

PDR UPDATE

U.S. NRC Local Public Document Room Program

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Dry Cask Storage, Multi-Purpose Canisters, and Independent Spent Fuel Storage Installations

In 1977, under the Carter Administration, the U.S. defined the Nation's policy regarding the permanent disposal of commercial nuclear power plant fuel by rejecting the option of reprocessing spent fuel. The Nuclear Waste Policy Act (NWPA) of 1982 and the Nuclear Waste Policy Amendments Act (NWPAA) of 1987 designated the Department of Energy (DOE) as the Federal agency responsible for disposal of high-level waste (HLW) which includes nuclear power plant spent fuel; the Environmental Protection Agency (EPA) as responsible for developing appropriate environmental standards for high-level waste; and the NRC as responsible for licensing activities related to the disposal and long-term storage of spent nuclear fuel. The NWPA calls for DOE to begin accepting spent fuel from utilities in 1998; however, progress on a permanent waste-disposal site has been stalled.

Over the last decade, nuclear power plants have begun to move used fuel from their spent fuel pools into dry cask storage or independent spent fuel storage installations (ISFSIs) on site.

The NRC's Spent Fuel Project Office is responsible for reviewing existing and projected applications for storage and transportation casks for certification. These casks may be developed by private vendors or individual nuclear utilities.

Most of the 110 operating nuclear power plants are storing used fuel in spent fuel pools (SFPs). Despite fuel pool refueling, which, in some cases, has almost doubled the capacity of the SFPs, older plants are running out of storage room in their pools. The most cost-effective and lowest maintenance method for storing spent fuel is dry cask storage.

Regulations are in place for the design, testing, manufacture, and maintenance of casks used in dry storage. NRC is responsible for reviewing proposed cask designs to ensure that they will safely confine the fuel and prevent fuel cladding degradation over a 20-year period.

Generally, casks are designed with a primary confinement vessel, containing a steel or concrete overpack that guarantees both structural strength and shielding. All casks are passive designs with no moving parts, and rely on convective cooling. Spent fuel casks are analyzed for both off-normal and accident conditions, including cask tip-over and drop accidents.

Currently, the following plants are storing older spent fuel elements in dry cask storage systems in an ISFSI: Surry, Oconee, H.B. Robinson, Calvert Cliffs, Fort St. Vrain, Palisades, Point

Beach, Prairie Island, Davis-Besse and Arkansas Nuclear One. Future ISFSIs are planned at Oyster Creek, North Anna, FitzPatrick, Trojan, Rancho Seco, Dresden Unit 1, Yankee Rowe, and WNP-2. The NRC has also received a letter of intent from DOE regarding its pursuit of an ISFSI license for storing the Three Mile Island Unit 2 (TMI-2) core at a facility within the Idaho National Engineering Laboratory property.

NOTE FROM THE EDITOR: The preceding information was taken from the NRC's Home Page on the WWW. Since I receive a number of inquiries each week on the issue of dry cask storage of spent fuel from LPDR librarians and the public, I am including it in this issue of *LPDR UPDATE*. Information on other "Current Technical Issues" is also available online at www.nrc.gov by first selecting "News and Information" from the menu. The documents cited in this article are available in the NUDOCS microfiche collections at power reactor and high-level-waste LPDRs. Contact the NRC LPDR staff at 800-638-8081 for assistance in locating any of these documents.

Public Affairs Brochures

The NRC Office of Public Affairs has published two brochures that may be of interest to LPDR staff and patrons, NUREG/BR-0216 and 0217. Copies of these brochures for the LPDR collection are available upon request from the NRC LPDR staff at 800-638-8081.

Radioactive Waste: Production, Storage, Disposal (NUREG/BR-0216)

Radioactive wastes are the leftovers from the use of nuclear materials for the production of electricity, diagnosis and treatment of disease, and other purposes. The materials are either naturally occurring or man-made. Certain kinds of radioactive materials, and the waste produced from using these materials, are subject to regulatory control by the Federal Government or the States.

The Department of Energy (DOE) is responsible for radioactive waste related to nuclear weapons production and certain research activities. The NRC and some States regulate commercial radioactive waste that results from the production of electricity and other non-military uses of nuclear material.

Various other Federal agencies, such as the Environmental Protection Agency, the Department of

Transportation, and the Department of Health and Human Services, also have a role in the regulation of radioactive material.

The NRC regulates the management, storage, and disposal of radioactive waste produced as a result of NRC-licensed activities. The agency has entered into agreements with 29 States, called Agreement States, to allow these States to regulate the management, storage, and disposal of certain nuclear waste.

The commercial radioactive waste that is regulated by the NRC or the Agreement States and that is the subject of this brochure is of three basic types: high-level waste, mill tailings, and low-level waste. This pamphlet provides separate discussions of these three types of radioactive waste. (Excerpt from NUREG/BR-0216).

The Regulation and Use of Radioisotopes in Today's World (NUREG/BR-0217)

More than 100 years ago, scientists discovered that many elements commonly found on earth occur in different atomic configurations. These varying configurations, called isotopes, had identical electronically charged particles and identical chemical properties, but different atomic weights and physical properties.

