



January 13, 1993

Dr. Thomas E. Murley
Director, Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Murley:

This is in reply to your letter of January 12, 1993 on issues regarding passive plant safety matters, in anticipation of our meeting on January 22.

We are pleased that your reviews of AP-600 and SBWR designs at this time have found no fundamental safety issues that would call into question their ultimate approval and certification.

There is a misunderstanding if your staff has an impression that designing to NRC and USC goals for core protection for 72 hours means the operators will allow the plant to proceed into safety system operation without taking other immediate response. Of course operators will rely on whatever means are available to mitigate transients and upsets.

But that does not reduce the importance of designing, building and maintaining passive safety systems to meet those goals alone.

As you say, that philosophy has "already led to design improvements in the passive plants intended to improve their expected safety performance". We expect application of that principle will lead to further improvements.

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CORRESPONDENCE PDR

Dr. Thomas E. Murley

January 13, 1993

Page: 2

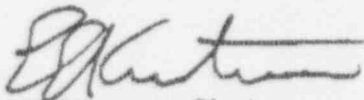
Your suggestion that we spend several hours discussing safety and quality of active systems is good. As you know, the O-RAP which was developed at your suggestion to help satisfy this concern has been under discussion with your staff for many months.

I suggest we also prepare to discuss your passive safety system concerns with specificity; i.e., what check valve malfunctions at what point in an accident scenario, what instrument failures, what interactions between active and passive systems, what problems for operators, remain concerns. Fully understanding those concerns in detail will allow us to make further improvements in safety through design, which is our common objective.

Finally, we are disturbed by your conclusion that we will not be able to resolve the remaining passive plant safety issues generically. It is the stated intention of the Commission that safety issues for the passive plants are to be resolved in the context of the Requirements Documents. We believe that should remain the firm objective, and we are prepared to continue to work with you in whatever way is necessary to that end. These are most fundamental and difficult safety issues for both regulators and the eventual owners and operators. They will significantly affect the prospects for future reactor plants in the U.S. and the world. We should get them right!

Thank you for your letter. We look forward to a productive discussion on January 22.

Sincerely yours,



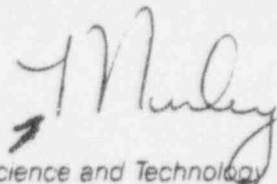
E. E. Kintner, Chairman
ALWR Steering Committee

cc: J. H. Wilson

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EPRI

Electric Power
Research Institute


Leadership in Science and Technology

26 January 1993

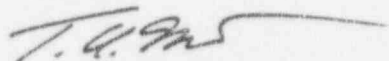
Mr. Dennis Crutchfield
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Dear Mr. Crutchfield:

I'm sending you a draft set of agreements developed from our meeting on 22 January 1993. I would appreciate your review and approval of these agreements as soon as possible. Most of the agreements affect the Process we are drafting for consideration.

Please call (415) 812-2803 or fax (415) 855-2874 if you have any questions or comments.

Sincerely yours,



T. U. Marston, Director
Advanced Reactors Development

589L/TUM/cdl

Attachments

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Agreements Reached At The NRC Management / Utility Steering Committee Meeting - 22 Jan 1993, Palo Alto, Ca

Agreement Items

- Agreement (copy attached) as drafted on 22 Jan 1993 is the acceptable process for determining the appropriate regulatory treatment of risk significant non-safety systems
- Need crisp definitions for the terms, risk significant and commensurate with risk significance
- The 'process' effectively becomes the standard review process for risk significant non-safety systems
- 10^{-4} for CMF and 10^{-6} for large release are the NRC safety goals and they will not regulate to ALWR goals of 10^{-5} for CMF and 10^{-6} for 25 Rem
- There is a need to review designs for potential containment bypass via non-safety systems due to adverse system interactions.
- Numbers and probabilities should not be locked into regulations
- Arrival rates of transients (events) should be based upon full PRA (with all systems operating with accepted levels of reliability) calculations
- Goals should not be subdivided and allocated below the overall safety goals
- June 1993 Volume III SER is going to the Commission and the ACRS, but the schedule may be impacted by the ABWR and System 80+™ reviews
- The decision on containment sprays has not been made, but will be based upon the demonstration of adequate containment performance
- Seismic margins methodology will continue to be used for URD and design certification
- Emergency planning shall be brought forward with due consideration of the appropriate Energy Policy Act of 1992 provisions
- D-RAP and O-RAP terminology will be consistent with the Maintenance Rule terminology
- NRC will forward the RTNSS policy paper to the Commission at the end of March 1993

Process for Determining the Regulatory Treatment of Nonsafety Systems

Develop an overall process consistent with the 22 January 1993 presentation (including viewgraphs, agreements and modifications to viewgraphs) for determining the regulatory treatment of nonsafety systems, and importance of passive systems and/or components for meeting NRC Safety Goals and Requirements. Specifically:

1. The Passive URD will describe the process to be used by the designer for specifying risk significant* SSC reliability/availability missions needed to meet NRC Safety Goals and Requirements.
 2. The designer will apply the process to his design to establish R/A missions for his risk significant SSC's.
 3. If nonsafety systems are determined to be risk significant, then NRC will review these R/A missions and satisfy themselves they are adequate (if met) and that the ORAP and simple tech specs (conditional) and LCO for some items (including the maintenance rule) are adequate to give reasonable assurance the missions can be met during operation.
 4. If nonsafety systems are relied on to meet the R/A missions, then design requirements commensurate with risk significance* will be imposed on those elements involved.
 5. NRC will not include any R/A missions in the Design Certification Rule. Instead, NRC would include deterministic requirements on both safety and nonsafety design features in the Design Certification Rule.
- ALWR Draft to NRC by 15 February 1993
 - NRC Comments received by 15 March 1993

*crisp definition required

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

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April 1, 1993

MEMORANDUM FOR: The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
Commissioner de Planque

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: REVIEW OF THE DRAFT COMMISSION PAPER, "10 CFR PART 52 COM-
BINED LICENSE (COL) REVIEW PROCESS AND COL FORM AND CONTENT"

The staff is developing its positions on the form and content of a combined license issued under 10 CFR Part 52. The staff discusses its initial positions in the enclosed draft Commission paper, "10 CFR Part 52 Combined License (COL) Review Process and COL Form and Content," and its enclosure.

The enclosed draft Commission paper does not represent the staff's final positions on COL issues, but is intended to provide a vehicle for beginning public discussions. The Office of the General Counsel (OGC) has reviewed this draft paper at a staff level and although OGC does not agree with all of the positions presented, it does not object to its public release. The release of this draft paper will help enable the staff to begin discussing COL issues in detail with the Advisory Committee on Reactor Safeguards, industry organizations, and the individual vendors.

