

Charles R. Pierce
Regulatory Affairs Director

**Southern Nuclear
Operating Company, Inc.**
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201

Tel 205.992.7872
Fax 205.992.7601

ENCLOSURE CONTAINS INFORMATION
NOT FOR PUBLIC DISCLOSURE

April 23, 2013



Docket Nos.: 50-321
50-366

NL-13-0402

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant
Proposed Exemption to 10 CFR 50.46 and
10 CFR 50 Appendix K to Allow GNF-Ziron Fuel Cladding

Ladies and Gentlemen:

In accordance with 10 CFR 50.12, Southern Nuclear Operating Company (SNC) requests an exemption to the cladding requirements in 10 CFR 50.46 and 10 CFR 50 Appendix K in order to irradiate two GE14 Ziron lead test assemblies (LTAs) in the Hatch Nuclear Plant (HNP).

By letter dated November 7, 2008, the Nuclear Regulatory Commission (NRC) approved the SNC request for an exemption to the cladding requirement in 10 CFR 50.46 and 10 CFR 50 Appendix K in order to irradiate two GE14 Ziron lead test assemblies (LTAs) in the HNP Unit 2 reactor for cycles 21, 22 and 23 (ML082950149). These two LTAs have now completed operation in cycles 21 and 22; however, SNC has decided not to include them in the cycle 23 core loading in order to allow the LTAs to be inspected prior to use in an additional cycle without impacting the end-of-cycle 22 refueling outage schedule. Since the original exemption request applied only to the operation of the LTAs in the Unit 2 reactor for cycles 21 – 23, SNC requests a second exemption to the fuel cladding material requirement in 10 CFR 50.46 and 10 CFR 50 Appendix K in order continue irradiation of the LTAs in either of the HNP reactors for one or more additional cycles, up to the standard GE14 peak pellet exposure. This exemption is necessary because these LTAs include fuel rods manufactured with a cladding material, called GNF-Ziron, which is similar in composition to Zircaloy-2, but contains a slightly higher iron content than specified in ASTM B350. Further irradiation of the LTAs will enable SNC to acquire more in-reactor operating experience with GNF-Ziron cladding material.

As described in the original exemption request, the GNF-Ziron modified zirconium alloy material for fuel components has been under development by GNF for over two decades. The properties of this material have been tested in various forms, including irradiation of cladding, spacers and water rods in a small quantity of LTAs in a foreign reactor up to 68 gigawatt days per metric ton uranium (GWd/MTU). Results of these tests indicate that the corrosion properties of GNF-Ziron are similar to Zircaloy-2; however, there is a significant reduction in hydrogen pickup at higher exposures.

ADD
NRR

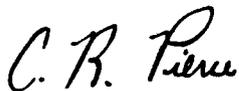
NRC authorization to proceed with this proposed LTA program is requested by November 15, 2013.

Enclosure 1 contains the Global Nuclear Fuel Affidavit and the authorization to apply for its withholding. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information, which is proprietary to Global Nuclear Fuel, be withheld from public disclosure in accordance with 10 CFR 2.390 of the Commission's regulations. Enclosure 2 contains information proprietary to Global Nuclear Fuel, which is supported by the affidavit signed by Global Nuclear Fuel, the owner of the information. Enclosure 3 contains the nonproprietary version of Enclosure 2. Enclosure 4 contains the background and supporting basis for the requested exemption.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

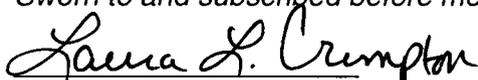
Mr. C. R. Pierce states he is Regulatory Affairs Director of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and, to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,



C. R. Pierce
Regulatory Affairs Director

Sworn to and subscribed before me this 23rd day of APRIL, 2013.


Notary Public

My commission expires: 11/02/2013

CRP/RMJ/md

- Enclosures:
1. Global Nuclear Fuels – Americas Affidavit
 2. GNF-0000-0079-7396P, “Technical Basis Supporting GNF-Ziron Lead Test Assembly Introduction into the Hatch Nuclear Plant,” January 2013 (Proprietary)
 3. GNF-0000-0079-7396NP, “Technical Basis Supporting GNF-Ziron Lead Test Assembly Introduction into the Hatch Nuclear Plant,” March 2008 (Nonproprietary)
 4. Exemption Request Background and Supporting Information

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. D. R. Madison, Vice President – Hatch
Mr. B. L. Ivey, Vice President – Regulatory Affairs
Mr. B. J. Adams, Vice President – Fleet Operations
RType: CHA02.004

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. R. E. Martin, NRR Senior Project Manager – Hatch
Mr. E. D. Morris, Senior Resident Inspector – Hatch

State of Georgia
Mr. J. H. Turner, Environmental Director Protection Division

**Edwin I. Hatch Nuclear Plant
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Enclosure 1

Global Nuclear Fuels – Americas Affidavit

Global Nuclear Fuel – Americas

AFFIDAVIT

I, **Lukas Trosman**, state as follows:

- (1) I am Engineering Manager, Reload Design and Analysis, Global Nuclear Fuel – Americas, LLC (GNF-A), and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in GNF-A proprietary report GNF-0000-0079-7396P, *Technical Basis Supporting GNF-Ziron Lead Test Assembly Introduction into the Hatch Nuclear Plant*, January 2013. GNF-A proprietary information in GNF-0000-0079-7396P, *Technical Basis Supporting GNF-Ziron Lead Test Assembly Introduction into the Hatch Nuclear Plant*, January 2013 is identified by a dotted underline inside double square brackets. ~~[[This sentence is an example.^{3}]]~~ GNF proprietary information in figures, large equation objects, and some tables is identified with double square brackets before and after the object. In all cases, the superscript notation ^{3} refers to Paragraph (3) of this affidavit, which provides the basis for the proprietary determination.
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee, GNF-A relies upon the exemption from disclosure set forth in the Freedom of Information Act (“FOIA”), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for “trade secrets” (Exemption 4). The material for which exemption from disclosure is here sought also qualify under the narrower definition of “trade secret”, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975 F2d 871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704 F2d 1280 (DC Cir. 1983).
- (4) Some examples of categories of information which fit into the definition of proprietary information are:
 - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GNF-A's competitors without license from GNF-A constitutes a competitive economic advantage over other companies;
 - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
 - c. Information which reveals aspects of past, present, or future GNF-A customer-funded development plans and programs, resulting in potential products to GNF-A;

- d. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. above.

- (5) To address 10 CFR 2.390 (b) (4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GNF-A, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GNF-A, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or subject to the terms under which it was licensed to GNF-A. Access to such documents within GNF-A is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GNF-A are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information identified in paragraph (2) is classified as proprietary because it contains details of GNF-A's fuel design and licensing methodology. The development of this methodology, along with the testing, development and approval was achieved at a significant cost to GNF-A.

The development of the fuel design and licensing methodology, along with the interpretation and application of the analytical results, is derived from an extensive experience database that constitutes a major GNF-A asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GNF-A's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GNF-A's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes

development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical, and NRC review costs comprise a substantial investment of time and money by GNF-A.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GNF-A's competitive advantage will be lost if its competitors are able to use the results of the GNF-A experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GNF-A would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GNF-A of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 29th day of January 2013.

A handwritten signature in black ink, appearing to read 'L. Trosman', with a long horizontal flourish extending to the right.

Lukas Trosman
Engineering Manager, Reload Design and Analysis
Global Nuclear Fuel – Americas, LLC