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Sent: Friday, February 10, 2012 12:48 PM
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Subject: Waste Confidence comments by ANA, Feb. 10
Attachments: ANA_waste_conf_comments_2.10.12.pdf

Hello Ms. Pineda:

Attached are comments by the Alliance for Nuclear Accountability (ANA) on the Waste Confidence Decision and Rule.

The Alliance for Nuclear Accountability (ANA) is a network of 35 local, regional and national organizations representing the concerns of communities in the shadows of the U.S. Department of Energy sites. ANA has offices in Washington, DC, Santa Fe, New Mexico and Columbia, South Carolina.

I request that these comments be formally entered into the record and also placed in ADAMS in order to be publicly availability.

Thank you.

Tom Clements
Nonproliferation Policy Director
Alliance for Nuclear Accountability
http://www.ananuclear.org/
Columbia, SC

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Alliance for Nuclear Accountability

A national network of organizations working to address issues of nuclear weapons production and waste cleanup

February 10, 2012

Ms. Christine Pineda,
Project Manager
Office of Nuclear Material Safety and Safeguards
Mailstop EBB-2B2
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
WCOutreach@nrc.gov

COMMENT ON ASSUMPTIONS FOR ENVIRONMENTAL STUDY OF EXTENDED STORAGE OF SPENT NUCLEAR FUEL

Dear Ms. Pineda:

Thank you for considering these comments by the Alliance for Nuclear Accountability. The Alliance for Nuclear Accountability (ANA) is a network of 35 local, regional and national organizations representing the concerns of communities in the shadows of the U.S. Department of Energy sites. ANA has offices in Washington, DC, Santa Fe, New Mexico and Columbia, South Carolina.

ANA actively participated in the deliberations of the Blue Ribbon Commission on America's Nuclear Future, including giving various formal presentations, and also participated on NRC panels in 2011 on the "Draft Regulatory Basis for a Potential Rulemaking on Spent Nuclear Fuel Reprocessing Facilities." We are thus very familiar with issue concerning spent fuel storage and management as well as reprocessing and plutonium fuel (MOX).

Spent Nuclear Fuel at Closed Facilities

As a general rule, spent nuclear fuel being stored on site at shut-down reactors must be the responsibility of the utilities that generated it until such time as a final repository is available. Spent nuclear fuel at closed reactors should no longer be stored in cooling pools and must be safely stored in robust dry casks. Though some have called this fuel "stranded" it actually must still be actively managed by the generator. No transport of this fuel should take place unless real environmental and security threats dictate and it should not be moved simply as a matter of policy.

The Blue Ribbon Commission stated the following on their expectation that spent fuel will remain at existing reactor sites: "Recognizing the substantial lead-times that may be required in opening one or more consolidated storage facilities, dispersed interim storage of substantial quantities of spent fuel at existing reactor sites can be expected to continue for some time." This "dispersed" fuel must be placed immediately in hardened, passively cooled storage casks that could be safety stored on or very near the site of generation.

Santa Fe Office: 1400 Maclovia Street, #6, Santa Fe, NM 87505, 505/473-1670, Fax: 505/438-2415
Washington, DC Office: 322 4th Street NE, Washington, DC 20002, 202/544-0217, Fax: 202/544-6143
www.ananuclear.org

Physical protection of isolated spent fuel storage facilities is of great concern and though the NRC is developing regulations on such facilities, the waste confidence process must assert that such facilities will not be abandoned to local police response in case of attack and that an active security force will remain on hand. For any dry cask facility, protection should be the equivalent to a facility inside the security perimeter of an operating nuclear plant.

Opposition to Centralized "Interim" Storage

We are concerned that "consolidated storage" is being considered as part of the process. There is no demonstrated need to consolidate storage at sites away from nuclear reactors where the spent fuel was generated. Moves toward consolidated storage will be problematic from political and environmental perspectives and will generate local and regional opposition. Consolidated storage will magnify transportation risks, increase possibility of terrorist attack in transit, and increase worker exposure to radiation. Such facilities would be used by reprocessing backers as a way to push for co-location of reprocessing facilities, which is in and of itself reason not to consolidate fuel at locations which are inclined to support reprocessing for reasons of financial gain. The reprocessing risk of consolidating spent fuel thus must be taken into account.

While centralized nuclear waste storage may seem like an efficient idea to some, in reality it is an inordinately expensive, needlessly risky, and thoroughly unfair proposition. Spent nuclear fuel and defense waste should only be moved if there are clearly identified safety risks at their sites of origin or if a permanent repository becomes operational.

Moving nuclear waste is a dicey proposition that requires large investments in transportation infrastructure, therefore it should be done as little as possible. Sites currently hosting nuclear waste could safely store their waste in hardened on-site facilities with much smaller financial investments and significantly lower risks to the environment and communities near the site of origin and along proposed transportation routes. Centralized storage is an unfair proposal, as the burden of hosting centralized waste will likely fall on communities that have already sacrificed greatly for our nation's nuclear projects.