The staff proposes to release this draft Commission paper and its enclosure to the public 3 days after the date of this memorandum.

James H. Smezek/jr
James M. Taylor
Executive Director
for Operations

Enclosure:
Draft Commission Paper

cc w/enclosure:
SECY
OGC
OCA
OPA

CONTACT:
R. Borchardt, NRR
504-1193

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FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: 10 CFR PART 52 COMBINED LICENSE (COL) REVIEW PROCESS AND COL
FORM AND CONTENT

PURPOSE:

This paper provides the Commission with the staff's current positions on a number of issues relating to 10 CFR Part 52 combined licenses (COL). The staff is requesting that the Commission note the staff's positions and comment as it sees appropriate. This paper is also intended to stimulate interaction with the industry and other interested parties. This paper will be provided to the Advisory Committee on Reactor Safeguards for their information.

SUMMARY:

The staff is developing its positions on the form and content of a combined license issued under 10 CFR Part 52. Among the topics presented in this paper are contents of a COL application; the COL form and content; COL inspections, tests, analyses, and acceptance criteria (ITAAC); the bridge concept of transition from high-level certified design information to detailed design and construction drawings; the quality assurance (QA) program's role in ITAAC; and probabilistic risk assessment (PRA) beyond design certification. The staff expects to continue interaction with the industry on many of these topics. Although a COL may not be issued for several years, it is important to note that many of the design certification rule policy decisions being made today will have a direct impact on the eventual issuance of a COL.

CONTACT:
R. W. Borchardt, NRR
504-1193

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The Commissioners

- 2 -

BACKGROUND:

Subpart C of Part 52 provides a process for issuing COLs for nuclear power facilities. A COL refers to a single license authorizing construction and operation of a nuclear power facility and includes inspections, tests, analyses, and their respective acceptance criteria (ITAAC) to provide reasonable assurance that the facility has been constructed and will operate in conformance with the license and applicable regulations.

The staff has previously prepared a number of Commission papers that discuss various issues associated with the implementation of 10 CFR Part 52. In SECY-90-377, "Requirements for Design Certification Under 10 CFR Part 52," the staff provided recommendations to the Commission on the level of detail required for a nuclear power facility design in a design certification application. There have been six Commission papers that discussed the concept and status of ITAAC and design acceptance criteria (DAC): SECY-91-178, "Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) for Design Certification and Combined Licenses," SECY-91-210, "Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Requirements for Design Reviews and Issuance of a Final Design Approval (FDA)," SECY-92-053, "Use of Design Acceptance Criteria During 10 CFR Part 52 Design Certification Reviews," SECY-92-196, "Development of Design Acceptance Criteria (DAC) for the Advanced Boiling Water Reactor (ABWR)," SECY-92-214, "Development of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) for Design Certification," and SECY-92-299, "Development of Design Acceptance Criteria (DAC) for The Advanced Boiling Water Reactor (ABWR) in the areas of Instrumentation and Controls (I&C) and Control Room Design". In SECY-92-134, "NRC Construction Inspection Program for Evolutionary and Advanced Reactors Under 10 CFR Part 52," and SECY-92-436, "Status of the Development of the NRC's New Construction Inspection Program," the staff described its plans for incorporating a "sign-as-you-go" process and 10 CFR Part 52 requirements into the NRC's construction inspection program. In SECY-92-287, "Form and Content for a Design Certification Rule," the staff described aspects of the relationship between the design certification rule (DCR) and the COL that references the DCR. In SECY-92-368, "Final Rule Amending 10 CFR Part 52," the staff changed 10 CFR Part 52 to conform to the exact language of the Energy Policy Act. Although related to the eventual issuance of a COL, the major focus of these papers was on the design review and issuance of a final design approval and a DCR. This paper also discusses some of these same topics in the context of a COL.

This paper assumes that a DCR (including ITAAC) and an early site permit (ESP) have been issued and that all provisions of Subparts A and B to Part 52 have been complied with.

DISCUSSION:

Subpart C of 10 CFR Part 52 delineates the requirements and procedures applicable to the issuance of a COL for nuclear power facilities. An

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The Commissioners

- 3 -

application for a COL may, but is not required to, reference a standard design certification or an early site permit (ESP), or both. As discussed in Section 52.79, the contents of a COL application depend on whether or not reference is made to a design certification or an ESP. The staff believes that, because of the large financial burden imposed on a prospective nuclear power facility owner, the first COL applicants will reference a standard certified design and will avert the significant delay that will result from the staff's review of a non-standard design. This paper will discuss the process for evaluating COL applications and issuing COL's that reference a standard certified design and an ESP.

Contents of Application

Section 52.79(b) requires a COL applicant to submit the technically relevant information required of applicants for an operating license by 10 CFR 50.34. In other words, the COL applicant is responsible for submitting all of the information that was required for a Part 50 operating license plus the additional requirements of Part 52.

Section 52.79 permits a COL applicant to reference a certified standard design provided that the application also contains additional information such as site-specific design information, demonstration of compliance with applicable interface requirements; and have procurement specifications as well as construction and installation specifications available for audit in accordance with Section 52.47(a)(2). The DCR will be incorporated into the COL when it is referenced in the COL application. A COL holder is required to conform to the DCR that is incorporated into the COL. A COL applicant/holder that desires to modify the facility or its operation from the Tier 1 information described in the incorporated DCR must request (1) an exemption from the DCR or (2) a change to the rule through the rulemaking process. Changes to Tier 2 information can be made by the COL applicant/holder by implementing the "50.59-like" process provided in the DCR. Although it is possible that the DCR itself could expire after a 15-year term, the DCR incorporated into a COL remains in effect for the entire term of the COL including any renewals or extensions. The staff is evaluating whether a rule change is appropriate to change Tier 1 information after expiration of the DCR. Since after the DCR expires, there is no effective rule to change, it may be appropriate to make changes through a facility-specific action such as a license amendment or exemption.

COL Form and Content

10 CFR Part 52 does not specifically discuss the form or content of a COL with the exception of Section 52.97(b) which states, in part

The Commission shall identify within the combined license the inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that, if met, are necessary and sufficient to provide

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The Commissioners

- 4 -

reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Atomic Energy Act, and the Commission's rules and regulations.

An outline of a COL is attached as Enclosure 1 to this paper. The staff used recently issued operating licenses as a starting point for this outline and then modified the license based upon the requirements of Part 52. The staff expects that the COL will incorporate the DCR, including the certified ITAAC by reference. In addition, the COL will impose requirements such as site-specific technical specifications, the environmental protection plan, pre- and post-fuel load license conditions, and site-specific ITAAC.

