

2009 DRAFTING REQUEST

Bill

Received: **02/25/2009**

Received By: **mkunkel**

Wanted: **As time permits**

Identical to LRB:

For: **Garey Bies (608) 266-5350**

By/Representing: **Andrew**

This file may be shown to any legislator: **NO**

Drafter: **mkunkel**

May Contact:

Addl. Drafters:

Subject: **Public Util. - energy**

Extra Copies:

Submit via email: **YES**

Requester's email: **Rep.Bies@legis.wisconsin.gov**

Carbon copy (CC:) to:

Pre Topic:

No specific pre topic given

Topic:

Payments to local governments by public utilities for spent nuclear fuel storage

Instructions:

A pub. util. must pay muni. \$250,000 per year plus \$40,000 per cask if the pub. util. stores spent nuclear fuel rods in the muni. Also, must pay county \$150,000 per year (no per cask amt. to county). Adjust amts. for inflation every 5 years.

Drafting History:

<u>Vers.</u>	<u>Drafted</u>	<u>Reviewed</u>	<u>Typed</u>	<u>Proofed</u>	<u>Submitted</u>	<u>Jacketed</u>	<u>Required</u>
/?				_____			Local
/1	mkunkel 02/26/2009	wjackson 03/04/2009	phenry 03/05/2009	_____	sbasford 03/05/2009		Local
/2	mkunkel 03/23/2009	wjackson 03/24/2009	rschluet 03/24/2009	_____	lparisi 03/24/2009	cduerst 05/21/2009	

FE Sent For: *at intro*
6/8/09

<END>

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/1	mkunkel 02/26/2009	wjackson 03/04/2009	phery 03/05/2009		sbasford 03/05/2009		

FE Sent For:

1/2 WJ 3/24

Handwritten signature and scribbles

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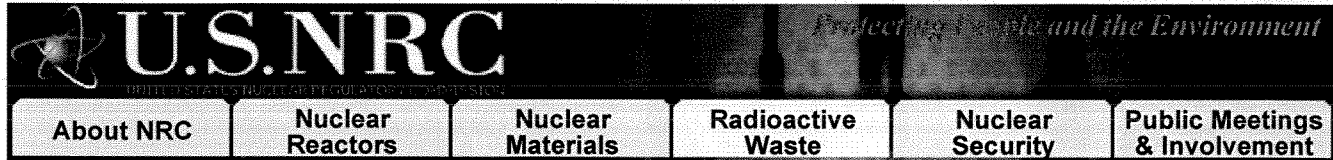
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/?	mkunkel	1 wj 3/4	3/5 ph	3/5 ph/df			

FE Sent For:

<END>


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[Home](#) > [Radioactive Waste](#) > [Spent Fuel Storage](#)
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[Low-Level Waste](#)
[Waste Incidental to Reprocessing](#)
[High-Level Waste](#)
[Uranium Mill Tailings](#)
Regulated Activities:
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Storage of Spent Nuclear Fuel

What We Regulate

There are two acceptable storage methods for spent fuel after it is removed from the reactor core:

- Spent Fuel Pools - Currently, most spent nuclear fuel is safely stored in specially designed pools at individual reactor sites around the country.
- Dry Cask Storage - If pool capacity is reached, licensees may move toward use of above-ground dry storage casks.

Spent Fuel Project Office - Licensing Process Conference

Regulatory Initiatives

- Interim Staff Guidance for Public Comment
- Diablo Canyon ISFSI License Application

How We Regulate


The NRC regulates spent fuel through a combination of regulatory requirements, licensing; safety oversight, including inspection, assessment of performance; and enforcement; operational experience evaluation; and regulatory support activities. For general information, see the How We Regulate page. For details, see the following:

- Regulations, Guidance, and Communications
- Licensing
- Oversight
- Public Involvement

