Agencies and Persons Consulted

In accordance with its stated policy, on September 26, 1995, the staff consulted with the New York State official, Heidi Voelk of the Energy Research and Development Authority, regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

Based upon the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated August 10, 1995, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the White Plains Public Library, 100 Martine Avenue, White Plains, NY 10610.

Dated at Rockville, Maryland, this 31st day of October 1995.

For the Nuclear Regulatory Commission.

Ledyard B. Marsh,

Director, Project Directorate I–1, Division of Reactor Projects—I/II, Office of Nuclear Reactor Regulation.

[FR Doc. 95–27622 Filed 11–7–95; 8:45 am]

BILLING CODE 7590–01–P

Proposed Generic Communication; Boraflex Degradation in Spent Fuel Pool Storage Racks (M91447)

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of opportunity for public comment.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to issue a generic letter concerning Boraflex degradation in spent fuel pool storage racks. The purpose of the proposed generic letter is to request that licensees who use Boraflex as a neutron absorber in their spent fuel storage racks (1) assess the capability of the boraflex to maintain a 5 percent subcriticality margin and (2) submit a plan of action if this subcriticality margin cannot be maintained by the Boraflex material because of current or projected degradation. The NRC is seeking comment from interested parties regarding both the technical and regulatory aspects of the proposed generic letter presented under the Supplementary Information heading.

The proposed generic letter was endorsed by the Committee to Review Generic Requirements (CRGR) on September 26, 1995. The relevant information that was sent to the CRGR will be placed in the NRC Public Document Room. The NRC will consider comments received from interested parties in the final evaluation of the proposed generic letter. The NRC's final evaluation will include a review of the technical position and, as appropriate, an analysis of the value/impact on licensees. Should this generic letter be issued by the NRC, it will become available for public inspection in the NRC Public Document Room.

DATES: Comment period expires December 8, 1995. Comments submitted after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except for comments received on or before this date.

ADDRESSEES: Submit written comments to Chief, Rules Review and Directives Branch, U.S. Nuclear Regulatory Commission, Mail Stop T–6D–69, Washington, DC 20555–0001. Written comments may also be delivered to 11545 Rockville Pike, Rockville, Maryland, from 7:30 am to 4:15 pm, Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, 2120 L Street, N.W. (Lower Level), Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Laurence I. Kopp (301) 415–2879.

SUPPLEMENTARY INFORMATION:

NRC Generic Letter 95–XX: Boraflex Degradation in Spent Fuel Pool Storage Racks (M91447)

Addressees

All holders of operating licenses for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to request that each addressee that uses Boraflex as a neutron absorber in its spent fuel storage racks (1) assess the capability of the Boraflex to maintain a 5 percent subcriticality margin and (2) submit to the NRC a plan describing its proposed actions if this subcriticality margin cannot be maintained by Boraflex material because of current or projected future Boraflex degradation.

Background

Degradation of Boraflex has been previously addressed by the NRC in Information Notice (IN) 87–43, ''Gaps in Neutron-Absorbing Material in High-Density Spent Fuel Storage Racks,'' September 8, 1987, IN 93–70, ''Degradation of Boraflex Neutron Absorber Coupons,'' September 10, 1993, and IN 95–38, ''Degradation of Boraflex Neutron Absorber in Spent Fuel Storage Racks.'' The Electric Power Research Institute (EPRI) has been studying the phenomenon of Boraflex degradation for several years and recently issued EPRI TR–103300, ''Guidelines for Boraflex Use in Spent-Fuel Storage Racks,'' December 1993, identifying two issues with respect to using Boraflex in spent fuel storage racks. The first issue related to gamma radiation-induced shrinkage of Boraflex and the potential to develop tears or gaps in the material. This phenomenon is typically accounted for in criticality analyses of spent fuel storage racks. The second issue concerned long-term Boraflex performance throughout the intended service life of the racks as a result of gamma irradiation and exposure to the wet pool environment.

