



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 4, 2010

Mr. Russell Jim, Manager
Environmental Restoration and
Waste Management Program
Confederated Tribes and Bands
of the Yakama Nation
P.O. Box 151, Fort Road
Toppenish, WA 98948

Dear Mr. Jim:

On behalf of the United States (U.S.) Nuclear Regulatory Commission (NRC), I am responding to your letter dated April 9, 2010, addressed to NRC Chairman Gregory B. Jaczko. In your letter, you urged the NRC to strengthen efforts to ensure the safe and secure storage of spent power reactor fuel at the Columbia Generating Station. You also raised concerns about use of high-density storage racks in spent fuel pools and storage of spent fuel during the period of an extended facility operating license.

Specifically, you urged "the NRC to end its policy of allowing dense compaction of spent fuel in pools and require highly radioactive fuel assemblies greater than five years old be placed into dry, hardened storage modes [sic] capable of withstanding aerial impacts, earthquakes and acts of malice." You noted in your letter that the NRC is working on a new waste confidence policy, and urged "that license extensions being sought, including that for the Columbia Generating Station be contingent on emplacement of spent fuel greater than five years of age, in dry, hardened storage," and that "[f]uture reactors should be required to have spent fuel pools under heavy containment." I address your comments below.

Since the 1976 prohibition on spent fuel reprocessing in the United States, spent fuel pools and dry cask storage facilities have been utilized to store spent reactor fuel. The Nuclear Waste Policy Act of 1982 required, in essence, the U.S. Department of Energy to find methods for long-term storage of high-level waste; however, it also required the owners of nuclear power plants to provide for interim storage of their spent fuel.

One of the most economical ways that utilities have found to accommodate the increasing inventory of spent fuel is to arrange pool storage racks as closely as possible, while ensuring that the fuel remains subcritical and that there is adequate means to cope with residual heat from the fuel. High-density fuel racks maximize the storage capacity of a spent fuel pool by minimizing the center-to-center spacing between fuel storage cells. To maintain subcriticality, neutron absorbing materials are built into the cell walls.

When a utility decides to expand the storage capacity of its existing spent fuel pool, it must apply to the NRC for a license amendment. As part of the licensing process, the utility must demonstrate that the fuel pool modification meets the requirements in General Design Criterion 61, "Fuel Storage and Handling and Radioactivity Control," and General Design Criterion 62, "Prevention of Criticality in Fuel Storage and Handling," of Appendix A, "General

Design Criteria for Nuclear Power Plants,” to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities.” These regulations require that fuel storage systems be designed to ensure adequate safety under normal and postulated accident conditions and to ensure that criticality is prevented. NRC guidance for evaluating the safety of an application appears, in part, in NUREG-0800, “Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants,” specifically Section 9.1.1, “Criticality Safety of Fresh and Spent Fuel Storage and Handling,” Section 9.1.2, “New and Spent Fuel Storage,” and Appendix D, “Guidance on Spent Fuel Racks,” to Section 3.8.4, Other Seismic Category I Structures.” These documents are available for review on the NRC’s public Web site at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/>.

NRC regulations give a sound basis for determining whether the use of a proposed storage system will protect public health and safety and the environment. In recent years, the NRC staff has reviewed many high-density spent fuel rack applications in detail to ensure that adequate safety margins are maintained. Also, in 2008 the NRC denied two petitions for rulemaking, one filed by the Attorney General of the Commonwealth of Massachusetts and the other filed by the Attorney General for the State of California, presenting nearly identical issues and requests for rulemaking on the environmental impacts of high-density storage in spent fuel pools. The *Federal Register* notice published on August 8, 2008 (73 FR 46204), describes the bases for the NRC staff’s denial of the petitions. The staff has determined that spent fuel stored in these high-density configurations is safe and that measures are in place to adequately protect the public.

In your letter, you reference a 2003 independent study on the potential risk of a terrorist attack on a spent fuel pool. The NRC staff has previously reviewed the subject paper and concluded that it was a deficient study of the hazards associated with the storage of spent fuel and that it did not address possible spent fuel pool accidents stemming from potential terrorist attacks in a realistic manner. The staff’s evaluation is available on the NRC’s public Web site at <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/reducing-hazards-spent-fuel.html>. The NRC considers spent fuel storage facilities to be robust; in the event of a terrorist attack similar to those of September 11, 2001, it is unlikely that any substantial radiological release would occur. Unlike the structures destroyed on September 11, 2001, spent fuel pools are not constructed of flammable material that would support long-duration fires. If an attack were to occur, licensees have approved emergency plans, tested biennially, that coordinate local, State, and Federal government responses.