Related Information

- Radioactive Waste: Production, Storage, Disposal (NUREG/BR-0216)
- Materials Safeguards and Threat Assessment
- Transportation of Spent Nuclear Fuel
- Locations of Independent Spent Fuel Storage Installations
- Dry Spent Fuel Storage Designs: NRC Approved for General Use
- Nuclear Fuel Pool Capacity
- Diablo Canyon ISFSI License Application

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 Wednesday, October 22, 2008



Protecting People and the Environment

About NRC
Nuclear Reactors
Nuclear Materials
Radioactive Waste
Nuclear Security
Public Meetings & Involvement

- Spent Fuel Storage
- Licensed Facilities**
- Locations
- Designs
- Graph of Fuel Capacity
- What We Regulate**
- Spent Fuel Pools
- Dry Cask Storage
- How We Regulate**
- Regulations, Guidance, and Communications
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- Oversight
- Public Involvement

Home > Radioactive Waste > Spent Fuel Storage > Spent Fuel Pools

Spent Fuel Pools

The water-pool option involves storing spent fuel rods under at least 20 feet of water, which provides adequate shielding from the radiation for anyone near the pool. The rods are moved into the water pools from the reactor along the bottom of water canals, so that the spent fuel is always shielded to protect workers.


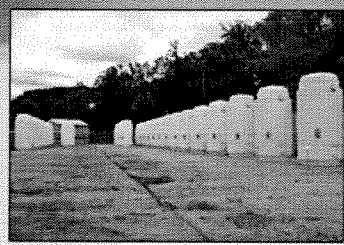
About one-fourth to one-third of the total fuel load from the pools is spent and removed from the reactor every 12 to 18 months and replaced with fresh fuel.

Current regulations permit re-racking of the spent fuel pool grid and fuel rod consolidation, subject to NRC review and approval, to increase the amount of spent fuel that can be stored in the pool. Both of these methods are constrained by the size of the pool.

Spent Fuel Dry Storage Single & Dual Purpose Cask


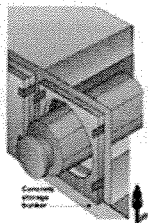
At some nuclear reactors across the country, spent fuel is kept on site, above ground, in systems basically similar to the ones shown here.

- Once the spent fuel has cooled, it is loaded into special casks which are designed to hold Pressurized Water Reactor and Boiling Water Reactor assemblies. Water and air are removed. The cask is filled with inert gas, sealed shut, and rigorously tested for leaks. It may then be placed in a "cask" for storage or transportation.
- The casks can also be stored in above-ground concrete bunkers, each of which is about the size of a one-car garage. Eventually they may be transported elsewhere for storage.

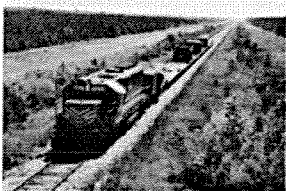



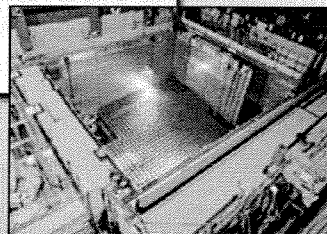

Two Types of Spent Fuel Storage Casks

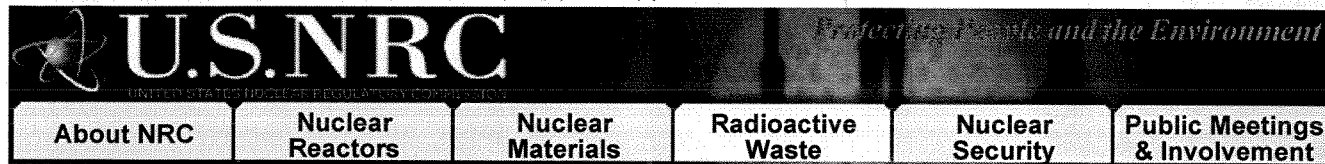
- Vertical**
- Horizontal**

Train Carrying Spent Nuclear Fuel



[Spent Fuel Storage](#)[Licensed Facilities](#)[Locations](#)[Designs](#)[Graph of Fuel Capacity](#)[What We Regulate](#)[Spent Fuel Pools](#)[Dry Cask Storage](#)[How We Regulate](#)[Regulations, Guidance, and Communications](#)[Licensing](#)[Oversight](#)[Public Involvement](#)[Home](#) > [Radioactive Waste](#) > [Spent Fuel Storage](#) > [Dry Cask Storage](#)

