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MFN 05-119

Project 717

October 28, 2005

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

**Subject: GE Response to Results of NRC Acceptance Review for ESBWR
Design Certification Application – Item 6 – Licensing Topical Reports
(TAC # MC8168)**

In the Reference 1 letter, GE indicated its plans to submit licensing topical reports (LTRs) in the areas of safety I&C hardware and software architecture and platforms; and software development life cycle design process plans identified in BTP HICB-14. These six LTRs are contained in Enclosure 1.

Enclosure 1 contains GE proprietary information as defined by 10 CFR 2.390. GE customarily maintains this information in confidence and withholds it from public disclosure. Non-proprietary versions of the six LTRs are contained in Enclosure 2

The six affidavits contained in Enclosure 3 identify that the information contained in Enclosure 1 has been handled and classified as proprietary to GE. GE hereby requests the information in Enclosure 1 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

The LTRs contained in Enclosures 1 and 2 are provided in full compliance with GE's Quality Assurance (QA) Program (NEDO-11209-04A, GE Nuclear Energy Quality Assurance Program Description, March 31, 1989), which is NRC approved.

Consistent with this QA program, these LTRs are identified as "Conditional Release – pending closure of design verifications." While GE has completed review of the technical accuracy and completeness of all the LTRs' content, and believes that the documents are accurate, complete and ready for NRC review, some internal GE

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documentation remains to be closed. Accordingly, the conditional release status is identified on the documents until closure of the internal documentation, which is scheduled for the fourth quarter of 2005.

If you have any questions about the information provided here, please let me know.

Sincerely,



David H. Hinds
Manager, ESBWR

Reference:

1. MFN 05-118, Letter from David H. Hinds to U. S. Nuclear Regulatory Commission, *GE Response to Results of NRC Acceptance Review for ESBWR Design Certification Application – Item 6 (TAC # MC8168, October 24, 2005*

Enclosures:

1. MFN 05-119 – Licensing Topical Reports – GE Proprietary Information
 - NEDE-33232P, *SSLC/RTIF System Performance Specification*, October, 2005
 - NEDE-33233P, *Safety System Logic and Control/Reactor Trip and Isolation Functions (SSLC/RTIF) Hardware/Software Specification*, October, 2005
 - NEDE-33234P, *RTIF Digital Trip Module (DTM) Function Software Design Specification*, October, 2005
 - NEDE-33226P, *ESBWR I&C Software Management Plan (Draft)*, October, 2005
 - NEDE-33227P, *ESBWR I&C Software Configuration Management Plan (Draft)*, October, 2005
 - NEDE-33229P, *ESBWR I&C Software Development Plan (Draft)*, October, 2005
2. MFN 05-119 – Licensing Topical Reports – Non Proprietary Versions
 - NEDO-33232, *SSLC/RTIF System Performance Specification*, October, 2005
 - NEDO-33233, *Safety System Logic and Control/Reactor Trip and Isolation Functions (SSLC/RTIF) Hardware/Software Specification*, October, 2005
 - NEDO-33234, *RTIF Digital Trip Module (DTM) Function Software Design Specification*, October, 2005
 - NEDO-33226, *ESBWR I&C Software Management Plan (Draft)*, October, 2005
 - NEDO-33227, *ESBWR I&C Software Configuration Management Plan (Draft)*, October, 2005
 - NEDO-33229, *ESBWR I&C Software Development Plan (Draft)*, October, 2005
3. Affidavits, George B. Stramback, dated October 28, 2005 (Quantity of six)

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cc: WD Beckner USNRC (w/o enclosures)
AE Cabbage USNRC (with enclosures)
LA Dudes USNRC (w/o enclosures)
GB Stramback GE/San Jose (with enclosures)
eDRF 0000-0046-8503

ENCLOSURE 3

MFN 05-119

Affidavits

(Quantity of six)

General Electric Company

AFFIDAVIT

I, **George B. Stramback**, state as follows:

- (1) I am Manager, Regulatory Services, General Electric Company ("GE") 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 the GE proprietary report NEDE-33232P, *SSLC/RTIF System Performance Specification*, Class III (GE Proprietary Information), dated October 2005. GE proprietary information is identified by a dark red font with double underlines inside double square brackets. Figures and large equation objects are identified with double square brackets before and after the object. In each case, 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, GE 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, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (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 General Electric's competitors without license from General Electric 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 General Electric customer-funded development, plans and programs, resulting in potential products to General Electric;

- 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 GE, 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 GE, 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. Access to such documents within GE 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 GE 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), above, is classified as proprietary because it contains specific, detailed, and extensive safety I&C equipment design information, which implements the life cycle design process plan, regarding the safety SSLC/RTIF equipment hardware and software design applicable to the GE BWR, ABWR, and ESBWR safety I&C systems. This information is part of the multi-generational engineering design and development program, specifically for equipment hardware and software design utilizing digital I&C equipment technology, developed by GE for over 25 years, at a total cost in excess of ten million dollars.

