ATTACHMENT 4

SUPPORTING STATEMENT FOR INFORMATION COLLECTION REQUIREMENTS IN 10 CFR 50.55a

Supporting Statement for Information Collection Requirements in
Final Rule, 10 CFR 50.55a (3150-0011)

Description of the Information Collection

This supporting statement consists of the information collections submitted to and approved by OMB for the proposed rule and changes made at the final rule stages. Final rule information collection changes are highlighted in the supporting statement.

Under 10 CFR 50.55a, each operating license for a boiling or pressurized water-cooled nuclear power facility must meet specific requirements of the ASME Boiler and Pressure Vessel Code. These requirements are incorporated by reference to avoid additional burden to industry and unnecessary duplication of requirements. This rulemaking will incorporate the 1992 Edition with the 1992 Addenda of Subsection IWE and Subsection IWL, of Section XI, Division 1.

Implementation of Subsections IWE and IWL requires the owner to prepare the following:

Plans and schedules for preservice and inservice examination and tests to meet the requirements of Subsection IWE and Subsection IWL;

Preservice and inservice inspection summary reports for Class 1 and 2 pressure retaining components and their integral supports.

Records of the examinations, tests, replacements, and repairs. Specifically, the following recordkeeping requirements are incurred:

- IWE-1232 (a)(2), Inaccessible Surface Areas - The procedures for radiography and leak testing, personnel qualifications, and examination results must be documented for all welded joints that are inaccessible for examination.

- IWE-1232 (b)(1), Inaccessible Surface Areas - The procedures for magnetic particle or ultrasonic examination, radiography, and leak testing; personnel qualifications; and examination results must be documented for all portions of Class CC metallic shell and penetration liners embedded in concrete or otherwise made inaccessible during construction or as a result of repair or replacement.

- IWE-2200 (d), Preservice Examination - When a vessel, liner, or portion thereof is repaired or replaced during the service lifetime of a plant, the preservice examination requirements for the vessel repair or replacement must be documented that the repair meets the acceptance criteria.

- IWE-2200 (e), Preservice Examination - The procedures, personnel qualifications, and examination results must be documented for welds made as part of a repair or a replacement if examined by the magnetic particle or liquid penetrant method.

- IWE-2200 (g), Preservice Examination - After repaired or replaced welds are examined by the magnetic particle or liquid penetrant method, if coatings are reapplied, the condition of the new paint or coating shall be documented in the preservice examination records.

- IWE-2500 (c)(2), Examination and Pressure Test Requirements Procedures for measurements in accordance with Section V, T-544, personnel qualifications, and

examination results must be documented for augmented examinations of surface areas accessible from one side only.

- IWE-3112 (a), Acceptance - Components containing flaws that do not exceed acceptable standards are acceptable for service, provided the flaws are recorded in terms of location, size, shape, orientation, and distribution within the component.

- IWE-3114, Repairs and Reexaminations - Repairs and reexaminations must be recorded on Form NIS-2, Owner's Report for Repairs or Replacements, and demonstrate that the repair meets the acceptance standards.

- IWE-3122.1, Acceptance by Examination - Components with examination results that meet the acceptance standards are acceptable for continued service. Verified changes of flaws from prior examinations shall be reported in inservice inspection summary reports.

- IWE-3122.2, Acceptance by Repair - Components whose examination results reveal flaws that do not meet acceptance standards shall be unacceptable for continued service. Repairs or mechanical removal of unacceptable components must be documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3122.3, Acceptance by Replacement - As an alternative to IWE-3122.2, Acceptance by Repair, the component or the component portion containing the flaw may be replaced. If welding is required, documentation is required for welding procedures, welder certification and qualifications, and a Certified Material Test Report for the welding material.

- IWE-3124, Repairs and Reexaminations - The results of reexaminations must be documented and demonstrate that the repair meets acceptance standards.

- IWE-3130, Inservice Visual Examinations - Components whose visual examination reveals areas that are unacceptable for continued service must be documented that the acceptance requirements of IWE-3120 are satisfied.