The most significant issue raised through the development of this outline was the identification and treatment of specific license conditions and acceptance criteria relevant to authorization of fuel load and reactor operation (paragraph 2.J of the COL license). The staff and industry have had extensive interaction on the subject of ITAAC as it relates to the design certification review, and the staff expects similar interaction with the industry on COL ITAAC.

COL ITAAC

The ITAAC referred to in Section 52.97(b) include the ITAAC certified as part of a referenced design certification rule (DCR) in addition to ITAAC associated with site-specific design information and programmatic issues submitted by the COL applicant, as approved by the staff.

The legal requirement in Part 52 pertinent to development of ITAAC is that the ITAAC in the design certification (Tier 1), together with any site- and applicant-specific ITAAC derived from the COL proceeding, must be necessary and sufficient to demonstrate, before facility operation, that the plant has been built and will operate in conformity with the Atomic Energy Act (the Act) and the Commission's rules and regulations. See 52.47(a)(1)(vi) and 52.97(b). To the extent necessary for the NRC to find before facility operation that the plant has been constructed and will operate in conformity with the license, the Act, and NRC regulations, all issues of proper implementation of the COL (including the referenced design certification) must be covered either generally or specifically by ITAAC.

In developing ITAAC, some judgement will need to be exercised to identify all those implementation issues sufficiently important to require satisfactory resolution before fuel loading, and therefore must be covered by ITAAC, and those other implementation questions that could be addressed by the more traditional Part 50 inspection and enforcement process.

In addition to the ITAAC associated with design and hardware, there are program areas that the staff has historically evaluated before authorizing a licensee to load fuel. The staff expects to include ITAAC for these program areas in the COL. The staff believes that these program areas must be

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The Commissioners

- 4 -

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The Commissioners

- 5 -

specified in the COL to ensure that their acceptable implementation will be a factor in the decision to authorize fuel load. Examples of the program areas under consideration include: staffing, the security program, radiological protection programs, and the reliability assurance program. Only those programmatic ITAAC that are necessary for the NRC staff and the Commission to make the Section 52.99 and 52.103(g) findings will be included in the license. After the Section 52.99 and 52.103(g) findings, the Part 50 provisions that are applicable to operating license holders apply to the COL holder, with the exception of Sections 50.33a, 50.55(a), and 50.58.

The staff has developed an abbreviated and preliminary listing of areas expected to be covered by COL programmatic ITAAC. The following list shows examples of the programmatic areas that would be specifically addressed in the COL:

- plant operations
- personnel qualifications
- training programs
- requalification programs
- staffing
- operational review groups
- plant procedures/administrative controls
- reliability assurance program
- fitness for duty program
- environmental monitoring
- emergency preparedness
- startup test procedures
- physical Security Plan

The staff's proposed treatment of the quality assurance program and emergency preparedness is described later in this paper.

Due to the provisions of Sections 52.99 and 52.103(g), all acceptance criteria specified in the COL must be met before facility operation. However, certain verification activities (i.e., low-power and power ascension testing) necessary to demonstrate proper facility construction and readiness for long-term operation can only be performed after facility operation begins. The staff will incorporate the requirements that these post-fuel load verification activities are performed into the COL as license conditions.

One important goal of the staff and industry efforts to develop ITAAC is to formulate requirements that can be verified objectively. This will reduce uncertainty and possible litigation over the safety requirements that must be met before fuel loading. However, there is no requirement in Part 52 that all ITAAC be objectively verifiable. In fact, the incorporation of such a requirement, suggested by the Department of Energy in its comments on the proposed Part 52 rule, was specifically rejected by the Commission in the Part 52 final rule as impracticable.

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The Commissioners

- 6 -

VERIFICATION OF ITAAC

Section 52.79(c) states that

The application for a combined license must include the proposed inspections, tests, and analyses, including those applicable to emergency planning, which the licensee shall perform and the acceptance criteria therefore which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations.

Thus, the COL applicant is responsible for submitting the proposed ITAAC that are necessary and sufficient to demonstrate that the as-built facility will be acceptable. The COL applicant will combine the DCR ITAAC with the proposed site-specific and programmatic ITAAC to form the complete COL ITAAC.

Once a COL has been issued, the acceptance criteria in the COL have identical status relative to the staff's and the Commission's findings prior to fuel load, regardless of their origin (DCR or COL application). Section 52.97(b) states that "Any modification to, addition to, or deletion from the terms of a combined license, including any modification to, addition to, or deletion from the inspections, tests, analyses, or acceptance criteria contained in such license is a proposed amendment to such license."

As described in SECY-92-287, "Form and Content for a Design Certification Rule," ITAAC would be included in the design control document (DCD) as Tier 1 information. Tier 1 information will be certified by the design certification rule. Tier 2 information is the remainder of the design-related information contained in the DCD. Both Tier 1 and Tier 2 information are afforded issue preclusion under the staff's proposal submitted in SECY-92-287. Although Tier 2 information supports the Tier 1 design information, it is not certified.

Bridge Concept

The functional system drawings and design descriptions available for review during the design certification and COL application stages are sufficient to perform licensing reviews and make final safety determinations per 52.47(a)(2) but are not adequate for actual construction or construction inspection activities. Therefore, before construction begins on any given portion of the facility, the licensee must ensure that the certified design plus site-specific design information in the COL application for that portion of the plant (including that required by the DAC), has been translated into plant-specific, detailed design, and construction drawings. The level of detail in the certified design and the use of DAC allow for some variation in implementing the certified design. The licensee also has some flexibility in completing the final design for Tier 2 design information, by means of the

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The Commissioners

- 7 -

50.59-like process. A COL license condition will require the licensee to verify that detailed drawings developed as a part of the ongoing design process are consistent with the certified design. The NRC staff will confirm design implementation by auditing these detailed drawings and by verifying that the ITAAC have been met by the licensee. Should the NRC inspection staff and the licensee disagree on the acceptability of a detailed drawing, an independent group of senior, experienced NRC individuals will determine whether or not the detailed drawing or design information is in conformance with the requirements of the COL. This transition from high-level certified design information to detailed design and construction drawings has been referred to as the "bridge" concept. In practice, both the licensee's construction force and the NRC's inspection program will utilize detailed design and construction drawings for their onsite activities.

Section 52.99, "Inspection during Construction," states

After issuance of a combined license, the NRC staff shall ensure that the required inspections, tests, and analyses are performed and, prior to operation of the facility, shall find that the prescribed acceptance criteria are met. Holders of combined licenses shall comply with the provisions of 10 CFR 50.70 and 50.71. At appropriate intervals during construction, the NRC staff shall publish in the Federal Register notices of the successful completion of inspections, tests, and analyses.