The NRC must focus on long-term solutions for nuclear waste storage, not get bogged down planning for interim storage. Consolidated interim storage schemes will only detract urgency, human capital, and monetary resources from the greater project of finding a permanent nuclear waste storage solution.

Support of Hardened On-Site Storage (HOSS)

We request that the ***Principles for Safeguarding Nuclear Waste at Reactors,*** as agreed by a large number of public interest groups and also submitted to the Blue Ribbon Commission during their deliberations, be taken into account in the waste confidence process. (See: HOSS principles at http://www.ieer.org/reports/DOE_WasteContracts2010/HOSS_PRINCIPLES_3-23-10x.pdf)

Quoting from the above document:

Irradiated fuel must be stored as safely as possible as close to the site of generation as possible. Waste moved from fuel pools must be safeguarded in hardened, on-site storage (HOSS) facilities. Transporting waste to interim away-from-reactor storage should not be done unless the reactor site is unsuitable for a HOSS facility and the move increases the safety and security of the waste. HOSS facilities must not be regarded as a permanent waste solution, and thus should not be constructed deep underground. The waste must be retrievable, and real-time radiation and heat monitoring at the HOSS facility must be implemented for early detection of radiation releases and overheating. The overall objective of HOSS should be that the amount of releases projected in even severe attacks should be low enough that the storage system would be unattractive as a terrorist target. Design criteria that would correspond to the overall objective must include:

- Resistance to severe attacks, such as a direct hit by high-explosive or deeply penetrating weapons and munitions or a direct hit by a large aircraft loaded with fuel or a small aircraft loaded with fuel and/or explosives, without major releases.

- Placement of individual canisters that makes detection difficult from outside the site boundary.

No Policy of Reprocessing, a Dying and Subsidized Industry Worldwide

As national policy is now for the "once-through" fuel cycle and is unlikely to change, there is no justification to include a reprocessing alternative amongst the options.

The Blue Ribbon Commission report did not recommend a national policy in favor of reprocessing and nuclear utilities are not clamoring for such a policy. Companies that profit from reprocessing, such as the state-owned French company AREVA, must not be allowed to dictate US policy even though it may well have been AREVA's request which set the NRC off on an unnecessary and time-consuming venture to develop unneeded reprocessing plant regulations.

Reprocessing in other countries is in trouble, as we can see from a withdrawal of all foreign countries from reprocessing at AREVA's La Hague complex. The United Kingdom's Thermal Oxide Reprocessing Plant (THORP) has operated far below design capacity and is in serious trouble while Japan's $20-billion Rokkasho reprocessing plant has failed to start after four years of efforts. Thus, the international trend is away from reprocessing and the staff should not make an attempt with the waste confidence process to revive a horse that is dying in other countries and that died years ago in the U.S.

Though it is unclear if the U.S. Department of Energy's program to introduce mixed uranium - plutonium fuel (MOX) made from surplus weapons plutonium in commercial reactors will go forward due to a host of problems involving cost overruns, technical issues and scheduling of MOX plant operations, as well as lack of commercial reactors to use MOX fuel, the waste confidence

process should include spent MOX fuel. Storage of MOX poses unique problems due to higher thermal loads, which must be taken into account in dry cask and geologic storage situations.

Minimize Transportation

The safest, least expensive, and easiest way to deal with nuclear waste is to transport it as little as possible. Interim storage need not be consolidated. Shipping nuclear waste around the country necessitates expensive safety upgrades to transportation routes and creates unnecessary environmental and human health risks.

Nuclear waste should only be moved for interim storage if it improves safety and environmental protection, not to fit a policy designed to relieve utilities of their nuclear waste burden. Nuclear waste should not be moved until it is bound for a permanent storage site. ANA recommends hardening spent nuclear fuel in passively cooled casks as close as possible to the site of generation as a way to reduce transportation and handling risks.

Programmatic Environmental Impact Statement

It is incumbent upon the NRC to do a full-scale programmatic analysis under the National Environmental Policy Act (NEPA) - a Programmatic Environmental Impact Statement - from "cradle to grave" on spent fuel. The PEIS must include an analysis of the use of robust dry casks, in the storage system know as Hardened On-Site Storage (HOSS) for a defined period of time. It is unclear without an in-depth analysis if any dry casks or HOSS casks can survive environmental, seismic or security threats which will be presented over time.

While the NRC may be looking at 200 years for HOSS storage, information about survivability of dry casks is lacking. Scientific and engineering justification needs to be presented for the selection of any defined time period. In any analysis, the ability to replace handling equipment and off load damaged casks during a course of 200 years or any lengthy period of time must be part of the review.

Thank you for consideration of our comments on the NRC's Waste Confidence Decision and Rule.

Submitted on behalf of ANA by:

Tom Clements
Nonproliferation Policy Director
Alliance for Nuclear Accountability
Columbia, SC
tel. 803-834-3084
tomclements329@cs.com