With regard to updating the rule in 10 CFR 51.23(a), known as the Waste Confidence Decision, the NRC has not yet reached a final decision. On October 9, 2008, the NRC published its proposed update, “Waste Confidence Decision Update,” and proposed rule, “Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation,” in the *Federal Register* (73 FR 59547 and 73 FR 59551). The public had a 60-day comment period to December 8, 2008, to submit comments, which the NRC later extended to February 6, 2009 (73 FR 72370; November 28, 2008). On June 15, 2009, the NRC staff submitted an update and draft final rule to the Commission.

The Commission is now reviewing the staff's proposal and will make a decision on the update and draft final rule in the future. A copy of the update and draft final rule is available on the NRC's public Web site at <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2009/secy2009-0090/2009-0090scy.pdf>.

In addition, the NRC staff is currently considering a petition for rulemaking asking that the provisions that govern temporary storage of spent fuel after cessation of reactor operation be revoked, that licensing of new nuclear power plants cease, and that existing operating nuclear power plants be phased out (see PRM-51-13 or 75 FR 16360; April 1, 2010). As described in the *Federal Register* notice, you may make comments on this petition. If you believe that NRC regulations do not address your concerns, the rulemaking process is described on the NRC public Web site at <http://www.nrc.gov/about-nrc/regulatory/rulemaking/public-involvement.html>.

The NRC has previously concluded that a high-level waste repository is technically feasible. While an update to previous findings on this issue is currently before the Commission for review, both the existing regulations and the proposed final update before the Commission recognize that until a permanent high-level waste repository is operational, the spent nuclear fuel can be safely stored either onsite or at offsite interim storage facilities.

The NRC's job is to protect people and the environment from radiation hazards by regulating the various commercial and institutional uses of nuclear material, including nuclear power plants. This mission is accomplished through: (1) the establishment of standards, regulations, and requirements governing licensed activities, (2) the licensing of nuclear facilities, and (3) the inspection of facilities to ensure that they comply with the applicable requirements.

The NRC continually strives to improve its regulatory programs to better accomplish its mission. The NRC has established or changed many of its regulations and policies based on the recommendations of the NRC staff and external stakeholders. In addition, reactor operating experience information is systematically evaluated by the NRC to help inform the rulemaking, licensing, and reactor oversight processes.

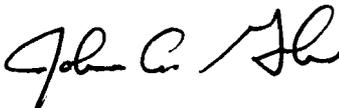
R. Jim

- 4 -

The NRC recognizes the public's interest in the safe regulation of nuclear activities and provides opportunities for citizens to make their opinions known, participate in regulatory proceedings, and ask questions about nuclear regulation. We appreciate your feedback and input to help inform our regulatory decisionmaking.

I hope that this letter satisfactorily addresses your concerns.

Sincerely,


for Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Docket No. 50-397

cc: ListServ

R. Jim

- 4 -

The NRC recognizes the public's interest in the safe regulation of nuclear activities and provides opportunities for citizens to make their opinions known, participate in regulatory proceedings, and ask questions about nuclear regulation. We appreciate your feedback and input to help inform our regulatory decisionmaking.

I hope that this letter satisfactorily addresses your concerns.

Sincerely,

/RA by John A. Grobe for/

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Docket No. 50-397

cc: ListServ

DISTRIBUTION: G20100244/LTR-10-0176/EDATS: SECY-2010-0219

PUBLIC	RidsNrrLAJBurkhardt Resource
LPL4 r/f	RidsNrrPMColumbia Resource
RidsAcrsAcnw_MailCTR Resource	RidsNrrMailCenter Resource
RidsEdoMailCenter Resource	RidsOcaMailCenter Resource
RidsFsmeOd Resource	RidsOgcRp Resource
RidsNmssOd Resource	RidsOpaMail Resource
RidsNrrOd Resource	RidsRgn4MailCenter Resource
RidsNrrDorl Resource	RidsSecyMailCenter Resource
RidsNrrDorlLpl4 Resource	

ADAMS Accession Nos.: Package ML101300456, Incoming ML101160435,
Response ML101300463 *via email

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	TECH ED	NRR/DORL/LPL4/BC
NAME	FLyon	JBurkhardt	KAzariah-Kribbs*	MMarkley
DATE	5/25/10	5/17/10	5/14/10	5/17/10
OFFICE	OGC	NRR/DORL/D	NRR/D	
NAME	BJones - NLO	JGiitter	ELeeds JGrobe for	
DATE	5/20/10	5/27/10	6/4/10	

OFFICIAL RECORD COPY