In addition, Section 52.103(g) states, in part, that "Prior to operation of the facility, the Commission shall find that the acceptance criteria in the combined license are met."

The Office of Nuclear Reactor Regulation (NRR) is developing a new construction inspection program to accommodate the requirements of future reactors licensed under Part 52 and to incorporate lessons learned from experience with the current construction inspection program. A primary objective of this new inspection program will be to verify that the constructed plant is in conformance with the referenced design certification rule and the provisions of the COL. The scope of the verification areas will include those defined by the COL ITAAC, which form the basis for the staff's and the Commission's findings.

The staff expects that there will be increased interaction between the licensee and the NRC throughout the facility construction stage. Increased NRC onsite staffing, the formal designation of mandatory verification activities by the COL ITAAC, and implementation of the "sign-as-you-go" (SAYGO) inspection program will create a more structured and interactive environment. The staff is also evaluating the concept of imposing hold point license conditions that would require NRC authorization before the licensee began certain construction or testing activities. Such hold points could provide assurance that detail construction drawings are in conformance with the design certification before construction begins, and that the proper plant

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The Commissioners

- 8 -

conditions have been established before major tests. The staff expects to further develop the hold point concept and hold detailed discussions with the industry before making a final recommendation to the Commission.

In support of the staff's periodic Federal Register notices regarding the successful completion of ITAAC, the staff anticipates that the licensee would, on a voluntary basis, submit periodic construction status and completion reports to the NRC. The staff will also require the licensee to certify that the completed plant is consistent with Tier 1 and meets the applicable regulations and COL requirements before fuel load.

The NRC's inspection program is written to provide general guidance to the inspection staff on a wide range of construction, preoperational, startup, and power operation areas. The inspection staff will adapt the general inspection guidance to develop a site-specific inspection plan that incorporates the specifics of the COL ITAAC and license conditions. The NRC's periodic acceptance of ITAAC will be based upon licensee completion reports and independent NRC inspection and design review activities. NRC inspection activities will also evaluate activities at a level of detail beyond that specified in the COL acceptance criteria. The inspection program will provide independent verification of site activities that support ITAAC. For example, an ITAAC for a pump might specify a flow rate acceptance criterion. Although simple and straightforward on the surface, there are several factors that affect the accuracy and reliability of this measurement. The inspection program will evaluate areas such as the calibration program, testing procedures, and the quality control program to provide assurance that the flow rate reading taken to satisfy ITAAC was accurate. Therefore, the results of the NRC inspection program will have a direct impact on the staff's conclusions regarding the satisfactory completion of ITAAC.

In addition to an enhanced NRC site organization, NRC headquarters will play an active and timely role in construction and verification activities. NRR will retain program management responsibility including the functions of interpreting DCR and COL requirements, overseeing inspection program activities, coordination of Federal Register notices, and establishing a process for resolution of technical disputes between the licensee and the inspection staff. The staff considers an appeal process necessary for resolving matters that may come into controversy during the inspections. Such resolutions will not become binding on the Commission. The staff will keep the Commission informed of progress in this regard, when the details of the inspection program have been further developed.

The responsible regional administrator will review the readiness to load fuel of each facility issued a COL under 10 CFR Part 52, including the facility's conformance with the COL. The regional administrator will conduct this review in a manner similar to the low-power license issuance recommendation made under 10 CFR Part 50.

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The Commissioners

- 9 -

Upon considering the results of this review, the regional administrator will issue a memorandum to the Director of NRR stating the region's recommendation about allowing or prohibiting the licensee to begin loading fuel and operating the facility. This memorandum would include final confirmation of a facility's readiness before the Commission issues its findings for fuel loading. In this memorandum, the regional administrator will confirm that all of the COL ITAAC requirements were satisfied. As part of this confirmation, the regional administrator would determine whether any outstanding inspection report finding or allegations would constitute an issue as to whether ITAAC previously determined by the NRC to be completed, have not in fact been successfully fulfilled.

QA Program Role in ITAAC

Under Part 50, the NRC's evaluation of the licensee's quality assurance (QA) program and its proper implementation played a key role in the NRC's issuance of low- and full- power operating licenses. The QA program's ability to identify, document, and correct deficiencies combined with independent inspection program conclusions served as a basis for issuing a license.

The use of ITAAC in the Part 52 process will significantly change the way the QA process will be evaluated and relied upon during the facility construction stage. Under Part 52, a COL applicant will commit to construct a plant in compliance with the referenced DCR and site-specific design information contained in the COL application. The COL's ITAAC will serve to demonstrate that the "as-built" plant meets the certified design and COL requirements. The COL holder will continue to apply the QA program as it has been traditionally applied under Part 50. The QA program will identify, document, and correct deficiencies during construction on an on-going basis, whereas ITAAC will demonstrate that the end result of the construction process is acceptable. The ITAAC, as designed, will provide the "necessary and sufficient" determination as an "end-of-process" examination, not a day-to-day evaluation of the construction process that the QA program performs. Throughout the construction process, the applicant would be required to complete the ITAAC commitments in order for the NRC to make its finding before the licensee loads fuel. A full set of QA program records would be available to show that the ITAAC have been met. The ITAAC would measure the successful end-point of the construction process, and the QA program documentation could be used to assure the design and construction process had been performed adequately.

Therefore, in view of the above, the staff does not perceive the need for a specific ITAAC on QA. Confidence in the QA process would still support the conclusion that the "as-built" plant is consistent with the docketed commitments and obligations; and the QA program would remain an enforceable process that would identify and correct deficiencies in the plant design and construction.

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The Commissioners

- 10 -

ITAAC Applicable to Emergency Plans

The application for a combined license must contain emergency plans that give reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site [10 CFR 52.79(d)].

The applicant must make good faith efforts to obtain certifications from local and State government agencies with emergency planning responsibilities that (1) the proposed emergency plans are practicable; (2) these agencies are committed to participating in any further development of the plans, including any required field demonstrations; and (3) these agencies are committed to executing their responsibilities under the plans in the event of an emergency. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site.

The staff intends to identify in the COL, the ITAAC necessary and sufficient to demonstrate that the emergency plans meet the 16 emergency planning standards in 10 CFR 50.47(b). The acceptance criteria will be taken from NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

As described in 10 CFR Part 50, Appendix E.II, a preliminary safety analysis report (PSAR) for a construction permit must contain information to ensure the compatibility of proposed emergency plans for both onsite areas and the emergency planning zones (EPZs). The PSAR must contain facility design features, site layout, and site location with respect to such considerations as access routes, surrounding population distributions, land use, and local jurisdictional boundaries for the EPZs, as well as the means by which the standards of 10 CFR 50.45(b) will be met.

