

DRAFT SUPPORTING STATEMENT  
FOR  
CODES AND STANDARDS

10 CFR 50.55a

DESCRIPTION OF THE INFORMATION COLLECTION

The NRC regulations in 10 CFR 50.55a incorporate by reference Division 1 rules of Section III, "Rules for Construction of Nuclear Power Plant Components," and Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME B&PV Code); and the rules of the ASME "Code for Operation and Maintenance of Nuclear Power Plants" (ASME OM Code). These rules of the ASME B&PV and OM Codes set forth the requirements to which nuclear power plant components are constructed, tested, and inspected. The ASME Codes contain information collection requirements that impose a recordkeeping and reporting burden. In general, the records prepared are not collected by the NRC, but are retained by the licensee to be made available to the NRC, if requested, at the time of an NRC audit.

The information collection requirements imposed by 10 CFR 50.55a through incorporation by reference of the ASME Codes apply to activities associated with the construction and operation of nuclear power plants. The actual number of plants affected by the various ASME Code editions and addenda incorporated by this regulation, and thereby affected by the information collection requirements, is dependent on a variety of factors. These factors include whether the application is for construction, operation, the class and type of components involved; the date of the construction permit application; the schedule of the inservice inspection (ISI) and inservice testing (IST) programs; and whether the plant licensee voluntarily elects to implement updated editions and addenda of the ASME Code. Section III of the ASME B&PV Code applies to the construction of new plants, and, through reference by Section XI of the ASME B&PV Code, the repair and replacement activities in operating plants. Section XI of the ASME B&PV Code and the ASME OM Code apply solely to operating plants. At present, there are no nuclear power plants under construction, and 104 that are operating. The following analysis of information collection requirements determines the ASME B&PV Code, Section XI, and the ASME OM Code burden for 104 operating plants, including the burden associated with repair and replacement activities. In addition, since no new plants are presently scheduled for the future, an evaluation has been made to estimate what the information collection burden for a single new plant would be as a result of Section III being incorporated by reference in § 50.55a.

Section 50.55a specifies that the ASME 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 B&PV Code. NCA-1140 specifies that the Owner (or his 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 three years prior to the date that the nuclear power plant construction permit application is docketed. NCA-1140 further states that later ASME Code editions and addenda

may be used by mutual consent of the Owner (or his designee) and Certificate Holder. It is permissible for individual operating plants to implement improved rules in later editions and addenda on a voluntary basis, but unless they make that choice, there is no additional paperwork burden associated with incorporating later Section III editions and addenda than that to which they are committed. New plants would be required to construct the facility in accordance with applicable Section III edition and addenda.

Owners of nuclear power plants are required to establish ISI and IST programs in accordance with the requirements of the latest edition and addenda of the ASME Code that have been incorporated by reference into 10 CFR 50.55a as of 12 months prior to the date of issuance of the operating license. Licensees are required to update their ISI and IST programs in accordance with the latest edition and addenda of ASME Code that have been incorporated by reference as of 12 months prior to the start of the next 120-month inspection interval. Conservatively, the total number of plants that may ultimately be required to implement a particular ASME Code edition and addenda is 104.

Section III and Section XI specify certain recordkeeping and reporting requirements. These requirements are generally identified in Section III Subsection NCA and Section XI Article IWA-6000 of the ASME B&PV Code, and in Subsection ISTA of the ASME OM Code. In addition, specific technical requirements may result in an additional information collection burden. This analysis of information collection burden evaluates all general information collection activities, any significant additional burden that may be imposed as a result of specific technical requirements, and information collections imposed as a result of licensee requirements specified directly in § 50.55a.

### Recordkeeping Requirements

#### ***Section III***

Section III, Subsection NCA specifies recordkeeping requirements for Class 1 (Subsection NB), Class 2 (Subsection NC), and Class 3 (Subsection ND) components. These provisions require the Owner to:

- Prepare and submit to the ASME necessary forms to obtain an Owner's Certificate of Authorization, and to obtain a written agreement with an Authorized Inspection Agency (AIA), prior to application, to provide inspection and auditing services (NCA-3230). This activity by the Owner occurs after receipt of notification from the NRC that an application for a Construction Permit has been docketed. The information to be supplied by the Owner when making an application is identified in the forms issued by the ASME. It is estimated that completion of these information forms would take 80 p-hours/plant.
- Prepare and file ASME Form N-3, "Owner's Data Report for Nuclear Power Plant Components" (NCA-3270). Information to be included on this form identifies the Owner and location of the plant, and the nuclear vessels, piping, and pumps and valves installed within the plant. Information required to identify each component includes certificate holder and serial number, system identification, state number, national board number, and year built (NCA-3270). Form N-3, which is provided by

the ASME, expedites the documentation of this information. It is estimated that the time to obtain the necessary information and to document that information on Form N-3 would be 400 p-hours/plant.