Dry Cask Storage

In the late 1970s and early 1980s, the need for alternative storage began to grow when pools at many nuclear reactors began to fill up with stored spent fuel. Utilities began looking at options such as dry cask storage for increasing spent fuel storage capacity. See the graph of nuclear fuel storage pool capacity.

Dry cask storage allows spent fuel that has already been cooled in the spent fuel pool for at least one year to be surrounded by inert gas inside a container called a cask. The casks are typically steel cylinders that are either welded or bolted closed. The steel cylinder provides a leak-tight containment of the spent fuel. Each cylinder is surrounded by additional steel, concrete, or other material to provide radiation shielding to workers and members of the public. Some of the cask designs can be used for both storage and transportation.

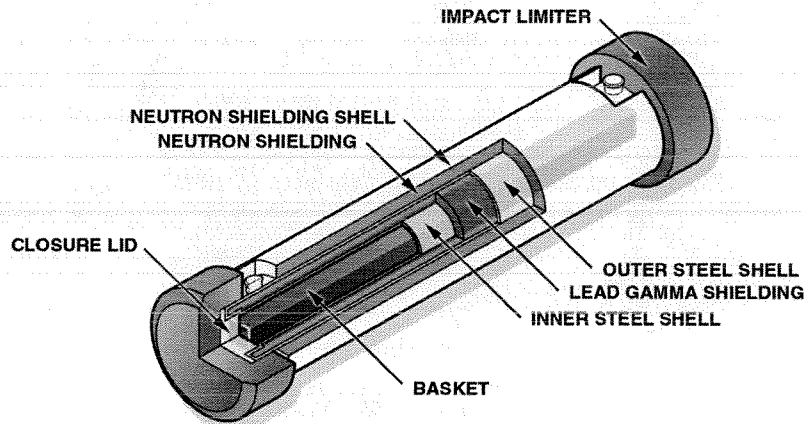
There are various dry storage cask system designs. With some designs, the steel cylinders containing the fuel are placed vertically in a concrete vault; other designs orient the cylinders horizontally. The concrete vaults provide the radiation shielding. Other cask designs orient the steel cylinder vertically on a concrete pad at a dry cask storage site and use both metal and concrete outer cylinders for radiation shielding. See the picture of a typical dry cask storage system.

The first dry storage installation was licensed by the NRC in 1986 at the Surry Nuclear Power Plant in Virginia.

Spent fuel is currently stored in dry cask systems at a growing number of power plant sites, and at an interim facility located at the Idaho National Environmental and Engineering Laboratory near Idaho Falls, Idaho. See the map showing the location of existing independent spent fuel storage installations.

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Tuesday, February 13, 2007

TYPICAL SPENT FUEL TRANSPORTATION CASKS



Generic Truck Cask for Spent Fuel

Typical Specifications

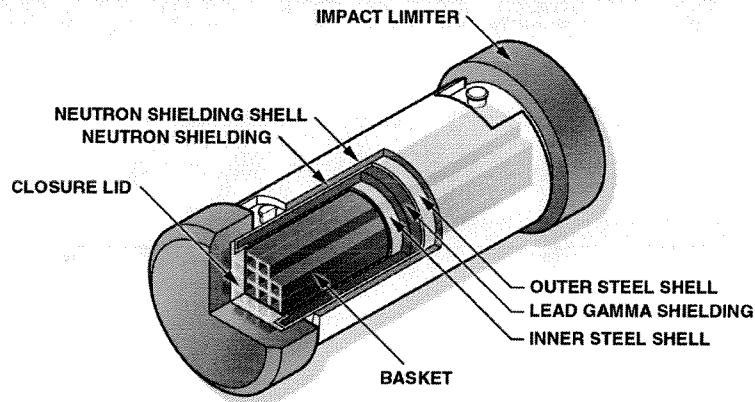
Gross Weight (including fuel): 50,000 pounds (25 tons)

