

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

Richard A. Muench  
Vice President Engineering

May 9, 1996

ET 96-0028

U. S. Nuclear Regulatory Commission  
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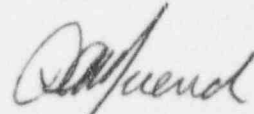
Subject: Docket 50-482: Response to NRC Bulletin 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment"

Gentlemen:

On April 11, 1996, the NRC issued NRC Bulletin 96-02 concerning the movement of heavy loads over safety-related equipment, over spent fuel, or over the reactor core during power operations. NRC Bulletin 96-02 requested all Licensees of boiling-water reactors and pressurized-water reactors to provide, within 30 days, a written response to the bulletin, pursuant to Section 182a, the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). Attached is WCNOC's response to that request.

If you have any questions concerning this matter, please contact me at (316) 364-8831, extension 4034, or Mr. Terry S. Morrill at extension 8707.

Very truly yours,



Richard A. Muench

RAM/jra

Attachment

cc: L. J. Callan (NRC), w/a  
W. D. Johnson (NRC), w/a  
J. F. Ringwald (NRC), w/a  
J. C. Stone (NRC), w/a

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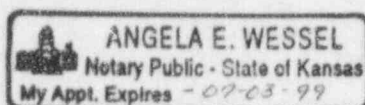
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STATE OF KANSAS       )  
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COUNTY OF COFFEY     )

Richard A. Muench, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the content thereof; that he has executed that same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By *Richard A. Muench*  
Richard A. Muench  
Vice President  
Engineering

SUBSCRIBED and sworn to before me this 9th day of May, 1996.



*Angela E. Wessel*  
Notary Public

Expiration Date *July 3, 1999*

**RESPONSE TO NRC BULLETIN 96-02, "MOVEMENT OF HEAVY LOADS OVER SPENT FUEL, OVER FUEL IN THE REACTOR CORE, OR OVER SAFETY-RELATED EQUIPMENT"**

**A. Requested Actions and Required Information**

NRC Bulletin 96-02 requested each Licensee to take the following action:

Review plans and capabilities for handling heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. Determine whether the activities are within the licensing basis and, if necessary, submit a license amendment request. Determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug and associated lifting devices) over fuel assemblies in the spent fuel pool.

In addition to the above requested action, NRC Bulletin 96-02 also requires, per 10 CFR 50.54(f), the following written information be submitted under oath or affirmation:

1. For Licensees planning to implement activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment within the next 2 years from the date of this bulletin, provide the following:
  - A report, within 30 days of the date of this bulletin, that addresses the licensee's review of its plans and capabilities to handle heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. The report should also indicate whether the activities are within the licensing basis and should include, if necessary, a schedule for submission of a license amendment request. Additionally, the report should indicate whether changes to Technical Specifications will be required.
2. For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) and that involve a potential load drop accident that has not previously been evaluated in the FSAR, submit a license amendment request in advance (6-9 months) of the planned movement of the loads so as to afford the staff sufficient time to perform an appropriate review.
3. For licensees planning to move dry storage casks over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) include in item 2 above, a statement of the capability of performing the actions necessary for safe shutdown in the presence of radiological source term that may result from a breach of the dry storage cask, damage to the fuel, and damage to safety-related equipment as a result of a load drop inside the facility.

4. For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled), determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug) over assemblies in the spent fuel pool and submit the appropriate information in advance (6-9 months) of the planned movement of the loads for NRC review and approval.

## B. RESPONSES TO REQUIRED RESPONSE ITEMS

### ITEM (1)

WCNOC personnel have reviewed the WCGS Operating License, Technical Specifications, Updated Safety Analysis Report, and the WCNOC Heavy Loads Report, as well as the plans and schedules of the various work groups involved with making heavy load lifts. Plant procedures provide the requirements for the control of heavy loads and special lifting devices, including safe load paths and applicable operational modes for crane usage. The control of heavy loads at WCGS complies with existing regulatory guidelines and heavy load activities are performed within the existing licensing basis.

For the two year period beginning April 11, 1996, while the reactor is at power, WCNOC plans to make heavy load lifts involving the replacement of the Positive Displacement Pump (PDP), and periodic access to the Essential Service Water System Valve Houses. The heavy load lifts will be confined within safe load paths which have been established based on analyses verifying that safe shutdown will remain achievable in case of a load drop. The loads are all within the capacities of the load handling devices that will be used, and lifts will be made in accordance with regulatory requirements. Safe shutdown capability is assured during these lifting activities, since damage to redundant safety-related equipment will be prevented by the physical horizontal train separation provided by the plant layout. The lifting activities described above are enveloped by the load drop cases analyzed in our Heavy Loads Report, WCNOC-4, and will be performed within the existing licensing basis.

Based on our review, no changes to either the WCGS Operating License or Technical Specifications are required to address the above activities.

### ITEM (2)

WCNOC currently has no plans to conduct any lifting within the next two years of any heavy loads over the spent fuel pool or the reactor core, with the reactor at power. As indicated in our response to Item (1) above, the lift activities described above, while not specifically addressed in our Updated Safety Analysis Report, are enveloped by the load drop cases analyzed in our Heavy Loads Report, WCNOC-4, and thus are within our licensing basis. In addition, and as also discussed above, WCNOC has not identified a need to submit a license amendment request for the planned lift activities described above.

ITEM (3)

WCNOC currently has no plans to move dry storage casks over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power. Spent fuel shipping casks can only be lifted and handled within specific limits within the fuel building, and thus cannot be lifted over the reactor core.

Concerning the handling of loads over fuel in the spent fuel pool, administrative controls are employed to prevent the handling of loads that have a greater potential energy than those which have been analyzed. The cask handling crane is restricted from moving the spent fuel cask over the fuel pool, the new fuel vault, the fuel pool cooling system, or engineered safety features systems which could be damaged by dropping the cask, and is limited to moving in such a manner as to avoid the possibility of falling or tipping into the spent fuel pool, in accordance with the regulatory position of Regulatory Guide 1.13 and General Design Criterion 61 of Appendix A to 10 CFR 50.

Although the spent fuel cask is expected to withstand a maximum vertical drop without a breach, the fuel building emergency exhaust system, described in USAR Section 9.4.6, is designed to prevent any unprocessed exfiltration following a fuel handling accident and to limit the radiological consequences of a fuel handling accident to less than 10 CFR 100 limits.

Safe plant shutdown would be unaffected due to the physical separation of the fuel building from safe shutdown equipment located in the auxiliary, control and containment buildings.

ITEM (4)

As indicated above, WCNOC has determined that no changes to our operating license or Technical Specifications are required to support the planned lift activities discussed above. No technical specifications exist relative to the control of heavy loads. USAR Sections 9.1.4, 16.9.2 and 16.9.3 describe the fuel handling system and associated crane operations. As discussed above, the planned lift activities will not affect safe shutdown of the plant and no other activities are planned that would require a change to the current WCNOC heavy loads analysis or other licensing basis documents.