- Document that a review of the Design Report has been performed to verify that all Design and Service Loadings have been evaluated and meet the acceptance criteria (NCA-3260). It is estimated that review of the Design Report, with documentation of any areas that need to be revised, would take 2000 p-hours/plant.
- Provide and file the Overpressure Protection Report required for the nuclear protection system (NCA-3220 (m) and (n)). This report includes the overpressure protection requirements for each component or system, including location of the overpressure protection devices, identification of the edition and addenda, system drawings, range of operating conditions, and an analysis of the conditions that give rise to the maximum pressure relieving requirements (NB/NC/ND-7200). It is estimated that the time associated with preparing the Overpressure Protection Report would be 2000 p-hrs, which is comprised of 1600 p-hours associated with obtaining and developing the necessary information and 400 p-hrs for collating the information into the necessary report.
- Document a Quality Assurance Program, and file copies of the Quality Assurance Manual with the Authorized Inspection Agency (NCA-8140). This documentation includes programs for surveying, qualifying, and auditing suppliers of subcontracted services (e.g., nondestructive examination contractors, material suppliers, and material manufacturers). Although Section III identifies the need for a documented Quality Assurance (QA) program, the primary NRC requirement for an overall QA program is contained in 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." (See the Section 16 Supporting Statement.) Therefore, no additional information collection burden is imposed on Owners by the quality assurance provisions of Section III which are incorporated by reference into § 50.55a.
- Provide, correlate, and certify Design Specifications (NCA-3250). This requires that the component Design Specification be provided in sufficient detail to form the basis for fabrication in accordance with the rules of Section III. The Design Specifications shall be certified to be correct and complete and to be in compliance with the requirements of NCA-3250 by one or more competent Registered Professional Engineers (NCA-3252). Although this is a requirement of Section III, its incorporation by reference in § 50.55a does not impose an additional information collection burden on the Owner. Preparation and certification of design specifications for construction of engineered structures is a routine and necessary engineering practice, which would occur with or without the incorporation of this Section III provision into § 50.55a.
- Designate records to be maintained and provide for their maintenance (NCA-3280). Although Section III identifies the need for specific record retention, the primary NRC requirement for record retention is specified in 10 CFR 50, Appendix B, Criterion XVII (Quality Assurance Records). (See the Section 16 Supporting

Statement.) Therefore, no additional information collection burden is imposed on Owners by the record retention provisions of Section III which are incorporated by reference into § 50.55a.

## **Section XI**

Section XI, Subsection IWA specifies recordkeeping requirements for ISI of Class 1 (Subsection IWB), Class 2 (Subsection IWC), Class 3 (Subsection IWD), Class MC (Subsection IWE), and Class CC (Subsection IWL) components. These recordkeeping requirements require the Owner to:

- Prepare records of the preservice and inservice examinations of Class 1 and Class 2 pressure retaining components and their supports on ASME Form NIS-1, "Owner's Report for Inservice Inspections." Information to be included on Form NIS-1, which expedites documentation of the required information, includes identification of the component (i.e., name of component, name of manufacturer, manufacturer serial number, state number, national board number), examination dates, the applicable Section XI edition and addenda, and abstracts of the examination and tests, including results, and any corrective measures (IWA-6220).

Section XI examinations are performed on the basis of a 10-year interval (i.e., all components to be examined, are examined within 10 years), with examinations distributed over three 40-month periods. For the purpose of this burden calculation, it has been estimated that it would take 160 p-hours to obtain and document the information required on Form NIS-1 for the examinations during one 40-month examination period at one plant. This averages to approximately 50 p-hrs/year/plant, or a total of 5,200 p-hrs/year for all 104 plants.

- Document the repairs and replacements in the inservice inspection summary reports on existing Form NIS-2, "Owner's Report for Repair or Replacements." Information to be included on ASME Form NIS-2 includes identification of the component (i.e., name of component, name of manufacturer, manufacturer serial number, national board number, year built) and system, the applicable construction code and Section XI edition and addenda, repair organization, and a description of the work performed (IWA-7520).

Form NIS-2 expedites documentation of the required information. For the purpose of this burden calculation, it has been estimated that, on the average, 50 components would be repaired each year by each plant in accordance with Section XI rules. It is estimated that it would take 2 hours to document the repair of an individual component on Form NIS-2. This results in a recordkeeping burden associated with this documentation of 100 p-hours/year/plant, or a total of 10,400 p-hrs/year for all plants.

