

70-2968



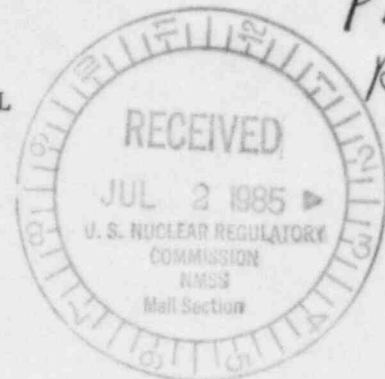
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

P.O. BOX 5000 - CLEVELAND, OHIO 44101 - TELEPHONE (216) 622-9800 - ILLUMINATING BLDG. - 55 PUBLIC SQUARE

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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

June 26, 1985
PY-CEI/NMSS-0013 L



John G. Davis, Director
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 70-2968
Amendment Request for NRC
Materials License No. SNM-1928

Dear Mr. Davis:

In accordance with 10CFR70.34, Amendment of Licenses, the Cleveland Electric Illuminating Company acting on its own behalf and as agent for the Toledo Edison Company, Ohio Edison Company, Duquesne Light Company and Pennsylvania Power Company, requests that Materials License No. SNM-1928 dated March 7, 1985, be amended. We are requesting that our license be amended to cover two neutron detector storage casks instead of only one.

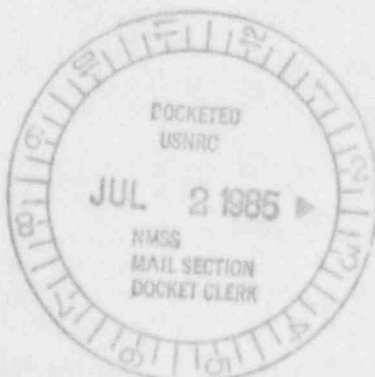
Enclosed are eight (8) copies of the necessary page changes to our license application dated August 30, 1982, and as further amended by our letters of September 30, 1982, May 27, 1983, May 30, 1984, November 15, 1984, January 7, 1985 and January 25, 1985.

If you have any questions, please feel free to call.

Very truly yours,

Murray R. Edelman

Murray R. Edelman
Vice President
Nuclear Group



MRE:njc

Enclosures

cc: Jay Silberg, Esq.
John Stefano (2)
J. Grobe

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25476

PERRY NUCLEAR POWER PLANT UNIT 1

Application for License
For
Storage Only of Unirradiated
Reactor Fuel and Associated Radioactive Material

The Cleveland Electric Illuminating Company (CEI) for itself and on behalf of Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and the Toledo Edison Company, pursuant to Title 10, Code of Federal Regulations Parts 30, 40, 70, and 71, hereby applies for a license to permit the receipt, possession, inspection, and storage of special nuclear material in the form of unirradiated nuclear fuel bundles, for the packaging of such fuel for delivery to a carrier, and for the receipt, possession, inspection and use of in-core detectors, operational sources and irradiated neutron detector storage casks as herein described for the Perry Nuclear Power Plant - Unit 1. The term of the license is requested to begin March 1, 1985, for the in-core detectors, operational source, fuel bundles and the irradiated neutron detector storage casks. It is requested that the license remain in effect until such time as it may be supplanted by an operating license.

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not be possible under these accident conditions. The consequence of the accident would be limited to the minimal effect of possible rupture of fuel rods and subsequent release of unirradiated uranium dioxide fuel. Due to construction activities in other areas of the fuel handling building, the HEPA filters and charcoal bed in the exhaust filter will not be used. A roughing filter will be used which is capable of removing 85 to 90% of particles greater than 0.1 to 5 microns.

3.0 OTHER MATERIAL REQUIRING NRC LICENSE

Authorization is requested to receive, possess, inspect and use antimony - beryllium (SbBe) neutron sources, in-vessel neutron detectors containing U-235 enriched greater than 20% and two irradiated neutron detector storage casks containing depleted uranium. These are in addition to the fuel bundles previously described in this application.

3.1 In-Vessel Neutron Detectors

3.1.1 Description

The neutron detectors consist of three types: Source Range Monitors (SRM), Intermediate Range Monitors (IRM) and Local Power Range Monitors. All of these detectors are sealed sources. The Transversing In-Core Probes (TIP) are the gamma sensitive type and do not contain any special nuclear material.

The quantities of U-235 are shown in the following table:

<u>Qty.</u>	<u>Description</u>	<u>Grams U-235</u>		<u>Activity (microcuries)</u>	
		<u>Per Detector</u>	<u>Total</u>	<u>Per Detector</u>	<u>Total</u>
8	SRM Detectors	.00272	.02176	5.82×10^{-3}	4.66×10^{-2}
16	IRM Detectors	.00075	.01200	1.60×10^{-3}	2.56×10^{-2}
196	LPRM Detectors	.00022	.04312	4.71×10^{-4}	9.23×10^{-2}

The total quantity of U-235 enriched greater than 20% is 0.07688 grams. This quantity of enriched U-235 does not exceed the "Formula quantity" defined in 10CFR73.2 bb. Therefore, the physical protection requirements of 10CFR73 do not apply.

3.1.2 Storage and Handling

Neutron detectors may be temporarily stored in a limited access area, adjacent to the fuel pools in the Fuel Handling Building. The neutron detectors will be installed in their normal use configuration in the reactor vessel when not stored in the Fuel Handling Building. Storage in this configuration will be in the detector dry tubes in the reactor vessel for the SRM, IRM and LPRM detectors. The spare neutron detectors will be stored adjacent to the fuel pools in the Fuel Handling Building under the auspices of the Interim or Physical Security Plans.

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policy, a minimum of 5 feet of water will be maintained above the sources when moving them to provide proper shielding. Also, a minimum of 5 feet of water shielding will also be provided above the lead cask containing the sources upon removal of the cask lid. By familiarizing the personnel with ALARA concepts and by providing review of procedures, the operation will result in personnel doses which are as low as reasonably achievable.

3.2.2.4 Shipping Authorization

In addition to storage, authorization is requested for provisions to cover return shipping containers to the supplier in case of damage to the sources or excessive decay of sources due to start-up delays. Appropriate procedures and precautions will be utilized should this need arise.

3.3 Irradiated Neutron Detector Storage Casks

3.3.1 Description

Each cask is a lead shielded container clad with stainless steel. They contain an aluminum repository bucket into which the neutron detectors and segments of irradiated cable are deposited. This bucket is sealed in with a stainless steel plug which acts as the lid and is filled with depleted uranium (U-238). Each cask contains 91.36 kg of depleted uranium (U-238) and an estimated radioactivity of 32.8896 mci. The cask is shown in Figure 15.

3.3.2 Shipping Authorization

In addition to storage, authorization is requested for provisions to cover return of the storage casks to the supplier in case of damage to a cask. Appropriate procedures and precautions will be utilized should this need arise.

DOCKET NO. 70-2968
CONTROL NO. 25476
DATE OF DOC. 06/26/85
DATE RCVD. 07/02/85
FCDF ☒ PDR ☒
FCAF _____ LPDR _____
WM _____ I&E REF. ☒
WHUR _____ SAFEGUARDS ☒
FCTC _____ OTHER _____

DESCRIPTION:

requesting
amendment to
license

07/02/85 INITIAL Crc