- IWE-3510.1 (b), Visual Examinations - Containment Surfaces Prior to conducting a Type A test, conditions that may affect containment structural integrity or leak tightness shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3510.2, Visual Examinations, VT-3, on Coated Areas - Containment Surfaces - Coated areas that may show signs of flaking, blistering, peeling, discoloration, and other signs of distress shall be accepted by engineering evaluation or corrected by repair or replacement and be documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3510.3, Visual Examinations, VT-3, on Noncoated Areas - Containment Surfaces - Noncoated areas that show signs of cracking, discoloration, wear, pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents, and other signs of surface irregularities shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3511.1, Visual Examinations, VT-3, on Coated Areas - Pressure Retaining Welds - Coated areas that show signs of flaking, blistering, peeling, discoloration, and other signs of distress shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3511.2, Visual Examinations, VT-3, on Noncoated Areas - Pressure Retaining Welds - Noncoated areas that show signs of cracking, discoloration, wear, pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents, and other signs of surface irregularities shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3512.1, VT-1 Visual Examinations Coated Areas - Coated areas that show signs of cracking, discoloration, wear, pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents, and other signs of surface irregularities shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3512.2, VT-1 Visual Examinations Noncoated Areas - Noncoated areas that show signs of cracking, discoloration, wear, pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents, and other signs of surface irregularities shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3512.3, Ultrasonic Examination - Containment vessel examinations that reveal material loss exceeding 10% of the nominal containment wall thickness, or material loss that is projected to exceed 10% of the nominal wall thickness prior to the next examination shall be accepted by engineering evaluation or corrected by repair or replacement and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3513.1, Visual Examinations, Seals, Gaskets, and Moisture Barriers - Seals, gaskets, and moisture barriers shall be examined for wear, damage, erosion, tear, surface cracks, or other defects that may violate the leak-tight integrity and documented on Form NIS-2, Owner's Report for Repairs or Replacements.

- IWE-3515.1, Visual Examinations, Pressure Retaining Bolting Bolting materials shall be examined in accordance with the material specification for defects which may cause the bolted connection to violate either the leak-tight or structural integrity. Replaced defective items shall be documented on Form NIS-2, Owner's Report for Repairs or Replacements.

Article IWE-4000, Repair Procedures, are covered by the rules of IWA-4000.

- IWA-4130, Repair Program - Repair operations shall be performed in accordance with a program that delineates the essential requirements. Prior to authorizing a repair, the Owner shall evaluate the suitability of the repair.

- IWA-4210, Storage and Handling of Welding Material - Procedures for welding material control shall be included in the repair program. Welding material must be certified by a material test report.

- IWA-4340, Defect Removal - Procedures for the removal of defects, personnel qualification, and examination results shall be documented.

- IWA-4400, Welding and Welder Qualifications (Including Welding Operators) - Welding procedures, welder certifications, personnel qualifications, and examination results must be documented.

- IWA-4600, Examination - The repaired areas shall be examined to establish a new preservice record. The method that detected the flaw shall be included in the record.

- IWL-2523.2, Sample Examination and Testing - Tension tests performed on each removed wire or strand shall be recorded with yield strength, ultimate tensile strength and elongation.

- IWL-2524.1, Visual Examination - Visual examinations of tendon anchorage areas shall be documented and include the physical condition of each area.

- IWL-2524.2, Free Water Documentation - The quantity of free water contained in the anchorage end cap as well as any which drains from the tendon during the examination process shall be documented.

- IWL-2526, Removal and Replacement of Corrosion Protection Medium - The amount of corrosion protection medium removed for samples shall be measured. The total amount replaced and the difference between the two amounts shall be documented.

- IWL-3310, Evaluation Report - The owner shall prepare an Engineering Evaluation Report for items with examination results that do not meet the acceptance standards of IWL-3100 or IWL-3200.

- IWL-7120, Replacement Program - A replacement plan must document the removal, reinstallation and replacement of post-tensioning system items for concrete containments.

In addition, the following requirements, which are modifications to Subsection IWL, must also be submitted by report to the NRC:

- 50.55a(b)(2)(ix)(B) - An Engineering Evaluation Report, when consecutive surveillances of tendon prestressing forces indicate that the tendon force would be less than the minimum design prestress requirements.

- 50.55a(b)(2)(ix)(C) - A difference of more than 10% (from that recorded during installation of the tendons) in elongation corresponding to a specific load during detensioning and retensioning of tendons.

- 50.55a(b)(2)(ix)(D) - Sampled sheathing filler grease containing chemically combined water exceeding 10% by weight, or replaced grease exceeding 10% of the net duct volume.

- 50.55a(b)(2)(ix)(E) - An evaluation of the acceptability of inaccessible areas in concrete containments when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas.

In addition, the following requirement, which is a modification to Subsection IWE, must also be submitted by report to the NRC:

- 50.55a(b)(2)(x)(A) - An evaluation of the acceptability of inaccessible areas in metal containments when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas.

