

May 25, 2004

Mr. Joseph E. Venable
Vice President Operations
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION UNIT 3 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE EXEMPTION FROM THE REQUIREMENTS OF PART 50 OF TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* (10 CFR) SECTION 50.46 AND APPENDIX K (TAC NO. MC2999)

Dear Mr. Venable:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemptions from the requirements of 10 CFR Part 50, Section 50.46 and Appendix K. The proposed exemptions would allow the use of four lead test assemblies containing fuel rods, guide thimble tubes, and instrumentation tubes fabricated with Optimized ZIRLO™, a cladding material that contains a nominally lower tin content than the already approved ZIRLO™ material. This action is in response to your letter dated April 30, 2004.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

N. Kalyanam, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: Environmental Assessment

cc w/encl: See next page

May 25, 2004

Mr. Joseph E. Venable
Vice President Operations
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION UNIT 3 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE EXEMPTION FROM THE REQUIREMENTS OF PART 50 OF TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* (10 CFR) SECTION 50.46 AND APPENDIX K (TAC NO. MC2999)

Dear Mr. Venable:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemptions from the requirements of 10 CFR Part 50, Section 50.46 and Appendix K. The proposed exemptions would allow the use of four lead test assemblies containing fuel rods, guide thimble tubes, and instrumentation tubes fabricated with Optimized ZIRLO™, a cladding material that contains a nominally lower tin content than the already approved ZIRLO™ material. This action is in response to your letter dated April 30, 2004.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,
/RA/
N. Kalyanam, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: Environmental Assessment

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	PDIV-1 r/f	Rids OgcRp
RidsAcrcAcnwMailCenter	RidsNrrPMNKalyanam	RidsNrrLADJohnson
RidsNrrLADBaxley	JTappert	JUhle
RidsRgn4MailCenter (AHowell)	GMiller	RidsNrrDssaDpr
RidsNrrDlpmLpdiv1 (RGramm)	RidsNrrDlpmDpr	RidsNrrDlpmLpdiv (HBerkow)

ADAMS Accession Number: ML041530127

OFFICE	PDIV-1/PM	PDIV-1/LA	RLEP/SC	OGC	PDIV-1/SC
NAME	NKalyanam	DBaxley	JTappert	BPoole(NLO)	RGramm
DATE	5/20/04	5/20/04	5/21/04	5/25/04	5/25/04

OFFICIAL RECORD COPY

UNITED STATES NUCLEAR REGULATORY COMMISSIONENTERGY OPERATIONS INC.DOCKET NO. 50-382WATERFORD STEAM ELECTRIC STATION, UNIT 3ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of exemptions from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.46 and Appendix K, for Facility Operating License No. NPF-38, issued to Entergy Operations Inc. (the licensee), for operation of the Waterford Steam Electric Station, Unit 3 (Waterford 3), located in St. Charles Parish, Louisiana. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would exempt Waterford 3 from the requirements of 10 CFR Part 50, Section 50.46 and Appendix K, to allow the use of up to four Lead Test Assemblies (LTAs) fabricated with Optimized ZIRLO™, a cladding material that contains a nominally lower tin content than previously approved cladding materials.

The proposed action is in accordance with the licensee's application dated April 30, 2004.

The Need for the Proposed Action:

As the nuclear industry pursues longer operating cycles with increased fuel discharge burnup and more aggressive fuel management, the corrosion performance requirements for the nuclear fuel cladding become more demanding. Available industry data from the American

Nuclear Society, the International Atomic Energy Agency, the Electric Power Research Institute, and Westinghouse Electric Corporation (Westinghouse) indicate that corrosion resistance improves for cladding with a lower tin content. The optimum tin level provides a reduced corrosion rate while maintaining the benefits of mechanical strengthening and resistance to accelerated corrosion from abnormal chemistry conditions. In addition, fuel rod internal pressures (resulting from the increased fuel duty, use of integral fuel burnable absorbers and corrosion/temperature feedback effects) have become more limiting with respect to fuel rod design criteria. Reducing the associated corrosion buildup, and thus, minimizing temperature feedback effects, provides additional margin to fuel rod internal pressure design criteria.

To meet these needs, Westinghouse developed a LTA program in cooperation with Entergy Operations Inc., which includes a fuel cladding with a tin content lower than the currently licensed range for ZIRLO™. The NRC's regulations in 10 CFR 50.46 and Appendix K, make no provision for use of fuel rods clad in a material other than Zircalloy or ZIRLO™. The licensee has requested the use of up to four LTAs with a tin composition that is less than that specified in the licensing basis for ZIRLO™, as defined in Westinghouse design specifications. Therefore, use of the LTAs calls for exemptions from 10 CFR 50.46 and Appendix K.

Environmental Impacts of the Proposed Action:

The NRC staff has completed its evaluation of the proposed action and concludes that the proposed exemptions would not increase the probability or consequences of accidents previously analyzed and would not affect facility radiation levels or facility radiological effluents.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a

potential to affect any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC staff concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for Waterford 3, dated September 1981.

Agencies and Persons Consulted:

On May 11, 2004, the staff consulted with the Louisiana State official, Mr. Prosanta Chowdhury, of the Louisiana Department of Environmental Protection, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated April 30, 2004 (ADAMS Accession Number ML041250184). Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint

North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 25th day of May 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Waterford Steam Electric Station, Unit 3

cc:

Mr. Michael E. Henry, State Liaison Officer
Department of Environmental Quality
Permits Division
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Director
Nuclear Safety Assurance
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, MS 39205

General Manager Plant Operations
Waterford 3 SES
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

Licensing Manager
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Resident Inspector/Waterford NPS
P. O. Box 822
Killona, LA 70066-0751

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Parish President Council
St. Charles Parish
P. O. Box 302
Hahnville, LA 70057

Executive Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Chairman
Louisiana Public Services Commission
P. O. Box 91154
Baton Rouge, LA 70825-1697