Some, or all, of these requirements and criteria may have been addressed in an early site permit. If so, the application may incorporate, by reference, emergency plans, or major features of emergency plans, previously approved by the NRC in consultation with the Federal Emergency Management Agency (FEMA), in connection with the issuance of the early site permit.

In the absence of a complete plant that incorporates construction features required for emergency response and in the absence of complete and integrated emergency plans for such a facility, ITAAC facilitate a predictive regulatory finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Without such a finding, a combined license may not be issued. The ITAAC are applicable to onsite emergency plans of the licensee as well as offsite emergency plans of State

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The Commissioners

- 11 -

and local governments. Accordingly, offsite-related ITAAC need to be reviewed and approved by the NRC in consultation with FEMA. (FEMA might also involve other Federal agencies through the regional assistance committees it has established under 44 CFR 350.)

PRA Beyond Design Certification

A plant-specific PRA is an excellent method for assessing overall plant safety and integrating plant systems and human interactions. Careful review of a PRA can also reveal important engineering evaluations, assumptions, and uncertainties. In the design and design review processes, PRA insights can be used to select among design options, strengthen the design against previously known vulnerabilities, characterize the design, and evaluate the balance in the design between severe accident prevention and mitigation.

At the COL stage, the COL applicant will be able to provide site-specific information and detailed design information that was not available during the certification process. The COL applicant will be required to update the design-specific PRA to reflect site-specific information before COL issuance. During the construction stage, the COL holder will also be able to consider as-built information. Experience has shown that subtle design interfaces involving support systems, systems interactions, or man-machine interfaces can significantly affect the risk profile of a plant.

The staff concludes that updated PRA insights, if properly evaluated and utilized, can strengthen programs and activities in areas such as training, emergency operating procedure development, reliability assurance, maintenance, and 10 CFR 50.59 evaluations. Therefore, the PRA should be revised to account for site-specific information, first-of-a-kind engineering developments, as-built (plant-specific) information refinements in the level of design detail, plant operational experience, and design changes. The COL applicant or COL holder should update the PRA to ensure that new information or design changes do not introduce new vulnerabilities or diminish the overall capability of the design to prevent and mitigate severe accidents. As plant experience data accumulates, failure rates (taken from generic data bases) and human errors assumed in the design PRA should be updated and incorporated as appropriate, into Operational Reliability Assurance Programs.

Currently, there are no regulatory requirements that address revising the design-specific PRA after it has been completed. However, as discussed above, the staff anticipates that important safety insights may be identified through periodic updating and reassessment of the plant's PRA.

In its letter of September 16, 1992, the Advisory Committee on Reactor Safeguards (ACRS) agreed that it is worthwhile for a plant operator to have an updated PRA. However, ACRS was concerned about how the staff intends to use the updated PRA, how the staff thinks the licensee should use the updated PRA, and what should be required to update or keep the PRA current.

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The Commissioners

- 12 -

The staff concludes that the updated PRA should primarily be used by the COL applicant to search for plant and design vulnerabilities and to provide safety insights. The staff also concludes that the operating license or COL holder should determine when the PRA needs to be updated. The staff recommends that, as a minimum, the PRA should be updated in a timely manner: (1) when design-specific data or industry experience indicate that the assumptions in the PRA (such as equipment failure rates) should be updated, (2) when safety-significant design details are available which were not covered by the original PRA (and not included in detail in the design certification (such as the ultimate heatsink or perhaps the control room), and (3) after post-certification design modifications (either after significant "50.59-like" process changes or after rule changes). The staff concludes that licensees should use the PRA as a tool to help conduct a preliminary assessment of the effect that a proposed design change may have on the risk profile of the plant before implementing the change.

The insights from these PRA updates should be incorporated into the appropriate programs or activities (such as the reliability assurance program, plant procedures, and operator training). The staff recommends that the licensee provide the NRC a brief description of any changes to the PRA including a summary or evaluation explaining the effect of the changes(s) on the risk profile of the plant and the effect, if any, on previous staff safety determinations. The plant's oversight committee or operational review committee should periodically review plant events, temporary modifications, and design changes to assess whether the plant organization has satisfactorily determined the effect of these events on the PRA. This process is similar to the reporting and review process for 10 CFR 50.59 changes.

The licensee will determine when to submit a formal PRA update to the NRC. However, the staff may request a formal PRA update submittal if review of the annual PRA update summaries indicates that, in the aggregate, the changes made during the current and preceding years represent a significant change to the assumptions or result in a significant change to the conclusions of the original or previously updated PRA.

EPRI, Westinghouse, and NUMARC agree with the staff that a design-specific PRA has value and benefit, but they believe that the legal status of the PRA must be established under 10 CFR Part 52. Industry representatives expressed their desire to establish a common understanding of the legal and regulatory implications regarding the maintenance of the PRA. NUMARC, for example, stated that an ALWR design-specific PRA contains no unique or original design information that is not already reflected in associated SSAR Chapters. Accordingly, NUMARC believes that a design-specific PRA should be in neither Tier 1 nor Tier 2, but rather should be used as an analytical tool to assist the applicant and the NRC staff in evaluating the safety of the plant design.

The staff agrees that it is essential to establish a common understanding of the regulatory implications regarding the maintenance of the PRA. As discussed in SECY-92-273, "Staff Use of Probabilistic Risk Analysis," the staff

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DRAFT

The Commissioners

- 13 -

is evaluating the strengths and limitations of the PRA in order to develop guidance for the consistent and appropriate regulatory application of PRA technology. The staff will continue dialogue with EPRI, NUMARC, and the vendors to address industry concerns and will interact with the Office of the General Counsel (OGC) and the Commission, as necessary, to resolve these concerns

RECOMMENDATION:

That the Commission approve the release of this paper to enable interaction with the ACRS and the industry on COL related issues.