Description of Circumstances

Palisades Nuclear Power Station

During the removal of several Boraflex surveillance coupons from the Palisades spent fuel pool in August 1993, a loss of as much as 90 percent of the Boraflex was observed and has been attributed to exposure to high-level gamma radiation in conjunction with interaction with the pool water. The Boraflex in these coupons was sandwiched and bolted between two stainless steel strips, allowing a relatively large area of Boraflex to be exposed to the pool water environment and flow. Neutron attenuation testing (blackness tests) of the actual Palisades storage racks indicated that because of the relatively watertight Boraflex panel enclosures, there was no similar degradation.

South Texas Project

The results of blackness tests performed in August 1994 at South Texas indicated that the Boraflex was degraded, as evidenced by gaps and/or localized washout of the boron content in 20 of the 37 storage cells tested. Of the eight cells that had been designated to receive an accelerated gamma dose, five cells exhibited substantial degradation (0.91 to 1.37 m [3 to 4.5 ft]). The licensee postulated that the degradation mechanism was washout-accelerated dissolution of the Boraflex caused by pool water flow through the panel enclosures. As a justification for continued operation, the licensee has placed restrictions on the use of the

degraded storage cells to ensure compliance with the required subcriticality margin. In addition, a long-term neutron absorption panel management plan is being developed, as well as a dose-to-degradation correlation that will aid in establishing restrictions for the use of the spent fuel racks.

Fort Calhoun Station

As part of the Fort Calhoun Station rerack project, the old spent fuel storage racks containing Boraflex were removed and disassembled in December 1994 to determine the condition of the Boraflex. The new storage racks do not contain Boraflex. The licensee inspected two cells from the removed Boraflex racks which had experienced the highest gamma flux since 1983. Only 40 percent of the Boraflex remained in one of the panels from these cells while another panel in the same cell exhibited no loss of Boraflex. An adjacent cell had a panel which had some Boraflex loss but subsequent attenuation and density tests confirmed that the average boron-10 areal density still exceeded the material minimum certifications. No other storage cells exhibited as significant a loss of Boraflex. The licensee has determined that there was sufficient Boraflex in the walls of each cell to meet the minimum requirements in the design-basis criticality analysis.

Discussion

Experimental data from test programs, including blackness tests performed at various boiling-water reactor (BWR) and pressurized-water reactor (PWR) spent fuel storage pools, confirmed that when Boraflex is exposed to gamma radiation, the material may shrink by as much as 3 to 4 percent. Shrinkage saturates at an integrated gamma exposure of about 1 to 2×10^{10} cGy (1 to 2×10^{10} rad). The application of realistic assumptions based on these tests has demonstrated that the reactivity effects of Boraflex shrinkage and gaps are very small and can generally be accommodated within the existing design basis of most storage racks (EPRI TR–101986, ''Boraflex Test Results and Evaluation,'' February 1993).

Data from laboratory tests and spent fuel pool silica measurements have identified a second factor that could affect storage rack service life: the potential gradual release of silica from Boraflex following gamma irradiation and long-term exposure to the wet pool environment. When Boraflex is subjected to gamma radiation in the pool's aqueous environment, the silicon polymer matrix becomes degraded and silica filler and boron carbide are released. Since irradiated Boraflex typically contains 46 percent of silica, 4 percent of polydimethyl siloxane polymer and 50 percent of boron carbide by weight, the presence of silica in the pool indicates depletion of boron carbide from Boraflex. The loss of boron carbide from Boraflex is characterized by slow dissolution of the silicon polymer from the surface of the Boraflex and a gradual thinning of the material. In a typical spent fuel pool, the irradiated Boraflex represents a significant source of silica (several thousand kilograms) and is the most likely source of pool silica contamination. The boron carbide loss, of course, can result in a significant increase in the reactivity of the storage racks. An additional consideration is the potential for silica transfer through the fuel transfer canal into the reactor core during refueling operations and its effect on the fuel clad heat transfer capability.