Cask Diameter: 4 feet

Overall Diameter (including Impact Limiters): 6 feet

Overall Length (including Impact Limiters): 20 feet

Capacity: Up to 4 PWR or 9 BWR fuel assemblies



Generic Rail Cask for Spent Fuel

Typical Specifications

Gross Weight (including fuel): 250,000 pounds (125 tons)

Cask Diameter: 8 feet

Overall Diameter (including Impact Limiters): 11 feet

Overall Length (including Impact Limiters): 25 feet

Capacity: Up to 26 PWR or 61 BWR fuel assemblies



State of Wisconsin
2009 - 2010 LEGISLATURE

LRB-2227/1

MDK:.....

WLj

NOTE

2009 BILL

2-26-09

Gen Cat

1 AN ACT ..., relating to: storage of spent fuel from nuclear power plants and
2 granting rule-making authority.

Analysis by the Legislative Reference Bureau

and to

This bill requires a public utility that stores spent fuel from a nuclear power plant to make annual payments to the city, village, or town (municipality), ~~as well~~ *as* the county, in which the spent fuel is stored. As defined under current law, a "nuclear power plant" is a nuclear-fired electric generating facility with a nominal operating capacity of 100 megawatts or more. The bill requires a public utility to pay a municipality \$250,000 for each year or portion of the year the public utility stores spent fuel in the municipality. Also, the public utility must pay a county \$150,000 for each year or portion of a year that the public utility stores spent fuel in the county.

In addition, if a public utility uses dry cask storage for spent fuel, the public utility must pay a municipality \$40,000 for each dry cask for each year or portion of a year that spent fuel is stored in a dry cask in the municipality. Dry cask storage is a method of storage that the United States Nuclear Regulatory Commission allows a nuclear power plant to use after the plant reaches its capacity for on-site storage in water pools.

Finally, the bill requires the Public Service Commission to promulgate rules implementing the bill's requirements and adjusting the payment amounts described above every 5 years to account for inflation.

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For further information see the *local* fiscal estimate, which will be printed as an appendix to this bill.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

1 **SECTION 1.** 196.491 (3) (d) (intro.)[✓] of the statutes is amended to read:

2 196.491 (3) (d) (intro.) Except as provided under par. (e) and s. 196.493 (2)[✓], the
3 commission shall approve an application filed under par. (a) 1. for a certificate of
4 public convenience and necessity only if the commission determines all of the
5 following:

History: 1975 c. 68, 199; 1979 c. 221, 361; 1983 a. 53 s. 114; 1983 a. 192, 401; 1985 a. 182 s. 57; 1989 a. 31; 1993 a. 184; 1995 a. 27 ss. 9116 (5), 9126 (19); 1995 a. 227, 409; 1997 a. 27, 35, 204; 1999 a. 9; 1999 a. 150 s. 672; 2001 a. 16; 2003 a. 33, 89; 2005 a. 24, 29; 2007 a. 20 s. 9121 (6) (a).

6 **SECTION 2.** 196.493 (title)[✓] of the statutes is amended to read:

7 **196.493 (title) ~~Construction of nuclear~~ Nuclear power plants limited.**

History: 1983 a. 401; 1997 a. 204.
8 **SECTION 3.** 196.493 (3)[✓] of the statutes is created to read:

9 196.493 (3) SPENT FUEL STORAGE. (a) A public utility that stores spent fuel from
10 a nuclear power plant shall do all of the following:

11 1. Pay^{to} the municipality in which the spent fuel is stored ^{SET} \$250,000, or the
12 amount specified in rules promulgated under par. (b)[✓], for each year or portion of a
13 year that the spent fuel is stored and, if the public utility uses dry cask storage for
14 the spent fuel, pay^{to} the municipality \$40,000, or the amount specified in rules
15 promulgated under par. (b)[✓], for each dry cask for each year or portion of a year that
16 the fuel is stored in a dry cask in the municipality.

