



Docket No. 50-286

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

April 21, 1992

Mr. Ralph E. Beedle  
Executive Vice President, Nuclear  
Generation  
Power Authority of the State of  
New York  
123 Main Street  
White Plains, New York 10601

Dear Mr. Beedle:

SUBJECT: NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT REGARDING EXEMPTIONS FROM 10 CFR 50.46(a)(1)(i), 10 CFR 50.44(a), AND APPENDIX K TO 10 CFR PART 50 - INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. M82567)

By letter dated January 8, 1992, as supplemented February 26, 1992, you requested an amendment to the Technical Specifications (TS) and exemptions to several Code of Federal Regulations' (CFR) requirements for the Indian Point Nuclear Generating Unit No. 3. The amendment and the exemptions are needed to allow use of ZIRLO™ clad fuel in the reactor instead of Zircaloy clad fuel as specified in the TS and CFR. You intend on refueling with ZIRLO™ clad fuel during the Cycle 8/9 refueling outage in June 1992.

Enclosed for your information is a copy of the Notice of Issuance of Environmental Assessment and Finding of No Significant Impact which supports your exemption request. Please note that the CFR exemption request must be approved before the Technical Specification amendment request can be issued.

The notice has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Nicola F. Conicella, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Reactor Regulation

Enclosure:  
FR Notice

cc w/enclosure:  
See next page

**NRC FILE CENTER COPY**

9204280273 920421  
PDR ADOCK 05000286  
P PDR

Mr. Ralph E. Beedle  
Authority of the State  
of New York

Indian Point Nuclear Generating Power  
Station Unit No. 3

cc:

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Resident Inspector  
Indian Point 3 Nuclear Power Plant  
U.S. Nuclear Regulatory Commission  
Post Office Box 337  
Buchanan, New York 10511

Mr. Gerald C. Goldstein  
Assistant General Counsel  
Power Authority of the State  
of New York  
1633 Broadway  
New York, New York 10019

Mr. Charles W. Jackson  
Manager, Nuclear Safety and  
Licensing  
Consolidated Edison Company  
of New York, Inc.  
Broadway and Bleakley Avenues  
Buchanan, New York 10511

Mr. John C. Brons, President  
Power Authority of the State  
of New York  
1633 Broadway  
New York, New York 10019

Mayor, Village of Buchanan  
236 Tate Avenue  
Buchanan, New York 10511

Mr. Joseph E. Russell  
Resident Manager  
Indian Point 3 Nuclear Power Plant  
Post Office Box 215  
Buchanan, New York 10511

Mr. Peter Kokolakis  
Director Nuclear Licensing - PWR  
Power Authority of the State of New York  
123 Main Street  
White Plains, New York 10601

Ms. Donna Ross  
New York State Energy Office  
2 Empire State Plaza  
16th Floor  
Albany, New York 12223

Charles Donaldson, Esquire  
Assistant Attorney General  
New York Department of Law  
120 Broadway  
New York, New York 10271

UNITED STATES NUCLEAR REGULATORY COMMISSIONPOWER AUTHORITY OF THE STATE OF NEW YORKDOCKET NO. 50-286NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of exemptions from the provisions of: (1) 10 CFR 50.46, which requires the calculation of emergency core cooling system (ECCS) performance for reactors with Zircaloy clad fuel; (2) 10 CFR 50.44, which gives requirements to control the hydrogen generated by Zircaloy clad fuel after a postulated loss-of-coolant-accident (LOCA); and (3) Appendix K to 10 CFR Part 50, which presumes the use of Zircaloy fuel when doing calculations for energy release, cladding oxidation and hydrogen generation after a postulated LOCA. The exemptions would be applicable to Facility Operating License No. DPR-64 and would be issued to the Power Authority of the State of New York, the licensee for Indian Point Nuclear Generating Unit No. 3, located in Westchester County, New York.

## ENVIRONMENTAL ASSESSMENT

### Identification of Proposed Action:

The proposed action would allow the licensee to use ZIRLO clad fuel in the reactor; ZIRLO's composition falls outside the definition of Zircaloy in the cited regulations. ZIRLO clad fuel assemblies would be loaded into the Indian Point Nuclear Generating Unit No. 3 reactor during the Cycle 8/9 refueling outage in June 1992.

By letter dated January 8, 1992, as supplemented February 26, 1992, the licensee applied for a Technical Specifications amendment and requested exemptions from the Code of Federal Regulations' requirements to allow the use of other than Zircaloy clad fuel.