James M. Taylor
Executive Director
for Operations

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[NAME OF NUCLEAR FACILITY OWNER]

DOCKET 52-[XXX]

[NAME OF NUCLEAR FACILITY]

FACILITY COMBINED LICENSE

License No. NPF-[XX]

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for a combined license filed by [name of nuclear facility owner(s)] (the licensee), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. The requirements of 10 CFR 50.40, 50.42, 50.43, 50.47, and 50.50 have been met;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D below);
 - D. There is reasonable assurance: (i) that the activities authorized by this combined license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I, except as exempted from compliance in Section 2.D below;
 - E. The licensee is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensee has satisfied the applicable provisions of 10 CFR 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;

Enclosure 1

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- 2 -

- H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Combined License No. NPF-[XX] subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings regarding this facility, Facility Combined License No. NPF-[XX] is hereby issued to the licensee, to read as follows:
- A. This license applies to the [Name of Nuclear Facility], a light-water nuclear reactor and associated equipment (the facility), owned by the licensee. The facility is located and is described in the licensees' Final Safety Analysis Report, as supplemented and amended, and the licensees' Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) The licensee, pursuant to Section 103 of the Act and 10 CFR Part 52 "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants," to possess, use, and operate the facility at the designated location in accordance with the procedures and limitations set forth in this license;
 - (2) The licensee, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

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- 3 -

- (4) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required, any byproduct, source or special nuclear material without restriction calibration or associated with radioactive apparatus or components; and
 - (5) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

The licensee is authorized to operate the facility at reactor core power levels not in excess of [XXXX] megawatts thermal in accordance with the conditions specified herein.
 - (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (3) Antitrust Conditions

Applicants as defined in Appendix C shall comply with the antitrust conditions delineated in Appendix C to this license; Appendix C is hereby incorporated into this license.
 - (4) ITAAC

The licensee shall meet the acceptance criteria for the inspections, tests, and analyses contained in Appendix D. Any modification to, addition to, or deletion from Appendix D is a proposed amendment to this license.
- D. The following exemptions are authorized by law and will not endanger life or property or the common defense and security. Certain special circumstances are present and these exemptions are otherwise in the public interest. Therefore, these exemptions are hereby granted pursuant to CFR 52.93.

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- 4 -

[LISTING OF FACILITY SPECIFIC EXEMPTIONS]

- E. With the exception of 2.C(2) and 2.C(3), the licensee shall report any violations of the requirements contained in Section 2.C of this license within 24 hours. Initial notification shall be made in accordance with the provisions of 10 CFR 50.72 with written follow-up in accordance with the procedures described in 10 CFR 50.73(b), (c), and (e).
- F. The licensee shall implant, implement, and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report through Amendment [XX] and as approved in the SER (NUREG-[XXXX]) and its supplements through SSER[XX], subject to the following provision:
- [Name of Nuclear Facility Owner], may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- G. The licensee shall fully implement and maintain in effect all provisions of the physical security, guard training and qualification, and safeguards contingency plans, previously approved by the Commission, and all amendments made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p).
- H. The licensee shall comply with all provisions of 10 CFR Part 50 and its appendices applicable to holders of construction permits and operating licenses as appropriate. Provisions of 10 CFR Part 50 that do not apply include 50.33a, 50.55(a), and 50.58.
- I. The licensee shall affirm under oath and affirmation to the Commission that the acceptance criteria contained in Appendix D have been met. Fuel will not be loaded into the reactor vessel until specifically authorized by the Commission.
- J. Specific license conditions/acceptance criteria needed to authorize fuel load/operation (only sample topics are listed in this example)
- emergency preparedness
 - training
 - fitness for duty
 - maintenance
 - oversight committees
 - staffing

- reliability assurance program

- K. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended to cover public liability claims.
- L. This license is effective as of the date of issuance and shall expire at midnight on (the date 40 years from the date on which the Commission makes the findings required under 10 CFR 52.99).

FOR THE NUCLEAR REGULATORY COMMISSION

, Director
Office of Nuclear Reactor Regulation

Attachments/Appendices:

- 1. Appendix A - Technical Specifications
(NUREG-[XXXX])
- 2. Appendix B - Environmental Protection
Plan
- 3. Appendix C - Antitrust Conditions
- 4. Appendix D - Inspections, Tests,
Analyses and Acceptance Criteria

Date of Issuance:

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

May 28, 1993

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MEMORANDUM FOR: The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
Commissioner de Planque

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: ACCEPTANCE OF GE NUCLEAR ENERGY'S APPLICATION FOR FINAL
DESIGN APPROVAL AND DESIGN CERTIFICATION OF THE SIMPLIFIED
BOILING WATER REACTOR DESIGN (DOCKET NO. 52-004)

In SECY-92-403, "Acceptance Review of GE Nuclear Energy's Application for Final Design Approval (FDA) and Design Certification (DC) of the Simplified Boiling Water Reactor (SBWR) Design," the staff reported to the Commission that GE Nuclear Energy (GE) had submitted its application for FDA for the SBWR standard plant design. During its acceptance review, the staff determined that the SBWR application was incomplete.

A partial list of information required by 10 CFR 52.47 that was missing from the SBWR application included Tier 1 design certification material (including inspections, tests, analyses, and acceptance criteria); interface requirements for a standard design; portions of the probabilistic risk assessment (PRA) and the PRA uncertainty and sensitivity analyses; severe accident evaluation; resolution of unresolved safety issues and generic safety issues; and a description of the test program supporting design certification. The submission also did not include the comparison of the SBWR design to the Electric Power Research Institute's Advanced Light Water Reactor Requirements Document, an evaluation of how operational experience was considered in the design, and the discussion of severe accident mitigation design alternatives needed for the review of the application.

On February 25 and 28 and May 7, 1993, GE submitted additional information in response to the NRC staff's identification of missing or incomplete areas of the application. The staff has reviewed this additional information and determined that the GE SBWR application is sufficiently complete to enable the formal design certification review to begin.

Contact:
M. Malloy, NRR
504-1178

9306080203

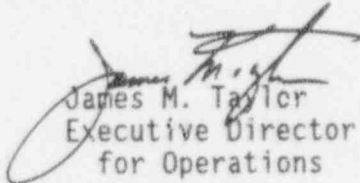
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The Commissioners

- 2 -

In accordance with 10 CFR 2.101, the staff has accepted the SBWR application as a docketed petition for design certification.

Enclosed is a copy of the staff's acceptance letter to GE Nuclear Energy.



James M. Taylor
Executive Director
for Operations

Enclosure:
Acceptance Letter

cc w/enclosure:
SECY
OGC
OCA
OPA



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 27, 1993

Docket No. 52-004

Mr. Patrick W. Marriott, Manager
Licensing & Consulting Services
GE Nuclear Energy
175 Curtner Avenue
San Jose, California 95125

Dear Mr. Marriott:

SUBJECT: ACCEPTANCE OF THE GE NUCLEAR ENERGY'S (GE's) APPLICATION FOR THE
SIMPLIFIED BOILING WATER REACTOR (SBWR) DESIGN

In a letter dated August 27, 1992, GE submitted its application for a final design approval under Appendix O to 10 CFR Part 52 and a standard design certification under 10 CFR Part 52 for the SBWR standard plant design. In accordance with 10 CFR 2.101, the staff performed an acceptance review to determine if the SBWR application was complete. The review revealed that, although an extensive amount of design information was included, the application was incomplete. Areas of the application where information was missing or incomplete were identified to GE in the staff's letter to you dated December 10, 1992.

