

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
OFFICE ON NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

August 7, 2000

NRC INFORMATION NOTICE 2000-11: LICENSEE RESPONSIBILITY FOR QUALITY
ASSURANCE OVERSIGHT OF CONTRACTOR
ACTIVITIES REGARDING FABRICATION AND USE
OF SPENT FUEL STORAGE CASK SYSTEMS

Addressees:

All U.S. Nuclear Regulatory Commission (NRC) 10 CFR Part 50 and Part 72 licensees, and Part 72 Certificate of Compliance holders.

Purpose:

The NRC is issuing this information notice (IN) to remind general and site specific licensees of their responsibilities to assure that the quality assurance requirements of Part 72, Subpart G, to Title 10 of the U.S. Code of Federal Regulations (CFR) have been met before a dry cask storage system is placed in service at their nuclear power plants. The regulations require that nuclear power plant licensees assume full responsibility for the overall safety and operational use of the dry cask storage system at their sites. The nuclear power plant licensee is also responsible for assuring that the fabrication and preparation for use of the dry cask storage system, and the contractor's activities associated with the dry cask storage system, conform with NRC regulations, the Certificate of Compliance (CoC), and the license conditions for the nuclear power plant. This IN discusses a number of examples of inadequate implementation of quality assurance (QA) programs identified in recent NRC inspections. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this IN are not new NRC requirements; therefore, no specific action nor written response is required.

Description of Circumstances:

During an inspection in 1999, NRC staff identified cracks in the front opening of fabricated horizontal spent fuel storage modules that could have affected their structural integrity. The NRC further learned that the applicant's contractor and subcontractor had accepted these cracks without documenting them in either nonconformance reports (NCRs) or process deficiency reports. As a result, about 29 storage modules were found to have similar cracks. It was determined that the acceptance of this nonconforming condition was based on the contractor's reliance on inapplicable acceptance criteria, inadequate worker training, and a lack of understanding of the role of the NCR process. This could have been avoided if the applicant had been more actively and effectively involved in overseeing its contractor's quality assurance activities.

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Problems in the implementation of the program by the applicant's contractor and subcontractor, occurred in part because of the lack of effective oversight. The identified deficiencies were corrected prior to the issuance of the Part 72 license.

During another inspection in 1999, the NRC reviewed the implementation of the licensee's QA program with respect to the fabrication of spent fuel storage casks. The licensee had contracted with a vendor for the delivery of pressurized water reactor (PWR) fuel baskets for use at the Independent Spent Fuel Storage Facility. The licensee had established a QA program that was found to meet regulatory requirements. However, inspectors found instances of inadequate oversight of contractor and subcontractor activities. Specifically, the inspection team identified a number of examples of violations of 10 CFR 72.154, "Control of purchased material, equipment, and services."

In one example, the NRC determined that the licensee did not effectively oversee the design control process when changes were made to the coating application process for the storage cask fuel basket internals. A number of design drawings required that the fuel basket protective coating be applied according to the manufacturer's specifications. This included spray application of coating followed by high temperature curing. The vendor instructed its contractor to brush-apply coatings to basket internal areas not adequately covered by the spray process, but the vendor failed to complete a design change/request notice to support and justify this change as required by its procedure. After being informed of this issue, the vendor initiated a corrective action report to resolve the matter.

Other examples of inadequate oversight of contractor's activities were identified by the inspection in the areas of design development, material procurement, fabrication and assembly, and test and inspection. Specifically, the contractor's fabrication procedure contained conflicting requirements for fabrication quality assurance. In addition, the contractor did not have a procedure in place for controlling access to its small parts storage area, personnel were not adequately controlling ink stamps used for documenting work acceptance on fabrication travelers, and personnel had performed dimensional acceptance measurements using uncalibrated measurement and test equipment.

