (WCNOC Letter NA 93-0236, dated December 15, 1993) a revision to the WCNOC EALs which implements the guidance in Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 3. This revision should eliminate the potential for ambiguity in determining the appropriate emergency classification and is expected to be reviewed and approved by the NRC the first half of 1994.

Corrective Steps Taken and Results Achieved:

WCNOC has drafted a revision to the WCNOC EALs which implements the guidance in Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 3. This draft revision was submitted for NRC review and approval on December 15, 1993.

Corrective Steps That Will Be Taken to Avoid Further Weaknesses:

All Duty Emergency Directors and Duty Emergency Managers will receive training on the new Emergency Action Levels. This training will be completed within ninety days of approval of the revised EALs.

Date When Corrective Actions Will Be Completed:

All corrective actions will be completed within ninety days of the approval of the revised EALs. In the meantime an aggressive drill schedule will be pursued to provide more practice in interpreting and appropriately classifying situations with EAL's.

Weakness 482/9320-02: The occurrence of numerous communication and information flow problems.

Weakness:

Numerous communication and information flow problems were identified.

Admission of Weakness:

WCNOC agrees that a weakness in the area of various communication and information flow problems occurred.

Reason for Weakness:

The cause of these communication and information flow problems was determined to be a lack of regular practices on the part of several WCNOC personnel who participated in the Exercise. WCNOC has a large Emergency Response Organization (ERO) with personnel assigned to multiple positions in multiple facilities. Because of the size and the assignment of multiple positions, several emergency response position holders have not been able to participate in a recent drill. The lack of drill participation can weaken information flow and communications adequacy.

Corrective Steps Taken and Results Achieved:

The corrective actions described below are considered appropriate and sufficient to prevent further occurrences of this weakness.

Corrective Steps That Will be Taken to Avoid Further Weaknesses:

WCNOC is in the process of re-organizing its ERO. This re-organization will establish emergency response teams with the majority of members being assigned responsibility for only one position. WCNOC will implement a drill program that will provide each emergency response team an opportunity to participate in a drill every year.

Good communication skills are only developed through practice. WCNOC believes drills are the most effective form of practice. Our ERO re-organization and aggressive drill schedule will provide the ERO a consistent opportunity to improve skills.

The drill schedule will be established prior to March 1, 1994. Emergency response teams members will participate in an Emergency Plan Drill in the first half of 1994. The new quarterly drill schedule will begin in the third quarter of 1994.

Date When Corrective Actions Will Be Completed:

The above noted corrective actions will be completed in the third quarter of 1994.

Weakness 482/9320-03: Proficiency problems with personnel assigned to man the Operations Support Center caused delays in dispatching teams to the field.

Weakness:

Team No. 3 was dispatched to obtain temporary power cables and lugs from the warehouse and take them to Team No. 1 where the two teams would use them to provide emergency power to residual heat removal pump A. When Team No. 3 arrived at the warehouse at 10:39 a.m., they found the warehouse locked. At 10:45 a.m., security arrived, and at 10:49 a.m., Team No. 3 arrived at the issue window area. Forty six minutes later, after receiving assistance from the warehouse supervisor, Team No. 3 finally located the cables and lugs. This delay occurred because the Team No. 3 members were not familiar with how to translate the warehouse locations provided by the procurement computer program to physical warehouse locations. This delayed the recovery of reactor coolant injection capability by 52 minutes and exacerbated the consequences of the emergency.

Admission of Weakness:

WCNOC agrees that a weakness in the area of Operations Support Personnel proficiency occurred.

Reason for Weakness:

The root cause for the delays encountered by Team No. 3 was determined to be a lack of Warehouse Personnel being assigned to Operations Support Center Emergency Response Staff. This staffing problem resulted in the excessive material retrieval times observed during this exercise.

Corrective Steps Taken and Results Achieved:

Five Warehouse employees have been chosen and assigned to the Operations Support Center Emergency Response Organization. Training of these employees was completed on January 6, 1994. They were added to the Automatic Dialing System for callout purposes on January 12, 1994.

Corrective Steps That Will Be Taken to Avoid Further Weaknesses:

The corrective actions described above are considered appropriate and sufficient to avoid further occurrences of this weakness.

Date When Corrective Actions Will Be Completed:

Corrective actions were completed on January 12, 1994.

Weakness 482/9320-04: Several examples of poor radiological protection practices were identified.

Weakness:

Several poor radiological practices were observed from the Operations Support Center.

Admission of Weakness:

WCNOC agrees that weaknesses in appropriately demonstrating adequate radiological protection practices in drill situations did occur.

Reason for Weakness:

The root cause was determined to be the failure of WCNOC personnel to demonstrate proper radiological practices. The technicians when interviewed did understand the need to constantly monitor the dose rates during emergency situations, and were knowledgeable of good radiological practices. The ERO personnel did not fully understand the need to communicate all thoughts and decisions to the evaluators.

Corrective Steps Taken and Results Achieved:

The corrective actions described below are considered appropriate and sufficient to prevent further occurrences of this weakness.

Corrective Steps That Will be Taken to Avoid Further Weaknesses:

Performance Improvement Request 93-1621 has been incorporated into the Emergency Plan Training for the Health Physics Technicians Regualification Training Program. This training was initiated on January 13, 1994, and will be completed by February 15, 1994. This training will review the issues associated with this Exercise Weakness thereby heightening personnel awareness and improve the implementation of sound radiological protection practices.

Date When Corrective Actions Will Be Completed:

Corrective actions for this weakness will be completed by February 15, 1994.

Weakness 482/9320-05: Communication of information to the offsite authorities which contained significant inconsistencies relative to recommended protective actions.

Weakness:

At 1:07 p.m., the Emergency Operations Facility issued Followup Notification Message EOF-006. The message communicated to offsite authorities the very large dose projections which had been generated based on the uncertain assumptions of the iodine release component. For example, this message showed the projected child thyroid dose rate at 10-miles distance downwind to be 81 Rem/hr with a projected integrated child thyroid dose of 160 Rem. Actual dose rates of this magnitude would necessitate protective actions beyond the 10-mile distance for which the licensee had recommended evacuation. Although the licensee had discussed protective action recommendations beyond the 10-mile emergency planning zone, no such recommendations were made with dose projection information issued in Message EOF-006.

Admission of Weakness:

WCNOC agrees that a weakness in the area of communication of information to the offsite authorities occurred during the Exercise when Followup Notification Message EOF-006 was issued.

Reason for Weakness:

Just prior to the issuance of Followup Notification Message EOF-006, personnel in the Emergency Operations Facility were aware of the radioactive release path from Containment through the Auxiliary Building Ventilation Exhaust System. Plume iodine/noble gas ratios were not yet available. Monitoring teams were in the process of counting plume air samples, thus the resultant questionable dose projections were discussed among Emergency Offsite Facility personnel and with the State and County prior to releasing the information. This discussion included the need to issue protective action recommendation past the 10 mile limit and that these recommendations would not be issued due to controller instructions. Due to the lack of actual plume data, Design Basis Accident default ratios were used. The Emergency Offsite Facility Lead Controller told the Duty Emergency Manager not to release the data, because revised data would be forthcoming. The revised data would be supplied by a controller created field team. Further, the controller anticipated that the revised data would be injected prior to the receipt of any actual field team data. However, actual team data arrived in the Emergency Offsite Facility before the revised data was received. Thus, the Duty Emergency Manager issued the followup notification not knowing the actual field team data was still inaccurate.

Corrective Steps Taken and Results Achieved:

Required reading was issued to the Duty Emergency Directors and Duty Emergency Managers. The Duty Emergency Manager and Duty Emergency Manager were instructed not to issue messages which contained conflicting dose projection and protective action recommendations. Further the Duty Emergency Manager and Duty Emergency Manager were informed that it is acceptable to issue a followup message with the dose projection section lined through and a note added that dose projection information would be relayed as soon as it became available. The drill schedule that will commence in March 1994, will be used by the controllers to verify that this knowledge has been appropriately transferred into real practice.

Corrective Steps That Will be Taken to Avoid Further Weaknesses:

Additionally this weakness and the associated corrective actions have been included in the Emergency Plan Training for licensed Operations Personnel. This training will be completed by February 15, 1994, and will be assessed for effectiveness in the second quarter of 1994.

Date When Corrective Actions Will Be Completed:

Corrective action noted above will be completed by February 15, 1994, and will be assessed for effectiveness in the second quarter of 1994.

Weakness 482/9320-06: Weak annual exercise preparation, control and simulation.

Weakness:

Exercise preparation and control was weak, resulting in difficulty in conducting the exercise, and in reducing its training benefit. This was observed in areas relating to the scenario, exercise control, and simulation.

Admission of Weakness:

WCNOC agrees that a weakness in the area of scenario development and control occurred.

Reason for Weakness:

The root cause of the scenario development and simulation portion of this weakness is the lack of a real-time simulator run of the scenario. The scenario has been run on the simulator at least twice for all previous Exercises; however, the runs have been compressed in time due to simulator availability. This compression may cause certain operator manipulations to be omitted. When performed during the Exercise, these manipulations may then cause undesirable changes to the plant data and simulator performance.

Contributing factors were the failure of Exercise Controllers to provide adequate oversight and control when the simulator failed and the failure to establish adequate scenario revision controls.

Corrective Steps Taken and Results Achieved:

Guidance will be added to the Controller Instructions which require the drill or exercise to be frozen if the simulator fails and all facilities brought to the same scenario time point. Upon completion of this task, the lead controller will decide which facility and which controller will assume the lead in distributing information to the emergency personnel in the various facilities. The lead controller will assume responsibility for assuring the Exercise progresses according to the scenario.

A scenario change cutoff date of two weeks prior to the drill or exercise has been established and will be adhered to where possible. Deviation from this requirement will only be allowed for correction of significant scenario problems.

Corrective Steps That Will be Taken to Avoid Further Weaknesses:

Upon completion of the development of an Exercise scenario, WCNOC will conduct a real-time run of the scenario on the simulator with a full licensed crew to anticipate possible operator actions, and with a full complement of Control Room drill controllers to identify any discrepancies in data. This action will be conducted for each scenario developed for the annual exercise.

All drill/exercise controllers will receive training. This training will include guidance on how to handle failures of the simulator, drill/exercise command and control and the dissemination of scenario information in times where the simulator has failed or where ERO personnel have taken actions not anticipated during the development of the scenario.

Date When Corrective Actions Will Be Completed:

Corrective actions noted above that are scenario specific will be completed and verified prior to the next Exercise. Controllers actions will also be evaluated as part of the drill schedule that will be implemented in March 1994. This will be done by the end of the second quarter 1994.