On February 25 and 28 and May 7, 1993, GE provided additional information in response to the NRC staff's identification of missing or incomplete information during its original acceptance review. The staff has subsequently determined that the information provided substantially fulfills the requirements of 10 CFR Part 52. Therefore, the GE SBWR application is now considered sufficiently complete to be accepted formally as a docketed petition for design certification. Enclosed is a copy of the notice relating to NRC acceptance of the SBWR application that will be sent to the Office of the Federal Register for publication.

The staff will conduct a detailed review of all application material during its review of the SBWR application in accordance with the schedule provided in SECY-93-097, "Integrated Review Schedules for the Evolutionary and Advanced Light Water Reactor Projects," April 14, 1993. As stated in SECY-93-097, the staff will complete issuance of requests for additional information (RAIs) to GE by no later than October 1993 and expects GE completion of responses to the RAIs by no later than January 1994.

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388

Enclosure

Mr. Patrick W. Marriott


- 2 -

May 27, 1993

Please continue your work to address the "round zero" RAIs we forwarded to you on January 28, 1993. At this time, however, we are requesting that you complete your response to these questions by June 30, 1993, so that those responses may be considered during the staff's development of further RAIs.

Should you have any questions or comments concerning these matters, please contact one of the project managers assigned to this review, Melinda Malloy at (301) 504-1178, or Son Ninh at (301) 504-1125.

Sincerely,


Dennis M. Crutchfield, Associate Director
for Advanced Reactors and License Renewal
Office of Nuclear Reactor Regulation

Enclosure:
Federal Register
Notice

cc w/enclosure:
See next page

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Mr. Patrick W. Marriott
General Electric Company

Docket No. 52-004

cc: Mr. Laurence S. Gifford
GE Nuclear Energy
12300 Twinbrook Parkway
Suite 315
Rockville, Maryland 20852

Director, Criteria & Standards Division
Office of Radiation Programs
U. S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Mr. Sterling Franks
U. S. Department of Energy
NE-42
Washington, D.C. 20585

Mr. Jeffrey C. Baechler
GE Nuclear Energy
175 Curtner Avenue, MC-782
San Jose, California 95125

Mr. Frank A. Ross
Program Manager, ALWR
Office of LWR Safety & Technology
U.S. Department of Energy
NE-42
19901 Germantown Road
Germantown, Maryland 20874

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United States Nuclear Regulatory Commission

GE Nuclear Energy

Receipt of Application for Design Certification

Notice is hereby given that the Nuclear Regulatory Commission (the Commission) has received an application from GE Nuclear Energy (GE) dated August 27, 1992, filed pursuant to Section 103 of the Atomic Energy Act and 10 CFR Part 52, for design certification of the Simplified Boiling Water Reactor (SBWR) Standard Plant Design. On February 25 and 28 and May 7, 1993, GE provided additional information in response to the NRC staff's identification of missing or incomplete information during the staff's acceptance review of the submittal sent August 27, 1993. With the receipt of the additional information, the staff considers that the application sufficiently complete to be accepted formally as a docketed petition for design certification. A notice relating to the rulemaking pursuant to 10 CFR 52.51 for design certification, including provisions for participation of the public and other parties, will be published in the future.

The SBWR is a 670 MWe boiling water reactor in which passive safety systems are used for the ultimate safety protection of the plant. All of the safety systems are designed to be passive, where natural forces, such as gravity, natural convection, and stored energy (in the form of compressed gas

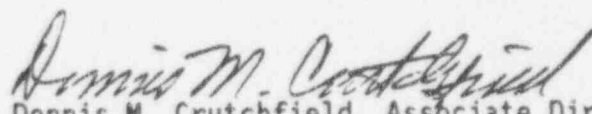
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or batteries), are used as the motive forces of these systems. The SBWR has a number of unique features that distinguish it from the current generation of light-water reactors and the evolutionary light-water reactors. The SBWR application includes the entire power generation complex, except those elements and features considered to be site specific, and is not a modular design in which major components are shared.

A copy of the application and transmittals of additional information are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. Previous correspondence on this application is filed under Project Number 681. The docket number established for this application is 52-004.

Dated at Rockville, Maryland this 27th day of May 1993.

FOR THE NUCLEAR REGULATORY COMMISSION


Dennis M. Crutchfield, Associate Director
for Advanced Reactors and License Renewal
Office of Nuclear Reactor Regulation

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notwithstanding section 405 of said Act, except expenses authorized by section 105 of said Act, including services as authorized by section 3109 of title 5, United States Code, and hire of passenger motor vehicles, and for necessary expenses for the Federal Cochairman and the alternate on the Appalachian Regional Commission and for payment of the Federal share of the administrative expenses of the Commission, including services as authorized by section 3109 of title 5, United States Code, and hire of passenger motor vehicles, to remain available until expended, \$110,700,000. Amounts previously made available for Appalachian Regional Development programs shall be transferred to and made part of this appropriation.

DELAWARE RIVER BASIN COMMISSION

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Delaware River Basin Commission, as authorized by law (75 Stat. 716), \$205,000.

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

For payment of the United States share of the current expenses of the Delaware River Basin Commission, as authorized by law (75 Stat. 706, 707), \$263,000.

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

CONTRIBUTION TO INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

To enable the Secretary of the Treasury to pay in advance to the Interstate Commission on the Potomac River Basin the Federal contribution toward the expenses of the Commission during the current fiscal year in the administration of its business in the conservancy district established pursuant to the Act of July 11, 1940 (54 Stat. 748), as amended by the Act of September 25, 1970 (Public Law 91-407), \$379,000.

NUCLEAR REGULATORY COMMISSION

SALARIES AND EXPENSES

For necessary expenses of the Commission in carrying out the purposes of the Energy Reorganization Act of 1974, as amended, and the Atomic Energy Act, as amended, including the employment of aliens; services authorized by section 3109 of title 5, United States Code; publication and dissemination of atomic information; purchase, repair, and cleaning of uniforms, official representation expenses (not to exceed \$20,000); reimbursements to the Civilian Services Administration for security guard services; hire of passenger motor vehicles and aircraft, \$420,000,000, to remain available until expended: *Provided*, That from this appropriation, transfer of sums may be made to other agencies of the Government for the performance of the work for which this appropriation is made, and in such cases the sums so transferred may be merged with the appropriation to which transferred: *Provided further*, That moneys

cept expenses authorized as authorized by section 3109 of title 5, United States Code, and hire of passenger motor vehicles for the Federal Cochairman of the Regional Commission and for the administrative expenses of the authorized by section 3109 of title 5, United States Code, of passenger motor vehicles, to \$110,700,000. Amounts previously appropriated for the Regional Development programs are part of this appropriation.