EPRI TR–103300 has identified several factors that influence the rate of silica release from Boraflex. The access of water to and around the Boraflex panels is perhaps the most significant factor influencing the rate of silica dissolution from Boraflex. Because of the different rack designs, this water access will vary from plant to plant. The rate of dissolution also increases with higher pool temperature and gamma exposure, suggesting that pool temperatures be maintained as low as practical and that freshly discharged fuel assemblies should not be placed in the same storage cells at each refueling outage. Once silica reaches an equilibrium value, the rate of dissolution essentially stops. However, when water purification systems are used to remove silica from the pool water, the solubility equilibrium becomes unbalanced and panel dissolution resumes.

Because Boraflex is used in spent fuel storage racks for nonproductive absorption of neutrons, a reduction in the amount of Boraflex could result in an increase in the reactivity of the spent fuel pool configuration, which may approach, or even exceed, the current NRC acceptance criterion of k_{eff} no greater than 0.95. The NRC has established this 5 percent subcriticality margin to comply with General Design Criterion (GDC) 62 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR Part 50), which requires the prevention of criticality in fuel storage and handling. Those plants that have installed storage racks containing Boraflex have the 5 percent subcriticality margin included in the plant technical specifications and/or a written commitment to meet this subcriticality margin, as reflected in the plant updated final safety analysis report (FSAR). The technical specifications for most other operating power reactors also include this 5 percent subcriticality requirement.

Safety Assessment

On the basis of test and surveillance information from plants that have detected areas of Boraflex degradation, no safety concern exists that warrants immediate action. Boraflex dissolution appears to be a gradual and localized effect forewarned by relatively high silica levels in the pool water. Because of the safety margin present in spent fuel storage pools, compliance with the required subcriticality margin (or conformance with the same margin to which licensees have committed in their updated FSARs) can be expected to be maintained during the initial stage of Boraflex degradation. This safety margin is due to the 5 percent subcriticality margin assumed in the analysis, the generally lower reactivity of stored fuel than that assumed in the safety analysis, and, in the case of PWRs, the presence of borated water in the pool. However, to verify compliance with both the regulatory requirements of GDC 62 and the 5 percent subcriticality margins, either contained in the technical specifications or committed to in the updated FSARs, and to maintain an appropriate degree of defense-in-depth measures, the NRC staff has concluded that it is appropriate for licensees to submit the following information.

Requested Information

All licensees of power reactors with spent fuel pool storage racks containing the neutron absorber Boraflex are requested to provide a description of the physical condition of the Boraflex, including any deterioration, on the basis of current as well as future projected accumulated gamma exposure and possible water ingress to the Boraflex and state whether a subcritical margin of 5 percent can be maintained for the life of the racks in unborated water. All licensees are further requested to submit to the NRC a description of any proposed actions to monitor or confirm that this 5 percent subcriticality margin can be maintained for the lifetime of the storage racks and describe what corrective actions will be taken in the event it cannot be maintained. Licensees should describe the results from any previous blackness tests and state whether blackness testing will be periodically performed. Any abnormal pool silica levels should also be described. All licensees are requested to submit the information to the NRC to

ensure that the onsite storage of spent fuel is in compliance with GDC 62 for the prevention of criticality in fuel storage and handling and with the 5 percent subcriticality margin position of the NRC staff to assure compliance with GDC 62.

Required Response

All addressees are required to submit a written response to the information requested above within 120 days of the date of this generic letter. If an addressee chooses not to respond to specific questions, an explanation of the reason and a description of any proposed alternative course of action should be provided, as well as the schedule for completing the alternative course of action (if applicable), and the safety basis for determining the acceptability of the planned alternative course of action.

Address the required written reports to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, under oath or affirmation under the provisions of Section 182a, Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). In addition, submit a copy to the appropriate regional administrator.