It was soon discovered that some isotopes of elements were radioactive. The dense central portion (called the nucleus) of an atom of the element emits energy in several different forms. Radioisotopes are simply atoms with nuclei that are seeking a more stable nuclear configuration by emitting radiation. Scientists have learned that more radioisotopes could be created by subjecting certain elements to radiation inside a nuclear reactor or bombarding them using a particle accelerator.

Gradually we have learned to harness these radioisotopes for use in our modern, high-tech world. In this brochure are described some of the most common uses for radioisotopes, as well as the relative benefits and hazards involved in their applications. The appendix at the end of this brochure describes various uses of radioisotopes in this country. (Excerpt from the Introduction of NUREG/BR-0217).

LPDR Highlights

The Red Wing Public Library, Red Wing, Minnesota, has been designated as a temporary local

public document room for the proposed Prairie Island Nuclear Station offsite independent spent fuel storage installation (ISFSI). Notice of the establishment of the LPDR was published in the *Federal Register* on October 1, 1996.

The Richland Public Library, Richland, Washington, LPDR for the Washington Nuclear Project, has been designated LPDR for records pertaining to the Department of Energy Hanford Tank Remediation System. The NUDOS microfiche collection at the library will hold the public records issued for this project. Notice of the location of the LPDR was published in the *Federal Register* on November 29, 1996.

Reminder

All repairs or service on NRC-furnished microfiche reader printers must be authorized in advance in order for NRC to pay the repair bill. Although the repair may require approval of a purchase order, which could delay the actual repair, we will make every attempt to have the equipment serviced as quickly as possible. If the library arranges for service on its own, please let the NRC LPDR staff know to avoid sending someone to make a repair that has already been done. If the library does request service on its own, the library will be responsible for the cost of the repair.

Please remind patrons that the NRC Public Document Room in Washington, D.C., can provide photocopies of any publicly available NRC documents. The current charge is \$0.08/page, plus postage. The PDR can also duplicate microfiche at \$0.75/microfiche. The toll-free PDR telephone number is 800-397-4209.

Electronic FOIA of 1996

The Electronic Freedom of Information Act Amendments of 1996 was signed into law on October 2, 1996, by President Clinton. The Act acknowledges the increase in the Government's use of computers and exhorts agencies to use new technology to enhance public access to Government information. The Office of Management and Budget has directed agencies to use electronic media and formats, including public networks, to make Government information more easily accessible and useful to the public.

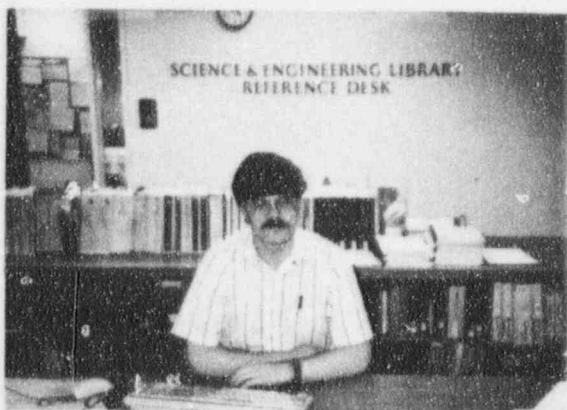
The list that follows summarizes the major new requirements and the time-frame in which they are to be implemented:

- Specifically includes electronic records in the definition of record and requires search of computer files as well as paper files under FOIA (effective April 1, 1997).
- Requires agencies to provide records in format requested, including requests for electronic formats, if reasonably possible (effective April 1, 1997).
- Requires agencies to indicate the amount of material withheld from a requester and, where technologically possible, to show where the deletion has been made (effective April 1, 1997).
- Requires all public reading room materials (for NRC this is the Public Document Room in Washington, D.C.) such as agency opinions and policy statements created after November 1, 1996, to be made available for public inspection pursuant to Section 552(a)(2) of the FOIA, in electronic form, and through on-line access if possible (effective October 1, 1997).
- Requires agencies to place records disclosed in an FOIA request in a public reading room (for NRC this is the PDR, Washington, D.C.) when the agency determines that the records are likely to be subject to additional FOIA requests (effective October 1, 1997).
- Requires agencies to provide an on-line index of records released under prior FOIA requests (effective December 31, 1999).
- Changes time limits from 10 days to 20 days and permits negotiation with requester in exceptional circumstances (effective October 1, 1997).
- Allows agencies to publish regulations that establish multi-track system for "first-in, first-out" processing (simple request track and complex track) (effective October 1, 1997).
- Requires agencies to publish regulations allowing expedited processing for "compelling need" based on (1) threat to life or safety or (2) persons primarily engaged in disseminating information to the public, when there is an urgency to inform the public concerning actual or alleged Government activity (effective October 1, 1997).

Responses to FOIA requests that are placed in the NRC Public Document Room are also filmed onto the NUDOCs microfiche and are available at power reactor, high-level waste, and gaseous

diffusion LPDR libraries. For further information on the FOIA contact the NRC LPDR staff at 800-638-8081.

Recent LPDR Visits



Michael Bowman, Science and Engineering Department, Branford Price Millar Library, Portland State University, Portland, Oregon, LPDR for the Trojan Nuclear Plant.



James Kirkendall and Joyce Johnson, Humboldt County Library, Eureka, California, LPDR for the Humboldt Bay Power Plant.



Kathy Knutson (left) and Grace Crisp, Richland Public Library, Richland, Washington, LPDR for the Washington Nuclear Project.

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