

October 24, 1985

Docket No. 50-320

Mr. F. R. Standerfer  
Vice President/Director  
Three Mile Island Unit 2  
GPU Nuclear Corporation  
P.O. Box 480  
Middletown, PA 17057

Dear Mr. Standerfer:

Subject: Approval of Exemption from 10 CFR 61.55

We have reviewed your request, dated June 25, 1985, for an exemption from the requirements of 10 CFR 20.311 regarding the waste classification of TMI-2 EPICOR II resin liners. We have determined that an exemption from the requirements of 10 CFR 20.311 is not necessary but that an exemption from the waste classification requirements of 10 CFR 61.55 is appropriate. Accordingly, we have granted an exemption from the requirements of 10 CFR 61.55 as described in the attached Exemption issued by the Director of Nuclear Reactor Regulation. The granting of this exemption includes supplemental requirements for the waste shipment manifests required by 10 CFR 20.311. A Federal Register notice for this issuance is also enclosed.

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Docket No. 50-320

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Sincerely,

Original signed by  
B. J. Snyder

Bernard J. Snyder, Program Director  
Three Mile Island Program Office  
Office of Nuclear Reactor Regulation

Enclosures:

1. Exemption
2. Environmental Assessment and Notice of Finding of No Significant Environmental Impact
3. Federal Register Notices

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## UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of

GENERAL PUBLIC UTILITIES NUCLEAR  
CORPORATION(Three Mile Island Nuclear Station  
Unit 2)

Docket No. 50-320

EXEMPTION

## I.

GPU Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company and Pennsylvania Electric Company (collectively, the licensee) are the holders of Facility Operating License No. DPR-73, which has authorized operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) at power levels up to 2772 megawatts thermal. The facility, which is located in Londonderry Township, Dauphin County, Pennsylvania, is a pressurized water reactor previously used for the commercial generation of electricity.

By Order for Modification of License, dated July 20, 1979, the licensee's authority to operate the facility was suspended and the licensee's authority was limited to maintenance of the facility in the present shut-down cooling mode (44 Fed. Reg. 45271). By further Order of the Director, Office of Nuclear Reactor Regulation, dated February 11, 1980, a new set of formal license requirements was imposed to reflect the post-accident condition of the facility and to assure the continued maintenance of the current safe, stable, long-term cooling condition of the facility (45 Fed. Reg. 11292). This license provides, among other things, that it is subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

11.

On October 26, 1983, General Public Utilities Nuclear Corporation (GPUNC) submitted a letter to the State of Washington requesting a variance to 10 CFR 61.55 regarding the classification of TMI-2 EPICOR II solid waste liners. This letter proposed that the EPICOR II liners be categorized as Class A waste and, therefore, be buried in an unconsolidated and dewatered condition. Accordingly, GPUN proposed to increase the upper Class A limit for Sr-90 from 0.04 uCi/cc to 1.0 uCi/cc for the EPICOR II liners. On July 17, 1985, GPUN received a letter from the State of Washington granting the variance provided that the following restrictive conditions are met: (1) Sr-90 concentrations are not to exceed 1 uCi/cc; (2) Wastes will comply with Class A waste requirements specified in 10 CFR 61.56; (3) Wastes are disposed of at the bottom of the trench and segregated from stable Class B and C wastes; and (4) Wastes do not contain other radio-nuclides listed in Tables 1 and 2 of 10 CFR 61.55 which exceed the Class A limits by themselves or giving consideration to the partial fractions rule. In order to implement this variance from 10 CFR 61.55, GPUN submitted a letter to the NRC, on June 25, 1985, requesting exemption from certain requirements of 10 CFR 20.311(b) and 20.311(d)(1), (2) and (3) for classifying the TMI-2 EPICOR II liners. However, we have determined that an exemption from the requirements of 10 CFR 20.311 is not necessary but that an exemption from the waste classification requirements of 10 CFR 61.55 is appropriate.

III.

10 CFR 20.311(b) in part states: "Wastes classified as Class A, Class B, or Class C in Section 61.55 of this chapter must be clearly identified as such in the manifest." 10 CFR 20.311(d)(1) states: "Prepare all wastes so that the waste is classified according to Section 61.55 and meets the waste characteristics requirements in Section 61.56 of this chapter."

10 CFR 20.311(d)(2) states: "Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste in accordance with Section 61.55 of this chapter." 10 CFR 20.311(d)(3) states: "Conduct a quality control program to assure compliance with Sections 61.55 and 61.56 of this chapter; the program must include management evaluation of audits."