In addition, licensees may use the following modification to Subsection IWE as an alternative to the ASME Code provisions. If the alternative engineering evaluation is performed, the results of the evaluation must also be submitted by report to the NRC:

- 50.55a(b)(2)(x)(D) - If examinations reveals flaws or areas of degradation exceeding the acceptance standards of IWE-3410-1, an evaluation must be performed to determine the extent of degradation and the necessary corrective actions.

In addition, licensees do not have to submit their containment inservice inspection program to the NRC staff for approval, but they must do the following:

- 50.55a(g)(6)(ii)(B)(5) - Licensees must submit in writing to the Director of the Office of Nuclear Reactor Regulation notification of commitment to the containment inservice inspection program as required by Subsection IWE and Subsection IWL with specified modifications.

A. JUSTIFICATION

1. Need for the Collection of Information

NRC regulations at 10 CFR § 50.55a incorporate by reference Division 1 rules of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Section XI sets forth the requirements to which nuclear power plant components are tested and inspected. There are existing recordkeeping requirements in Section XI. The final rule will incorporate by reference the 1992 Edition with Addenda through the 1992 Addenda of Subsection IWE, "Requirements for Class MC Components of Light-Water Cooled Power Plants," and Subsection IWL, "Requirements for Class CC Components of Light-Water Cooled Power Plants," of Section XI (Division 1), of the ASME Code. Subsection IWE provides the rules and requirements for inservice inspection of Class MC pressure retaining components and their integral attachments, and metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments in light-water cooled power plants. Subsection IWL provides the rules and requirements for preservice examination and inservice inspection of the reinforced concrete and the post-tensioning systems of Class CC components. Section XI records are needed to document the plans for and results of inservice inspection and inservice test programs. The records developed are generally not collected by the NRC, but are retained by the licensee to be made available to the NRC in the event of an NRC audit.

Section XI, Division I, requirements for inservice inspection records and reports are provided in IWA-6000, "Records and Reports." The following records and reports identified in IWA-6000 must be maintained for the component or system. These records and reports are:

- Index to record file
- Preservice and inservice inspection plans

- Preservice and inservice inspection reports
- Repair records and reports
- Replacement records and reports
- Nondestructive examination procedures
- Nondestructive examination records

IWA-6310 states that the records and reports shall be filed and maintained in a manner which will allow access by the Inspector. The Owner also shall provide suitable protection from deterioration and damage for all records and reports, in accordance with the Owner's Quality Assurance Program, for the service lifetime of the component or system. Lifetime retention of the above records is necessary to ensure adequate historical information on the design, examination, and testing of components and systems to provide a basis for evaluating degradation of these components and systems at any time during their service lifetime.

IWA-6240 requires that ISI Summary Reports be submitted to the regulatory and enforcement authorities having jurisdiction at the plant site. The requirements of IWA-6240 and IWA-6310 were incorporated into previous changes to § 50.55a, and this final rulemaking action, therefore, does not impose additional recordkeeping or reporting burden.

2. Agency Use of Information

The records are generally historical in nature and provide data on which future activities can be based. The practical utility of the information collection for NRC is that appropriate records are available for auditing by NRC personnel to determine if ASME Code provisions for construction, inservice inspection, and inservice testing are being properly implemented in accordance with 10 CFR 50.55a, or whether specific enforcement actions are necessary.

3. Reduction of Burden Through Information Technology

The information being collected represents the documentation for the various plant specific construction, inservice inspection, and inservice testing programs. The NRC has no objection to the use of new information technologies and generally encourages their use.

4. Effort to Identify Duplication

ASME Code requirements are incorporated by reference into the NRC regulations to avoid the need for writing equivalent NRC requirements. This amendment will not duplicate the information collection requirements contained in any other regulatory requirement.

5. Effort to Use Similar Information

The NRC is using the information reporting requirements specified in the ASME Code in lieu of developing its own equivalent requirements.

6. Effort to Reduce Small Business Burden

This amendment to 10 CFR 50.55a affects only the licensing and operation of nuclear power plants.

The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act in the Small Business Size Standards issued by the Small Business Administration at 13 CFR Part 121.

7. Consequences of Less Frequent Collection

The information is generally not collected, but is retained by the licensee to be made available to the NRC in the event of an NRC audit.

8. Circumstances Which Justify Variation from OMB Guidelines

The record retention periods for information requested is frequently for the service lifetime of the applicable component. Such lifetime retention of records is necessary to ensure adequate historical information on the examination and testing of components to provide a basis for evaluating degradation of these components and systems at any time during their service lifetime.

9. Consultations Outside the NRC

The NRC staff prepared the proposed rule in consultation with personnel from the Idaho National Engineering Laboratory (Idaho Falls, ID), and ISI Containment Specialists from General Dynamics/Electric Boat Division, Nuclear Engineering (Groton, CT) and Multiple Dynamics Corporation (Southfield, MI). The proposed rule was published in the Federal Register for comment on January 7, 1994. The final rule contains four modifications as a result of the public comments received.

10. Confidentiality of Information

NRC provides no pledge of confidentiality for this collection of information.

11. Justification for Sensitive Questions

No sensitive questions are involved.

12. Estimated Annualized Cost to the Federal Government

NRC inspection personnel who audit plant quality assurance records would include in their audit verification that the above records are being properly prepared and maintained. The time associated with NRC inspectors verifying these records would be small when the activity is performed as part of a normal quality assurance audit.

13. Estimate of Burden

a. Number and Type of Respondents

The recordkeeping requirements incurred by 10 CFR 50.55a through incorporation by reference of

the ASME Code will apply to the 117 nuclear power plants presently under construction or in operation.

b. Estimated Hours Required to Respond to the Collection

The incorporation by reference of Subsections IWE and IWL into 10 CFR 50.55a will require each licensee to develop an initial inservice inspection (ISI) plan, implement that ISI plan, and then develop and implement 10-year updates to that ISI plan. The development of the initial ISI plan is estimated to average 1000 hours per year per plant over a 4-year period. Development of the initial inservice inspection plan is a one-time effort. Total annual burden for the development of the ISI plan is estimated at 117,000 hours (1000 hours times 117 plants) each year for 4 years.

It is estimated that implementation of the ISI plan would require 800 hours per year for each plant performing ISI of the containment. Assuming that on the average 12 plants per year would be performing ISI of the containment, this would result in an industry burden of 9,600 hours per year. The reporting burden of Sections 50.55a(b)(2)(ix)(B), (C), (D), and (E), which are modifications to Subsection IWL, and Section 50.55a(b)(2)(x)(A) which is a modification to Subsection IWE, must also be reported in the ISI summary report are estimated to average 12 hours per plant per year for recordkeeping and 12 hours per plant per year for reporting. Sections 50.55a(b)(x)(D), which is an option to Subsection IWE, would be a reduction in the reporting burden. Since this Section is an option that may be used in lieu of the accepted ASME Code provisions, the higher figures for the standard ASME Code provisions have been used in the reporting burden calculations. The one-time reporting burden for Section 50.55a(g)(6)(ii)(B)(5) is estimated to be 2 hours. Therefore, the total burden estimated for the ISI plan would be 9,912 hours per year or 826 hours per plant.

Every 10 years each licensee must update the ISI plan. Update of the plan is estimated to average 180 hours per plant. Assuming that 12 plants per year would be updating their containment ISI plans, this would result in an industry burden of 2,160 hours per year.

ITEM	ANNUAL RECORDKEEPING HOURS / PLANT	NUMBER OF PLANTS PER YEAR	TOTAL ANNUAL HOURS
Development[1]	1,000	117	117,000
Periodic ISI	826	12	9,912
Update	180	12	2,160
TOTAL	1,006		12,072

[1] Development has not been included into the total number of hours as this activity will be completed after the first 4 years. The total reflects the continuing annual burden after development is complete.

The total burden for the final rule is 6 hours per plant for the periodic ISI or 72 hours for the industry, and a one-time burden of 2 hours per plant or 236 hours for the industry for the notification of commitment to the containment inservice inspection program.

c. Estimated Cost Required to Respond to the Collection

Based upon the hours specified in Item b. above, and a rate of $133/hr., it is estimated that the cost to the industry for responding to the information collection required by the proposed amendment to § 50.55a is a total of $16,879,296 (117,000 + 9,912 hours X $133/hour) for the first 4 years, and $1,605,576 (12,072 hours X $133/hour) thereafter.

14. Reasons for Change in Burden

The change in burden results from minor changes to provisions in the proposed rule as a result of public comments. The changes in these provisions result in a slight increase in the recordkeeping requirements in the final rule.

15. Publication for Statistical Use

This information will not be published for statistical use.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

Statistical methods are not used in the collection of the required information.