Backfit Discussion

This generic letter only requires information from the addresses under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). Therefore, the staff has not performed a backfit analysis. The information requested will enable the NRC staff to determine whether licensees are complying with the current licensing basis for the facility with respect to GDC 62 for the prevention of criticality in fuel storage and handling and 5 percent subcriticality margins either contained in the technical specifications, or committed to in the updated FSARs, of plants containing Boraflex in the spent fuel storage racks. The staff is not establishing a new position for such compliance in this generic letter. Therefore, this generic letter does not constitute a backfit and no documented evaluation or backfit analysis need be prepared.

Federal Register Notification

(To be completed after the public comment period.)

Paperwork Reduction Act Statement

The information collections contained in this request are covered by the Office of Management and Budget clearance number 3150–0011, which expires July 31, 1997. The public reporting burden for this collection of information is estimated to average 150 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch, (T–6F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB–10202 (3150–0011), Office of Management and Budget, Washington, DC 20503.

Dated at Rockville, Maryland, this 2nd day of November, 1995.

For the Nuclear Regulatory Commission.

Dennis M. Crutchfield,

Director, Division of Reactor Program Management, Office of Nuclear Reactor Regulation.

[FR Doc. 95–27624 Filed 11–7–95; 8:45 am]

BILLING CODE 7590–01–P

Issuance of Urgent Bulletin; NRC Bulletin 95–02, Unexpected Clogging of a Residual Heat Removal (RHR) Pump Strainer While Operating in Suppression Pool Cooling Mode

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of issuance.

SUMMARY: The Nuclear Regulatory Commission (NRC) has issued Bulletin 95–02 to request certain remedial actions and associated reporting by holders of boiling water reactor (BWR) licenses and construction permits as a result of the unexpected clogging of a residual heat removal pump strainer at a boiling water reactor facility while operating in the suppression pool cooling mode. This bulletin is available in the NRC Public Document Room under accession number 9510040059. This bulletin was issued as an urgent generic communication under NRC procedures for issues that the staff considers urgent. This bulletin is discussed in Commission information paper SECY–95–255 which is also available in the NRC Public Document Room.

DATES: The bulletin was issued on October 17, 1995.

ADDRESSES: Not applicable.

FOR FURTHER INFORMATION CONTACT: Robert B. Elliott, (301) 415–1397 or Robert M. Latta, (301) 415–1314.

SUPPLEMENTARY INFORMATION: The NRC issued this bulletin to accomplish the following:

(1) Alert BWR owners to complications experienced during a recent event in which a licensee initiated suppression pool cooling in response to a stuck-open safety relief valve (SRV) and subsequently experienced clogging of one RHR pump suction strainer.

(2) Request BWR owners to review the operability of their emergency core cooling system (ECCS) and other pumps which draw suction from the suppression pool while performing their safety function. The evaluation should be based on suppression pool cleanliness, suction strainer cleanliness, and the effectiveness of foreign material exclusion (FME) practices. In addition, BWR owners are requested to implement appropriate procedural modifications and other actions (e.g., suppression pool cleaning), as necessary, to minimize foreign material in the suppression pool, drywell and containment. BWR owners are requested to verify their operability evaluation through appropriate testing and inspection.

(3) Require that BWR owners report to the NRC whether and to what extent they have complied with the requested actions. In addition, require a second report indicating completion of confirmatory test(s) and inspection(s) and providing the test results by BWR owners that have complied with the requested actions, or indicating completion of any proposed alternative course of action by BWR owners that have not complied with the requested actions.

Dated at Rockville, Maryland, this 2nd day of November, 1995.

For the Nuclear Regulatory Commission.

Dennis M. Crutchfield,

Director, Division of Reactor Program Management Office of Nuclear Reactor Regulation.

[FR Doc. 95–27625 Filed 11–7–95; 8:45 am]

BILLING CODE 7590–01–P

Biweekly Notice

Applications and Amendments to Facility Operating LicensesInvolving No Significant Hazards Considerations

I. Background

Pursuant to Public Law 97-415, the U.S. Nuclear Regulatory Commission (the Commission or NRC staff) is