The above regulations require the licensee to comply with the waste classification requirements of 10 CFR 61.55. Under 10 CFR 61.55, the TMI-2 liners (approximately 100 liners total, each with 170 ft.<sup>3</sup> of spent resin) would be classified as Class B waste. If the licensee proposes to reprocess the EPICOR liner waste to meet Class A classification under 10 CFR 61.55, there would be an increase in waste volume to be disposed of by about 600%. Compliance with the Class B conditions of 10 CFR 61.55 would require stabilization of the waste form. This would also result in substantial increases in the volume of EPICOR liner wastes to be disposed and the occupational exposure due to required increased handling of waste. We estimate that the stabilization requirements for Class B wastes would result in a volume increase of 20% to 50% for the EPICOR liners to be disposed. Additionally, we estimate that occupational exposure resulting

from either the stabilization requirement of Class B form or reprocessing to meet the Class A classification condition would increase by at least a factor of two over the exposure which would result from the handling of the EPICOR liners as Class A waste. Accordingly, an exemption from the waste classification requirements of 10 CFR 61.55, which would otherwise require the EPICOR wastes to be classified as Class B and stabilized, is appropriate as required stabilization would result in an adverse impact and GPUN has proposed alternatives for the handling and disposal of the EPICOR wastes.

In lieu of the waste classification requirements of 10 CFR 61.55, GPUN proposed to classify the TMI-2 EPICOR II liners in accordance with a letter submitted by GPUNC to the State of Washington on October 26, 1983, requesting a variance to the requirements of 10 CFR 61.55 to allow a 1 uCi/cc limit on Sr-90 as the upper Class A limit for TMI-2 EPICOR II liners. In response to a September 11, 1981 request, the NRC staff performed an evaluation (Letter from B. Snyder, NRC, to J. Barton, Metropolitan Edison Company, dated October 22, 1981) to determine the Sr-90 concentration limit that would be acceptable for burial of an unstabilized EPICOR II liner. The staff's evaluation concluded that dewatered resin wastes with a concentration limit of 24 uCi/cc of Sr-90 would be acceptable for burial at an arid disposal site such as the Hanford site in the State of Washington provided certain restrictions on disposal were met. The acceptability of the disposal was based on pathway analyses that demonstrated that the

performance objectives in proposed 10 CFR Part 61 would be met. Disposal as provided in the State variance would meet the performance objectives in final Part 61 and all other aspects of the staff's earlier October 22, 1981 evaluation were reviewed and determined to remain valid for this current exemption request. The staff, therefore, concludes that the licensee's proposal for an upper Class A limit of 1.0 uCi/cc for Sr-90 is acceptable in this instant action and an exemption to the waste classification requirements of 10 CFR 61.55 is appropriate. Alternatively, without the exemption, the licensee would not be able to implement the State variance from 10 CFR 61.55 resulting in a substantial increase of waste volume to be handled and transported for disposal. Such an increase would be detrimental to the public health and safety and would both increase unnecessary exposure to radiation and consumption of burial site capacity without providing any benefit to public health and safety at the burial site.

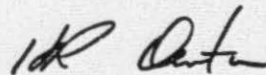
#### IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 61.6, an exemption is authorized by law and will not result in undue hazard to life or property. The Commission hereby grants an exemption from the requirements of 10 CFR 61.55 as discussed in Section III. The exemption is to the Sr-90 concentration limit of 0.04 curies per cubic meter (micro-curies per cubic centimeter) in Column 1 of Table 2 in 10 CFR 61.55 for the specific EPICOR II wastes. The wastes must be labeled and identified as Class A. Further, in order to assure that the site operator can identify

the special case EPICOR II Class A wastes and meet the prescribed disposal requirements, the licensee is hereby directed to add the following language or equivalent to the manifest required by 10 CFR 20.311: "Class A EPICOR II waste packages must be disposed of as prescribed in the attached variance." (The requirement to attach a copy of the variance to the shipping papers is included in the State approval.)

It is further determined that the exemption does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. In light of this and as reflected in the Environmental Assessment and Notice of Finding of No Significant Environmental Impact prepared pursuant to 10 CFR 51.21 and 51.30 through 51.32, issued on October 3, 1985, it was concluded that the instant action will not have a significant impact on the environment and thus, an environmental impact statement need not be prepared.

FOR THE NUCLEAR REGULATORY COMMISSION



Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Effective Date: October 24, 1985  
Dated at Bethesda, Maryland  
Issuance Date: October 24, 1985



UNITED STATES NUCLEAR REGULATORY COMMISSION  
GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION  
DOCKET NO. 50-320  
REVISION TO  
ENVIRONMENTAL ASSESSMENT AND NOTICE OF FINDING  
OF NO SIGNIFICANT ENVIRONMENTAL IMPACT

On September 20, 1985, the U.S. Nuclear Regulatory Commission (the Commission) provided notice (50 F.R. 38234) of a planned issuance of an Exemption relative to the Facility Operating License No. DPR-73, issued to General Public Utilities Nuclear Corporation (the licensee), for operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2), located in Londonderry Township, Dauphin County, Pennsylvania. Specifically, the notice stated that the Commission was considering an exemption from certain requirements of 10 CFR 20.311(b) and 20.311(d)(1), (2) and (3) for classifying TMI-2 EPICOR II solid waste liners. Since the issuance of the aforementioned notice (50 F.R. 38234), the Commission has determined that exemption from certain requirements of 10 CFR 20.311 is unnecessary but that exemption from certain requirements of 10 CFR 61.55 is appropriate. While the environmental impacts associated with the considered exemption from 10 CFR 61.55 are no different from the impacts previously described (50 F.R. 38234) for exemption from 10 CFR 20.311, the Commission is nonetheless providing the following revised Environmental Assessment to correctly describe the action being considered (i.e., exemption from certain requirements of 10 CFR 61.55).