### The Need for the Proposed Action:

The exemptions under consideration are needed because 10 CFR 50.46(a)(1)(i) and Appendix K to 10 CFR Part 50 require the demonstration of adequate ECCS performance for light-water reactors that contain fuel consisting of uranium oxide pellets enclosed in Zircaloy tubes; furthermore, 10 CFR 50.44(a) addresses requirements to control hydrogen generated by Zircaloy fuel after a postulated LOCA. Since the cladding the licensee is proposing to use falls outside the definition of Zircaloy, the licensee requested exemptions from 10 CFR 50.44, 10 CFR 50.46, and Appendix K to 10 CFR Part 50. The Commission believes that special circumstances exist to grant the exemption requests since application of the rules at issue here would not achieve the underlying purpose of those rules. The underlying purpose of

10 CFR 50.46 and Appendix K to 10 CFR Part 50 is to establish requirements for emergency core cooling systems. The underlying purpose of 10 CFR 50.44 is to control hydrogen generated by the metal/water reaction after a postulated LOCA, regardless of whether that metal is Zircaloy or ZIRLO. The licensee addressed the safety impact of using the new fuel in its amendment and exemption application, and the staff had previously evaluated a similar impact in its Safety Evaluation of Topical Report WCAP-12610, "Vantage+ Fuel Assembly Reference Core Report," dated July 1, 1991, and supplemented October 9, 1991. These evaluations concluded that a facility can continue to comply with the purpose of the appropriate regulation with ZIRLO clad fuel.

Environmental Impacts of the Proposed Action:

The proposed exemptions do not increase the probability or consequences of accidents previously analyzed, and do not affect radiological plant effluents. The new fuel assemblies meet the same design bases as the fuel that is currently in the reactor. No safety limits have been changed or setpoints altered as a result of the use of these new assemblies. The FSAR analyses are bounding for the new assemblies, as well as for the rest of the core. The advanced zirconium-based alloys have been shown through testing to perform satisfactorily under conditions representative of a reactor environment and the material properties of ZIRLO and Zircaloy are very similar. Issuance of the exemptions does not involve a significant increase in the allowable individual or cumulative occupational radiation exposure. Accordingly, the Commission concludes that issuing the exemptions would result in no significant radiological environmental impacts.

With regard to potential nonradiological impacts, the proposed exemptions involve fuel cladding only. They do not affect nonradiological plant effluents and have no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed exemptions.

Alternatives to the Proposed Action:

Since the Commission has concluded that there are no significant environmental effects that would result from the proposed action, any alternatives with greater or equal environmental impacts need not be evaluated. The principal alternative would be to deny the licensee's amendment and exemption requests. This would not reduce environmental impacts of plant operations.

Alternative Use of Resources:

This action does not involve the use of resources not previously considered in the "Final Environmental Statement Related to the Operation of Indian Point Nuclear Generating Plant Unit No. 3," dated February 1975.

Agencies and Persons Consulted:

The staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

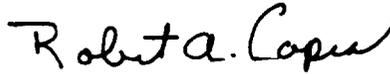
Based on the foregoing environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined

not to prepare an environmental impact statement for the exemptions under consideration.

For further details with respect to this action, see the application for exemptions dated January 8, 1992, as supplemented February 26, 1992. These documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C., and at the White Plains Public Library, 100 Martine Avenue, White Plains, New York 10610.

Dated at Rockville, Maryland, this 21 day of April 1992.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

April 21, 1992

Docket No. 50-286

Mr. Ralph E. Beedle  
Executive Vice President, Nuclear  
Generation  
Power Authority of the State of  
New York  
123 Main Street  
White Plains, New York 10601

**DISTRIBUTION:**

Docket File	SVarga
NRC & Local PDRs	JCalvo
PDI-1 Reading	RACapra
CVogan	NConicella
OGC	EJordan
ACRS (10)	OPA
Plant File	CCowgill

Dear Mr. Beedle:

**SUBJECT: NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT REGARDING EXEMPTIONS FROM 10 CFR 50.46(a)(1)(i), 10 CFR 50.44(a), AND APPENDIX K TO 10 CFR PART 50 - INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. M82567)**

By letter dated January 8, 1992, as supplemented February 26, 1992, you requested an amendment to the Technical Specifications (TS) and exemptions to several Code of Federal Regulations' (CFR) requirements for the Indian Point Nuclear Generating Unit No. 3. The amendment and the exemptions are needed to allow use of ZIRLO™ clad fuel in the reactor instead of Zircaloy clad fuel as specified in the TS and CFR. You intend on refueling with ZIRLO™ clad fuel during the Cycle 8/9 refueling outage in June 1992.

Enclosed for your information is a copy of the Notice of Issuance of Environmental Assessment and Finding of No Significant Impact which supports your exemption request. Please note that the CFR exemption request must be approved before the Technical Specification amendment request can be issued.

The notice has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original Signed By

Nicola F. Conicella, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Reactor Regulation

Enclosure:  
FR Notice

cc w/enclosure:  
See next page

OFFICE	PDI-1 <i>for</i>	PDI-1 <i>for</i>	OGC <i>for</i>	D:PDI-1 <i>for</i>	
NAME	CVogan	NConicella:pc	J Hall	RACapra	
DATE	02/11/92	02/11/92	4/02/92	04/21/92	1/1

OFFICIAL RECORD COPY  
FILENAME: B:\M82567.EA