17 2. Pay^{to} the county in which the spent fuel is stored \$150,000, or the amount
18 specified in rules promulgated under par. (b)[✓], for each year or portion of a year that
19 the spent fuel is stored in the county.

**DRAFTER'S NOTE
FROM THE
LEGISLATIVE REFERENCE BUREAU**

LRB-2227/1dn
MDK:.....

WJ

Date

Rep. Bies:

Note that I haven't researched whether federal law poses any preemption problems for this bill. If you'd like me to do so, please let me know.

Mark D. Kunkel
Senior Legislative Attorney
Phone: (608) 266-0131
E-mail: mark.kunkel@legis.wisconsin.gov

DRAFTER'S NOTE
FROM THE
LEGISLATIVE REFERENCE BUREAU

LRB-2227/1dn
MDK:wlj:ph

March 5, 2009

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E-mail: mark.kunkel@legis.wisconsin.gov



State of Wisconsin
2009 - 2010 LEGISLATURE

LRB-2227/1
MDK:wlj:ph

3-23-09

SOON

stays
RM has
open
PMA

2009 BILL

dry cask

uses dry cask storage to store

1 AN ACT ^{Regen} to amend 196.491 (3) (d) (intro.) and 196.493 (title); and to create
2 196.493 (3) of the statutes; relating to: storage of spent fuel from nuclear
3 power plants and granting rule-making authority.

Analysis by the Legislative Reference Bureau

This bill requires a public utility that ~~stores~~ spent fuel from a nuclear power plant to make annual payments to the city, village, or town (municipality), and to the county, in which the spent fuel is stored. As defined under current law, a "nuclear power plant" is a nuclear-fired electric generating facility with a nominal operating capacity of 100 megawatts or more. The bill requires a public utility to pay a municipality \$250,000 for each year or portion of the year the public utility ~~stores~~ spent fuel in the municipality. Also, the public utility must pay a county \$150,000 for each year or portion of a year that the public utility ~~stores~~ spent fuel in the county. ~~In addition, if a public utility uses dry cask storage for spent fuel, the public utility must pay a municipality \$40,000 for each dry cask for each year or portion of a year that spent fuel is stored in a dry cask in the municipality. Dry cask storage is a method of storage that the United States Nuclear Regulatory Commission allows a nuclear power plant to use after the plant reaches its capacity for on-site storage in water pools.~~

Finally, the bill requires the Public Service Commission to promulgate rules implementing the bill's requirements and adjusting the payment amounts described above every five years to account for inflation.

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14 ~~the spent fuel,~~ pay to the municipality \$40,000, or the amount specified in rules
15 promulgated under par. (b), for each dry cask for each year or portion of a year that
16 the fuel is stored in a dry cask in the municipality.

17 2. Pay to the county in which the spent fuel is stored \$150,000, or the amount
18 specified in rules promulgated under par. (b), for each year or portion of a year that
19 the spent fuel is stored in the county.

BILL

1 (b) The commission shall promulgate rules to implement this subsection and
2 to adjust the amounts specified in par. (a) every 5 years to account for inflation.

3 (END)

Basford, Sarah

From: Nowlan, Andrew
Sent: Thursday, May 21, 2009 9:04 AM
To: LRB.Legal
Subject: Draft Review: LRB 09-2227/1 Topic: Payments to local governments by public utilities for spent nuclear fuel storage

Please Jacket LRB 09-2227/1 for the ASSEMBLY.

↳ called Andrew in Bies' office →
meant to jacket 1/2 version.
5/21/09