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action: The action being considered by the Commission is an exemption from certain requirements of 10 CFR 61.55 for classifying TMI-2 EPICOR II solid waste liners. Specifically 10 CFR 61.55 requires, in part, that the classification of waste for near surface disposal be in accordance with the radionuclide concentration limits provided in Tables 1 and 2 of §61.55(a)(3) and (4). For Sr-90, the concentration limit for Class A waste is 0.04 curies per cubic meter. The licensee has received a variance from the State of Washington to permit the burial, as Class A waste, of EPICOR II resin liners containing Sr-90 concentrations up to 1.0 curies per cubic meter. In order to implement this variance, the licensee requires an exemption from the requirements of 10 CFR 61.55 for classifying EPICOR II resin liners. This action does not involve any other exemptions and the EPICOR II resin liners will be packaged and transported in accordance with applicable Commission and Department of Transportation regulations.

The Need for the Action: The licensee has received from the State of Washington a variance to the Class A waste criteria of 10 CFR 61.55 regarding the TMI-2 EPICOR II solid waste liners to increase the upper Class A limit for Sr-90 from 0.04 uCi/cc to 1.0 uCi/cc. In order to implement this variance, the licensee requires an exemption from 10 CFR 61.55 as discussed above. Without the variance, the waste volume for disposal would significantly increase and there would be corresponding increases in occupational exposure resulting from additional waste handling without any benefit to public health and safety at the burial site.

Environmental Impacts of the Proposed Actions: The staff has evaluated the subject exemption and concluded that it will not result in significant increases in airborne radioactivity inside facility buildings or in corresponding releases to the environment. There are also no non-radiological impacts to the environment as a result of this action.

Alternative to this Action: Since we have concluded that the environmental effects of the proposed action and exemption are negligible, any alternatives with equal or greater environmental impacts need not be evaluated. Denial of this exemption would not reduce environmental impacts of plant operations and would result in the application of overly restrictive regulatory requirements when considering the unique conditions of TMI-2.

Agencies and Persons Consulted: The NRC staff reviewed the licensee's request and consulted with the Department of Social and Health Services, State of Washington.

Alternate Use of Resources: This action does not involve the use of resources not previously considered in connection with the Final Programmatic Environmental Impact Statement for TMI-2 dated March 1981.

Finding of No Significant Impact: The Commission has determined not to prepare an environmental impact statement for the subject Exemption. Based upon the foregoing environmental assessment, we conclude that this action will not have a significant effect on the quality of the human environment.

For further details with respect to this action see; (1) Letter to J. J. Barton, Metropolitan Edison Co., from B. J. Snyder, USNRC, Evaluation of EPICOR II liner disposal conditions, dated October 22, 1981; (2) Letter to L. Gronemyer, State of Washington, from B. K. Kanga, GPUNC, 10 CFR 61 Exemption, dated October 26, 1983; (3) Letter to B. J. Snyder, USNRC, from F. R. Standerfer, GPUNC, 10 CFR 20.311 Exemption Request, dated June 25, 1985; and (4) Letter to B. K. Kanga, GPUNC, from J. Stohr and M. J. Elsen, State of Washington, dated July 17, 1985.

The above documents are available for inspection at the Commission's Public Local Document Room, 1717 H Street, N.W., Washington, DC, and at the Commission's Local Public Document Room at the State Library of Pennsylvania, Government Publications Section, Education Building, Commonwealth and Walnut Streets, Harrisburg, Pennsylvania 17126.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Bernard J. Snyder, Program Director  
Three Mile Island Program Office  
Office of Nuclear Reactor Regulation

Enclosure 3



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

October 24, 1985

Docket No. 50-320

Docketing and Service Section  
Office of the Secretary of the Commission

SUBJECT: **Three Mile Island Unit 2**  
Approval of Exemption from 10 CFR 61.55

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Exemption

**Bernard J. Snyder, Program Director**  
Office of Nuclear Reactor Regulation

Enclosure:  
As Stated



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

September 27, 1985


Docket No. 50-320

Docketing and Service Section  
 Office of the Secretary of the Commission

SUBJECT: Three Mile Island Unit 2  
 Environmental Assessment and Notice of Finding of No  
 Significant Environmental Impact

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- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Environmental Assessment and Notice of Finding of No  
Significant Environmental Impact

  
 Bernard J. Snyder, Program Director  
 Office of Nuclear Reactor Regulation

Enclosure:  
 As Stated