The reporting, evaluation and interpretations of the results, as they relate to the ESBWR, was achieved at a significant cost to GE. The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE'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 GE.

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.

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The value of this information to GE 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 GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing 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 28th day of October 2005


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General Electric Company

General Electric Company

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 - c. Information, which reveals aspects of past, present, or future General Electric customer-funded development, plans and programs, resulting in potential products to General Electric;

- 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 GE, 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 GE, 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.
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- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains specific, detailed, and extensive safety I&C equipment design information, which implements the life cycle design process plan, regarding the safety SSLC/RTIF equipment hardware and software design applicable to the GE BWR, ABWR, and ESBWR safety I&C systems. This information is part of the multi-generational engineering design and development program, specifically for equipment hardware and software design utilizing digital I&C equipment technology, developed by GE for over 25 years, at a total cost in excess of ten million dollars.

The reporting, evaluation and interpretations of the results, as they relate to the ESBWR, was achieved at a significant cost to GE. The development of the evaluation process along with the interpretation and application of the analytical

results is derived from the extensive experience database that constitutes a major GE asset.

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- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed software management plans for I&C systems, which implements the life cycle design process plan, regarding the software design applicable to the GE BWR, ABWR, and ESBWR I&C systems. This information is part of the multi-generational engineering design and development program, specifically the software management plan, developed by GE for over several years, at a total cost of ½ to one million dollars.

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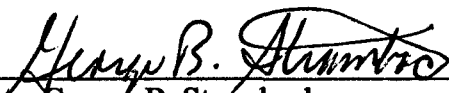
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- (5) To address 10 CFR 2.390 (b) (4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GE, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GE, 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. Access to such documents within GE 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 GE 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), above, is classified as proprietary because it contains detailed software configuration management plans for I&C systems, which implements the life cycle design process plan, regarding the software design applicable to the GE BWR, ABWR, and ESBWR I&C systems. This information is part of the multi-generational engineering design and development program, specifically the software configuration management plan, developed by GE for over several years, at a total cost of ½ to one million dollars.

The reporting, evaluation and interpretations of the results, as they relate to the ESBWR, was achieved at a significant cost to GE. The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE'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 GE.

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.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE 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 GE 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 GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing 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 28th day of October 2005


George B. Stramback
General Electric Company

General Electric Company

AFFIDAVIT

I, George B. Stramback, state as follows:

- (1) I am Manager, Regulatory Services, General Electric Company ("GE") 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 the GE proprietary report NEDE-33229P, *ESBWR I&C Software Development Plan (Draft)*, Class III (GE Proprietary Information), dated October 2005. GE proprietary information is identified by a dark red font with double underlines inside double square brackets. Figures and large equation objects are identified with double square brackets before and after the object. In each case, 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, GE 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, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (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 General Electric's competitors without license from General Electric 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 General Electric customer-funded development, plans and programs, resulting in potential products to General Electric;

- 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 GE, 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 GE, 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.
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- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed software development plans for I&C systems, which implements the life cycle design process plan, regarding the software design applicable to the GE BWR, ABWR, and ESBWR I&C systems. This information is part of the multi-generational engineering design and development program, specifically the software development plan, developed by GE for over several years, at a total cost of ½ to one million dollars.

The reporting, evaluation and interpretations of the results, as they relate to the ESBWR, was achieved at a significant cost to GE. The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE'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 GE.

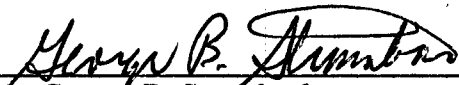
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The value of this information to GE would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing 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 28th day of October 2005


George B. Stramback
General Electric Company

ENCLOSURE 2

MFN 05-119

Licensing Topical Reports – Non Proprietary Versions

- NEDO-33232, *SSLC/RTIF System Performance Specification*, October, 2005
- NEDO-33233, *Safety System Logic and Control/Reactor Trip and Isolation Functions (SSLC/RTIF) Hardware/Software Specification*, October, 2005
- NEDO-33234, *RTIF Digital Trip Module (DTM) Function Software Design Specification*, October, 2005
- NEDO-33226, *ESBWR I&C Software Management Plan (Draft)*, October, 2005
- NEDO-33227, *ESBWR I&C Software Configuration Management Plan (Draft)*, October, 2005
- NEDO-33229, *ESBWR I&C Software Development Plan (Draft)*, October, 2005