Discussion:

Section 140, of 10 CFR Part 72, states that, "the certificate holder and applicant for a CoC are responsible for the quality assurance requirements as they apply to the design, fabrication, and testing of a spent fuel storage cask." However, the regulation also clearly states that, "the licensee and the certificate holder are also simultaneously responsible for these quality assurance requirements through the oversight of contractors and subcontractors." The regulation also recognizes that there are circumstances when licensees delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but that the licensee shall retain responsibility for the program. The problems and deficiencies discussed above could have been avoided had each applicant/licensee ensured that both contractor and subcontractor organizations understood and effectively implemented a QA program in accordance with 10 CFR Part 72. Oversight by an applicant/licensee should be based on direct knowledge of specific implementation of a QA program, independent evaluation of program findings, and trending of defects and problems.

If a design or fabrication problem occurs with a spent fuel storage cask the ultimate responsibility for assuring the quality of the cask still remains with the cask user, the licensee.

This information notice requires no specific action nor written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate regional office.

/RA/M. Wayne Hodges
For

/RA/

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Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

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Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRR Information Notices

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DATE:	3/31/00		3/31/00		3/31/00		4/05/00		07/24/00		07/26/00	
OFC:	SFPO	E			NMSS	E	SFPO	E				
NAME:	SShankman				MSitek		WBrach					
DATE:	6/13/00				7/6/00		8 /4 /00		/ /00		/ /00	

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LIST OF RECENTLY ISSUED
NMSS INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
2000-10	Recent Events Resulting in Extremity Exposures Exceeding Regulatory Limits	7/18/2000	All material licensees who prepare or use unsealed radioactive materials, radio pharmaceuticals, or sealed sources for medical use or for research and development
2000-07	National Institute for Occupational Safety and Health Respirator User Notice: Special Precautions for Using Certain Self-Contained Breathing Apparatus Air Cylinders	4/10/2000	All holders of operating licenses for nuclear power reactors, non-power reactors, and all fuel cycle and material licensees required to have an NRC approved emergency plan
2000-05	Recent Medical Misadministrations Resulting from Inattention to Detail	3/06/2000	All medical licensees
2000-04	1999 Enforcement Sanctions for Deliberate Violations of NRC Employee Protection Requirements	2/25/2000	All U.S. Nuclear Regulatory Commission licensees
2000-03	High-Efficiency Particulate Air Filter Exceeds Mass Limit Before Reaching Expected Differential Pressure	2/22/2000	All NRC licensed fuel-cycled conversion, enrichment, and fabrication facilities
2000-02	Failure of Criticality Safety Control to Prevent Uranium Dioxide (UO ₂) Powder Accumulation	2/22/2000	All NRC licensed fuel-cycled conversion, enrichment, and fabrication facilities
99-33	Management of Wastes Contaminated With Radioactive Materials	12/28/99	All medical licensees
99-32	The Effect of the Year 2000 Issues on Medical Licensees	12/17/99	All NRC medical licensees
99-31	Operational Controls to Guard Against Inadvertent Nuclear Critically	11/17/99	All NRC licensed fuel cycle conversion, enrichment and fabrication facilities

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95-03, Supp 2	Loss of Reactor Coolant Inventory and Potential Loss of Emergency Mitigation Functions While in a Shutdown Condition	7/03/2000	All holders of OL for nuclear power reactors except those who have ceased operations and have certified that fuel has been permanently removed from the reactor vessel
2000-09	Steam Generator Tube Failure at Indian Point Unit 2	6/28/2000	All holders of OL for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel
2000-08	Inadequate Assessment of the Effect of Differential Temperatures on Safety-Related Pumps	5/15/2000	All holders of operating licensees for nuclear power reactors
2000-07	National Institute for Occupational Safety and Health Respirator User Notice: Special Precautions for Using Certain Self-Contained Breathing Apparatus Air Cylinders	4/10/2000	All holders of operating licenses for nuclear power reactors, non-power reactors, and all fuel cycle and material licensees required to have an NRC-approved emergency plan
2000-06	Offsite Power Voltage Inadequacies	3/22/2000	All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor