SUPPORTING STATEMENT FOR PROPOSED AMENDMENT
10 CFR PART 50.55a, CODES AND STANDARDS

(OMB Clearance No. 3150-0011)

DESCRIPTION OF THE INFORMATION COLLECTION

The proposed amendment to 10 CFR 50.55a would incorporate by reference the 1997 Addenda, the 1998 Edition, the 1999 Addenda and the 2000 Addenda of (1) Section III, Division 1, "Requirements for Construction of Nuclear Power Plant Components," of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (BPV Code); (2) Section XI, Division 1, "Requirements for Inservice Inspection of Nuclear Power Plant Components," of the ASME BPV Code; and (3) the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code).

A. JUSTIFICATION

1. Need for and Practical Utility of the Collection of Information

Section III and Section XI of the ASME BPV Code and the ASME OM Code contain recordkeeping requirements. In general, Section III records are needed to provide documentation that construction procedures have been properly implemented, and Section XI records are needed to document the plans for, and results of, inservice inspection (ISI). The ASME OM Code records are needed to document the plans for, and results of, inservice testing (IST). The records are generally not collected by the NRC, but are retained by the licensee to be made available in the event of an NRC inspection.

ASME Section III, Subsubarticle NCA-3290, "Owner's Responsibility for Records," gives the authority to the Owner for designating the construction records to be maintained. ASME Section XI, Subsubarticle IWA-6310, "Maintenance of Records," requires that each licensee maintain ISI records and reports for the service lifetime of the component or system. Finally, the ASME OM Code, Subsubarticle, ISTA 3.3.1 (1997 Addenda) and ISTA-9310 (1998 Edition up to and including the 2000 Addenda), "Maintenance of Records," requires that each licensee maintain IST records and reports for the service lifetime of the component or system.

2. Agency Use of Information

The records and reports are generally historical in nature and provide data on which future activities and actions can be based. The practical utility of the information collection for NRC is that appropriate records and reports are available for inspection by NRC personnel to determine whether ASME Code provisions for construction, ISI, and IST are being properly implemented.

3. Reduction of Burden Through Information Technology

The records document the various plant specific construction, ISI, and IST programs. The NRC has no objection to the use of new information technologies and encourages their use.

4. Effort to Identify Duplication and to Use Similar Information

The NRC references ASME national consensus standards as a general practice to avoid duplication of these requirements. Therefore, the amendment does not duplicate the information collection requirements contained in any industry codes or standards, or generic NRC or other Federal agency regulatory requirements. The NRC uses the information collection requirements specified in the ASME Code in lieu of developing specific information collection requirements.

5. Effort to Reduce Small Business Burden

The proposed amendment will have no impact on the paperwork burden of small companies. The amendment to Section 50.55a affects only the licensing and operation of nuclear power plants. The companies that own such 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 set out in regulations issued by the Small Business Administration at 13 CFR Part 121. Since these companies are dominant in their service areas, the proposed amendment does not fall within the province of this Act.

6. Consequences to Federal Program Activities if the Collection is not Conducted or is Conducted Less Frequently

The information is generally not collected, but is retained by the licensee to be made available to the NRC during an inspection. These records document licensee implementation of ASME Code provisions for construction, ISI, and IST activities. The ASME has set a frequency for conducting these activities with their attendant recordkeeping based on operating history and the need for component functionality. The NRC would not be able to evaluate ASME construction, ISI, and IST activities if this information collection was not conducted or conducted less frequently. Performance of NRC inspection activities ensures that safety-related components or systems are capable of performing their intended functions.

7. Circumstances Which Justify Variation From OMB Guidelines

The record retention periods for the information required by the ASME Codes are generally based on the service lifetime of the applicable component or system. Such lifetime retention of records is necessary to document historical information on the design, examination, and testing of components and systems for evaluating degradation throughout their service lifetimes.

8. Consultations Outside the NRC

Information outside of the NRC was not solicited.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Proprietary or confidential information is protected in accordance with 10 CFR 2.790 of the NRC's regulations. However, confidential information is not anticipated.

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimate of Annualized Burden and Burden Hour Cost

The recordkeeping and reporting requirements of Section 50.55a, through incorporation by reference of the ASME Codes, will apply to licensees and applicants for nuclear power plant licenses. Licensees are required to update their ISI and IST programs to the requirements of the latest edition and addenda of Section XI and the ASME OM Code which have been incorporated by reference in 10 CFR 50.55a that is in effect 12 months prior to the start of the 120-month inspection interval. On this basis, many plants may at one time be required to implement the revisions contained in the Section XI, Division 1 and OM Code edition and addenda specified in the proposed rule. The number of plants that could implement the specified edition and addenda will grow gradually as each plant updates its ISI and IST program at the 120-month interval. Therefore, conservatively, the total number of plants that may ultimately be required to implement the specified edition and addenda is 103.

a. Section XI Recordkeeping and Reporting Burden:

The changes in the Section XI edition and addenda contained in the proposed rule which significantly affect recordkeeping requirements are addressed below.

(i) Subsubarticle IWA-2420 of the 1999 Addenda added items for which records must be kept. Records associated with inspection plans must now include (1) inspection period and interval dates; (2) identification of the components selected for examination and testing, including successive exams for prior periods; (3) identification of drawings showing items which require examination; (4) list of examination procedures; (5) description of alternative examinations and identification of components to be examined using alternative procedures; and (6) identification of calibration blocks used for ultrasonic examination of components. These records should not significantly change after being initially added to the inspection plans; therefore, it is estimated that average increase in

records would be approximately 1 person-hour per plant a year during the 120-month interval because of the additional recordkeeping requirements. This increase in recordkeeping burden is estimated to be 103 person-hours a year (i.e., 1 hour x 103 plants). (Ref. Table 1)

(ii) Subsubarticle IWA-6340 of the 1999 Addenda added items for which records must be kept. Records associated with (1) flaw acceptance by analytical evaluation; (2) regions in ferritic Class 1 standards with modified acceptance standards; (3) Class MC bolt torque or tension tests; (4) tendon force and elongation measurements; (5) tendon wire and strand sample test results; (6) free water documentation; and (7) corrosion protection medium analysis results must now be kept, if applicable. It is estimated that records will increase approximately 3 person-hours per plant a year because of the additional recordkeeping requirements. This increase in recordkeeping burden is estimated to be 309 person-hours a year (i.e., 3 hours x 103 plants). (Ref. Table 1)

(iii) The NRC-proposed modification in 10 CFR 50.55a(b)(2)(xxi)(B) would add the requirement to examine control rod drive (CRD) bolting whenever the CRD housing is disassembled in accordance with the provisions in Table IWB-2500-1, Category B-G-2, Item B7.80 of the 1995 Edition. It is estimated that records will increase approximately 1 person-hour a year for 103 units because of the additional recordkeeping requirement associated with the examination of CRD bolting. This increase in recordkeeping burden is estimated to be 103 person-hours a year (i.e., 1 hour x 103 units). (Ref. Table 1)

(iv) The 1998 Edition deleted the requirement to perform a visual examination of paint and coatings reapplied to containment surfaces (1995 Edition, IWE-2200(g)). It is estimated that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the revised ISI provision will eliminate the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2)

(v) The NRC-proposed limitation in 10 CFR 50.55a(b)(2)(xii)(A) would not allow welds in high-energy fluid system piping that are located inside a containment penetration assembly or encapsulated by a guard pipe to be exempted from examination as permitted by IWC-1223 of the 1997 through 2000 Addenda. It is estimated that the recordkeeping burden will increase approximately 1 person-hour per plant per year because of the additional recordkeeping requirement associated with examination of welds. This increase in recordkeeping burden is estimated to be 103 person-hours a year (i.e., 1 hour x 103 plants). (Ref. Table 1) It is estimated that the reporting burden will increase about 1.6 person-hours per plant each year due to the need for a relief request to obtain NRC

approval to not perform examinations for designs where welds are inaccessible. The increase in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the NRC-proposed modification will create the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2)

(vi) The 1998 Edition deleted the requirement to perform a visual examination of containment paint and coating to be removed (1995 Edition, IWE-2500(b)). It is estimated that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the revised ISI provision will eliminate the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2)

(vii) Code Case N-605 was incorporated in IWE-2500(c) in the 1998 Edition and, therefore, licensees will no longer be required to request approval for its use. It is estimated that approximately half of the 103 units would request relief from this requirement and that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 82 person-hours a year (i.e., 1.6 hours x 51 plants). It is estimated that implementation of the revised ISI provision will eliminate the need for 51 relief requests (i.e., 1 relief request per unit x 51 units). (Ref. Table 2)

(viii) The 1998 Edition deleted the requirement to visually examine containment seals and gaskets (1995 Edition Table IWE-2500-1, Category E-D, Items E5.10 and E5.20). It is estimated that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the revised ISI provision will eliminate the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2)

(ix) The 1998 Edition deleted the torque test of bolted connections which was contained in the 1995 Edition (Table IWE-2500-1, Category E-G, Item E8.20). It is estimated that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the revised ISI provision will eliminate the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2) It is estimated that records will decrease approximately 2 person-hours per plant a year because testing has been eliminated. The decrease in record keeping burden is estimated to be 206 person-hours a year (i.e., 2 hours x 103 plants). (Ref. Table 1)

(x) The NRC-proposed modification 10 CFR 50.55a(b)(2)(ix)(I)(*4*) would require licensees to supplement the examination requirements for containment bolted connections in Table IWE-2500-1, Examination Category E-A, Items E1.10 and E1.11, of the 1998 Edition, the 1999 Addenda, and the 2000 Addenda with additional examination requirements. The proposed modification would require that maintenance procedures be revised to ensure that the integrity of the reassembled bolted connection is maintained if the bolted connection is disassembled at times other than a periodic (or planned) inspection and is not examined by a qualified visual examiner before reassembly. The procedures would be required to include acceptance criteria for the continued use of all parts of the connection including bolts, studs, nuts, bushings, washers, threads in base material, and flange ligaments between fastener holes. It is estimated that the burden will increase approximately 1 person-hour per plant per year to revise maintenance procedures and maintain the additional records associated with the examination of bolting. This increase in burden is estimated to be 103 person-hours a year (i.e., 1 hour x 103 plants). (Ref. Table 1)

b. <u>ASME OM Recordkeeping and Reporting Burden</u>

The changes in the ASME OM Code edition and addenda contained in the proposed rule which significantly affect recordkeeping requirements are addressed below.

(i) The requirement in ISTA 1.4 to use an Authorized Inspection Agency for inspection services was deleted in the 1997 Addenda. It is estimated that the recordkeeping burden will decrease approximately 4 person-hours per plant a year because of the elimination of the use of an Authorized Inspection Agency. This decrease in recordkeeping burden is estimated to be 412 person-hours a year (i.e., 4 hours x 103 plants). (Ref. Table 1)

(ii) In ISTB-1200 and ISTC-1200 of the 1998 Edition of the ASME OM Code, skid mounted pumps and valves were excluded from the requirements of the Code provided they are tested as part of the major component and are justified by the Owner as being adequately tested. In the past, licensees have requested relief for skid mounted components from certain Code test requirements (for example, valves on the diesel generator skid). It is estimated that records will decrease approximately 2 person-hours per plant a year because testing has been reduced. The decrease in recordkeeping burden is estimated to be 206 person-hours a year (i.e., 2 hours x 103 plants). (Ref. Table 1)
It is estimated that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 165 person-hours a year (i.e., 1.6 hours x 103 plants). It is estimated that implementation of the revised IST provision will eliminate the need for 103 relief requests (i.e., 1 relief request per unit x 103 units). (Ref. Table 2)

(iii) The reduction in the exercise frequency for manual valves in NRC-proposed modification 10 CFR 50.55a(b)(3)(vi) would result in a reduction of recordkeeping. Manual valves would be exercised every 2 years in lieu of every 3 months as required by ISTC-3510 of the 1998 Edition and previous editions and addenda. It is estimated that the recordkeeping burden will decrease approximately 3 person-hours per plant a year because of the reduction in recordkeeping requirement associated with the reduction in exercising frequency for manual valves. This decrease in recordkeeping burden is estimated to be 309 person-hours a year (i.e., 3 hours x 103 plants). (Ref. Table 1)

(iv) The 1998 Edition of the ASME OM Code, ISTC-5223, added a provision to allow operational testing of two check valves in series as a unit, provided certain conditions are met. It is estimated that approximately 25 units would request relief from this requirement and that the reporting burden will decrease about 1.6 person-hours per plant a year since the need for a relief request is eliminated. The decrease in reporting burden is estimated to be 40 person-hours a year (i.e., 1.6 hours x 25 plants). The number of responses from the industry will decrease. It is estimated that implementation of the revised IST provision will eliminate the need for 25 relief requests (i.e., 1 relief request per unit x 25 units). (Ref. Table 2)

c. Section III Recordkeeping and Reporting Burden:

Section 50.55a specifies that the Code edition and addenda to be applied to reactor coolant pressure boundary and Quality Group B and Quality Group C components must be determined by the provisions of paragraph NCA-1140 of Subsection NCA of Section III of the ASME Code. NCA-1140 specifies that the Owner (or designee) shall establish the ASME Code edition and addenda to be included in the Design Specifications, but that in no case shall the Code edition and addenda dates established in the Design Specifications be earlier than 3 years prior to the date that the nuclear power plant construction permit is docketed. NCA-1140 further states that later ASME Code editions and addenda may be used by mutual consent of the Owner (or designee) and Certificate Holder. There is no plant under construction for which implementation of the Section III edition and addenda specified in the proposed rule will be a requirement. Individual licensees may implement these improved rules on a voluntary basis, but unless that choice is made, no additional information collection burden is incurred.

d. Estimated Costs of the Information Collection Requirements:

The total industry decrease in the recordkeeping and reporting burden is 1194 person-hours a year (i.e.,Table 1 Total Annual Hours + Table 2 Total Annual Hours), resulting in an annual average decrease of approximately 12 person-hours per plant. (i.e., 1194 person-hours/103 units)

It is estimated that the annual cost savings to the industry resulting from the decrease in annual information collection requirements required by the referenced Codes in the proposed amendment to Section 50.55a is $179,100 (i.e., 1194 person-hours a year x $150/hr).

It is estimated that the number of responses from the industry will decrease by 488 due to the implementation of revised ISI and IST provisions that eliminate the need for relief requests. (Ref. Table 2)

13. Other Additional Costs

As discussed under 1. "Need for and Practical Utility of the Collection of Information," ASME Sections III and XI, and the ASME OM Code each contain requirements governing licensees' maintenance of construction, ISI, and IST records and reports for the service lifetime of the component or system. Licensees preserve the records in storage facilities that provide protection from hazards such as winds, floods, fires, and environmental conditions such as adverse humidity. The costs associated with the records storage facilities is not known by the NRC and would likely be incurred by licensees in the course of doing business.

14. Estimated Annualized Cost to the Federal Government

Licensees must request NRC staff authorization to use alternatives to the requirements of the 1995 Edition with the 1996 Addenda of Section XI of the ASME BPV Code and the ASME OM Code. The requirements in the 1997 Addenda, the 1998 Edition, the 1999 Addenda and the 2000 Addenda of Section XI and the ASME OM Code have been revised to eliminate the need for licensees to submit relief requests to the NRC staff for the following items:

(i) The NRC staff reviewed relief requests from licensees to use alternatives to the requirements of the 1995 Edition of Section XI that include (1) examination of reapplied paint and coatings (IWE-2200(g)); (2) examination of paint prior to removal (IWE-2500(b)); (3) examination of seals and gaskets (Table IWE-2500-1, Category ED, Items E5.10 and E5.20); and (4) bolt torque testing (Table IWE-2500-1, Category EG, Item E8.20). Licensees would no longer need to request NRC staff approval for alternatives to these requirements when implementing the 1998 Edition of Section XI. It is estimated that a total of 1,530 NRC staff-hours would have been required to review these requests for approval.

(ii) The NRC staff reviews requests from licensees to implement Code Case N-605, "Alternative to the Requirements of IWE-2500(c) for Augmented Examination of Surface Areas." Licensees would no longer need to request NRC staff approval to use the alternative requirements described in Code Case N-605 because Code Case N-605 has been incorporated in the 1998 Edition of Section XI (Subarticle IWE-2500). It is estimated that a total of 130 NRC staff-hours would have been required to review these requests for approval.

(iii) The NRC staff approves requests from licensees that allow testing of two check valves in series. The 1998 Edition of the ASME OM Code, ISTC-5223, added a provision to allow operational testing of two check valves in series as a unit, provided certain conditions are met. Licensees would no longer need to request NRC staff approval for testing two check valves in series when implementing the 1998 Edition of the ASME OM Code. It is estimated that a total of approximately 250 NRC staff-hours would have been required to review these requests for approval.

(iv) The NRC staff approves relief requests from licensees to exclude skid mounted pumps and valves from the requirements of the ASME OM Code provided that they are tested as part of the major component and are justified by the Owner as being adequately tested. Licensees would no longer need to request NRC staff approval to exclude skid mounted pumps and valves from the requirements of the ASME OM Code because the 1998 Edition of the OM Code, ISTB-1200 and ISTC-1200, specifically excludes skid-mounted components from the requirements of the ASME OM Code provided that they are tested as part of the major component and are justified by the Owner as being adequately tested. It is estimated that a total of 300 NRC staff-hours would have been required to review these relief requests.

(v) The NRC-proposed limitation in 10 CFR 50.55a(b)(2)(xii)(A) would not allow welds in high-energy fluid system piping that are located inside a containment penetration assembly or encapsulated by a guard pipe to be exempt from the examination requirements in Subsection IWC as permitted by IWC-1223 of the 1997 through 2000 Addenda of Section XI. In designs where these welds are inaccessible, relief from impractical Code requirements will need to be granted by the NRC staff when appropriate bases are provided by the licensee pursuant to 10 CFR 50.55a(g)(5). It is estimated that there are approximately 2 containment penetration assemblies in each unit that contain high-energy fluid piping with welds that would now create the need for a relief request to examine. It is estimated that a total of 600 NRC staff-hours will be required to review these relief requests.

The reduction in NRC burden (1610 hours or 16 hours per reactor) would be reflected as a reduction in the fees billed to licensees to review their submittals (i.e., -1610 hours x $150/hour = -$241,500). The cost of NRC review time is fully recovered from fees charged to NRC licensees pursuant to 10 CFR Parts 170 and 171.

15. Reasons for Change in Burden

The change in burden results from the change in the Section XI and the ASME OM Code recordkeeping and reporting requirements in the edition and addenda that this proposed rulemaking will incorporate by reference in 10 CFR 50.55a, and from the NRC-proposed modifications to the requirements in Section XI and the OM Code.

16. Publication for Statistical Use

This information will not be published for statistical use.

17. Reason for Not Displaying the Expiration Date

The requirement will be contained in a regulation. Amending the Code of Federal Regulations to display information that, in an annual publication, could become out of date would confuse the public.

18. Exception to the Certification Statement

Not applicable.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

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

Table 1. ASME BPV Code Section XI and ASME OM Code Annual Recordkeeping Burden

Section XI or OM Code Revision	Number of Plants Affected Annually	Annual Rcrdkping Hrs/Plant	Total Annual Hours	Annual Cost ($150/hr)	Retention Period*
IWA-2420	103	1	103	15,450	Lifetime
IWA-6340	103	3	309	46,350	Lifetime
TABLE-IWB-2500-1 CATEGORY B-G-2, ITEM B7.80	103	1	103	15,450	Lifetime
IWC-1223	103	1	103	15,450	Lifetime
TABLE IWE-2500-1, CATEGORY E-G, ITEM E8.20	103	-2	-206	-30,900	Lifetime
Table IWE-2500-1, Category E-A, Items E1.10 and E1.11	103	1	103	15,450	Lifetime
Section XI Subtotal			515	77,250	
ISTA 1.4	103	-4	-412	-61,800	Lifetime
ISTB-1200, ISTC-1200	103	-2	-206	-30,900	Lifetime
ISTC-3510	103	-3	-309	-46,350	Lifetime
OM Code Subtotal		-9	-927	-139,050	
Total (XI & OM)			-412	-61,800	

***Lifetime means the lifetime of the component or system**
- A negative number indicates a reduction in recordkeeping burden

Table 2. ASME BPV Code Section XI and ASME OM Code Reporting Requirements

Section XI or OM Code Revision	Number of Plants Affected Annually	Annual Reporting Hrs/Plant	Total Annual Hours	Total Responses	Annual Cost ($150/hr)
IWE-2200(g)	103	-1.6	-165	-103	-24,750
IWC-1223	103	1.6	165	103	24,750
IWE-2500(b)	103	-1.6	-165	-103	-24,750
IWE-2500(c)	51	-1.6	-82	-51	-12,300
TABLE IWE-2500-1, CATEGORY E-D, ITEMS E5.10 AND E5.20	103	-1.6	-165	-103	-24,750
TABLE IWE-2500-1, CATEGORY E-G, ITEM E8.20	103	-1.6	-165	-103	-24,750
Section XI Subtotal			-577	-360	-86,550
ISTB-1200, ISTC-1200	103	-1.6	-165	-103	-24,750
ISTC-5223	25	-1.6	-40	-25	-6000
OM Code Subtotal			-205	-128	-30,750
Total (XI & OM)			-782	-488	-117,300

- A negative number indicates a reduction in reporting burden