BASIN COMMISSION

EXPENSES

carry out the functions of the United States River Basin Commission, as authorized by law (75 Stat. 661, 662).

SUSQUEHANNA RIVER BASIN COMMISSION

share of the current expenses of the Commission, as authorized by law (75 Stat. 661, 662).

POTOMAC RIVER BASIN COMMISSION

EXPENSES ON THE POTOMAC RIVER BASIN

To pay in advance to the Potomac River Basin the Federal share of the Commission during the administration of its business in the pursuant to the Act of July 11, 1940 (Public Law 48-417, Act of September 25, 1970 (Public Law 91-368, 90 Stat. 1245)).

ATLANTIC RIVER COMMISSION

EXPENSES

Commission in carrying out the authorization Act of 1974, as amended, and added, including the employment of section 3109 of title 5, United States Code, of atomic information; uniforms; official representation; reimbursements to the General Security guard services; hire of passenger motor vehicles, to remain available from this appropriation, transfer of functions of the Government for the which this appropriation is made, and transferred may be merged with the remainder: *Provided further*, That moneys

received by the Commission for the cooperative nuclear safety research program, services rendered to foreign governments and international organizations, and the material and information access authorization programs including criminal history checks under section 149 of the Atomic Energy Act, as amended, may be retained and used for salaries and expenses associated with those activities, notwithstanding the provisions of section 3302 of title 31, United States Code, and shall remain available until expended: *Provided further*, That revenues from licensing fees, inspection services, and other services and collections estimated at \$189,000,000 in fiscal year 1989 shall be retained and used for necessary salaries and expenses in this account, notwithstanding the provisions of section 3302 of title 31, United States Code, and shall remain available until expended: *Provided further*, That the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 1989 from licensing fees, inspection services and other services and collections, excluding those moneys received for the cooperative nuclear safety research program, services rendered to foreign governments and international organizations, and the material and information access authorization programs, so as to result in a final fiscal year 1989 appropriation estimated at not more than \$231,000,000.

SUSQUEHANNA RIVER BASIN COMMISSION

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Susquehanna River Basin Commission as authorized by law (84 Stat. 1541), \$192,000.

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

For payment of the United States share of the current expense of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1530, 1531), \$262,000.

TENNESSEE VALLEY AUTHORITY

TENNESSEE VALLEY AUTHORITY FUND

For the purpose of carrying out the provisions of the Tennessee Valley Authority Act of 1933, as amended (16 U.S.C. ch. 12A), including purchase, hire, maintenance, and operation of aircraft, and purchase and hire of passenger motor vehicles, and for entering into contracts and making payments under section 11 of the National Trails System Act, as amended, \$103,000,000, to remain available until expended: *Provided*, That this appropriation and other moneys available to the Tennessee Valley Authority may be used hereafter for payment of the allowances authorized by section 5948 of title 5, United States Code: *Provided further*, That the official of the Tennessee Valley Authority referred to as the "inspector general of the Tennessee Valley Authority" is authorized, during the fiscal year ending September 30, 1989, to require by subpoena the production of all information, documents, reports, answers, records, accounts, papers, and other data and other documentary evidence necessary in the performance of the audit and investigation functions of that official, which subpoena, in the case of contumacy or

16 USC 831b
note.

cept expenses authorized by section 3109 of title 5, United States Code, and hire of passenger motor vehicles for the Federal Cochairman of the Regional Commission and for the administrative expenses of the authorized by section 3109 of title 5 of passenger motor vehicles, to \$110,700,000. Amounts previously appropriated for the Regional Development programs are part of this appropriation.

BASIN COMMISSION

TO EXPENSES

to carry out the functions of the United States River Basin Commission, as authorized by law (75 Stat. 1541), \$192,000.

THE RIVER BASIN COMMISSION

the share of the current expenses of the Commission, as authorized by law (75 Stat. 1541), \$192,000.

THE POTOMAC RIVER BASIN

COMMISSION ON THE POTOMAC RIVER BASIN

To pay in advance to the Potomac River Basin the Federal share of the Commission during the administration of its business in the pursuant to the Act of July 11, 1940 (Public Act of September 25, 1970 (Public Law 91-368), \$192,000.

ATORY COMMISSION

ND EXPENSES

Commission in carrying out the authorization Act of 1974, as amended, and added, including the employment of section 3109 of title 5, United States Code, of atomic information; purchase of uniforms, official representation; reimbursements to the General Security guard services; hire of passenger motor vehicles, to remain available from this appropriation, transfer of agencies of the Government for which this appropriation is made, and transferred may be merged with the authorized: *Provided further*, That moneys

received by the Commission for the cooperative nuclear safety research program, services rendered to foreign governments and international organizations, and the material and information access authorization programs including criminal history checks under section 149 of the Atomic Energy Act, as amended, may be retained and used for salaries and expenses associated with those activities, notwithstanding the provisions of section 3302 of title 31, United States Code, and shall remain available until expended: *Provided further*, That revenues from licensing fees, inspection services, and other services and collections estimated at \$189,000,000 in fiscal year 1989 shall be retained and used for necessary salaries and expenses in this account, notwithstanding the provisions of section 3302 of title 31, United States Code, and shall remain available until expended: *Provided further*, That the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 1989 from licensing fees, inspection services and other services and collections, excluding those moneys received for the cooperative nuclear safety research program, services rendered to foreign governments and international organizations, and the material and information access authorization programs, so as to result in a final fiscal year 1989 appropriation estimated at not more than \$231,000,000.

SUSQUEHANNA RIVER BASIN COMMISSION

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Susquehanna River Basin Commission as authorized by law (84 Stat. 1541), \$192,000.

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

For payment of the United States share of the current expense of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1530, 1531), \$262,000.

TENNESSEE VALLEY AUTHORITY

TENNESSEE VALLEY AUTHORITY FUND

For the purpose of carrying out the provisions of the Tennessee Valley Authority Act of 1933, as amended (16 U.S.C. ch. 12A), including purchase, hire, maintenance, and operation of aircraft, and purchase and hire of passenger motor vehicles, and for entering into contracts and making payments under section 11 of the National Trails System Act, as amended, \$103,000,000, to remain available until expended: *Provided*, That the appropriation and other moneys available to the Tennessee Valley Authority may be used hereafter for payment of the allowances authorized by section 5948 of title 5, United States Code: *Provided further*, That the official of the Tennessee Valley Authority referred to as the "inspector general of the Tennessee Valley Authority" is authorized, during the fiscal year ending September 30, 1989, to require by subpoena the production of all information, documents, reports, answers, records, accounts, papers, and other data and other documentary evidence necessary in the performance of the audit and investigation functions of that official, which subpoena, in the case of contumacy or

16 USC 831b note.

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