- Prepare plans and schedules for preservice and inservice examination and tests (IWA-6210). It is estimated that the preparation of the plans and schedules for preservice and inservice examination would require 1600 p-hours, and the plans and schedules for preservice and inservice testing would require 400 p-hours.

Assuming that, on average, 10% of the plants prepared plans and schedules for examination and testing (plans and schedules are established for 10 year intervals), this would result in an industry burden of 20,800 p-hrs/year for all plants [(1600+400)p-hrs/plant x (0.10)(104)plants/year].

- Record the results of preservice and inservice examinations of components performed in accordance with Section XI, IWB/IWC/IWD-2000. Specific requirements for examinations are tabulated in IWB/IWC/IWD-2500-1 for components such as vessels and piping. A record of each examination would include the component identification, date of examination, specific Section XI requirement, type of examination (e.g., volumetric, surface, visual), equipment settings, and record of any indications. The examinations are distributed over a 10-year examination interval (three 40-month periods) with examinations being performed at, on average, 18-month refueling outages (i.e., two per period). Therefore, on average, approximately 1/6 of the components are examined/year. The recordkeeping burden associated with these examinations is estimated at 1 hour/component. Based on an estimate of 4000 components/plant, it would take 400 p-hrs/year/plant [4000 components/interval x (1/10) interval/yr x 1 hour/component] to document the testing of these components for each plant, which results in a total burden of 41,600 p-hours for 104 plants.
- Record the results of the preservice and inservice containment inspection results in accordance with Section XI Subsection IWE and Subsection IWL, which provide rules for the preservice and inservice inspection of metal and concrete containments to assess and detect defects that could compromise a containment's structural integrity. The containment inservice inspections are established for a 10-year interval, but the Subsection IWE inspections are performed approximately every 3 years, while the Subsection IWL inspections are performed every 5 years. These ASME Code requirements were incorporated by reference into 10 CFR 50.55a for the first time in 1996. The incorporation by reference of Subsections IWE and IWL into 10 CFR 50.55a required each licensee to develop an initial inservice inspection (ISI) plan for these subsections, implement that ISI plan, and then develop and implement 10-year updates to that ISI plan. The development of the initial ISI plan was estimated to average 1000 p-hrs/yr per plant over a 4-year period is assumed to be essentially complete with no significant additional burden.

It is estimated that implementing the ISI plan requires 600 p-hrs/yr for each plant performing ISI of the containment. Assuming that on the average 10 plants per year would be performing ISI of the containment, this would result in an industry burden of 6,000 p-hrs/yr.

Every 10 years each licensee must update the ISI plan. Update of the plan is estimated to average 180 p-hrs per plant. Assuming that 10 plants per year would be updating their containment ISI plans, this would result in an industry burden of 1,800 p-hrs/yr.

The total burden is estimated to be 7,800 p-hrs/yr.

The following additional significant recordkeeping requirements result from implementation of specific Section XI technical requirements:

- The 1995 Edition up to and including the 1996 Addenda of Section XI requires examination of essentially 100% of the length of all reactor vessel shell welds during the 2nd, 3rd, and 4th inspection intervals. (Section XI has required examination of essentially 100% of the length of reactor vessel shell welds during the 1st interval since the 1974 Edition as modified by addenda through the 1975 Addenda.) Although the data from these examinations is generally automatically recorded and processed, it is estimated that about 200 p-hrs is required to assemble, review, and summarize the additional data that is collected once during each 10-year inspection interval. On average, about 10 percent of all operating plants perform the reactor vessel shell weld examinations each year. Therefore, the additional recordkeeping burden per year resulting from the specified reactor vessel examination is estimated to be 2,080 p-hrs (i.e., 200 p-hrs/plant x [.10 x 104] plants/year).
- Mandatory Section XI, Appendix VII, "Qualification of Nondestructive Examination Personnel for Ultrasonic Examination," specifies requirements for the training and qualification of ultrasonic nondestructive examination (NDE) personnel in preparation for employer certification to perform NDE. Appendix VII specifies requirements for qualification records. These records include those for recertification (e.g., name of individual, qualification level, educational background and experience, statement indicating satisfactory completion of prior training, record of annual supplemental training, results of vision examinations, and current qualification examination results). It is estimated that it would take 65 p-hrs/plant/year to prepare and maintain the specified training records. This results in a yearly burden of 6,760 p-hrs for 104 plants.
- Table IWA-1600-1 (1991 Addenda) references a revised ASME N626 specification which requires that Authorized Inspection Agencies be accredited by ASME. It is estimated that the records associated with this change will result in an average of 10 p-hrs per plant per year. The recordkeeping burden is estimated to be 1,040 p-hrs/yr (i.e., 10 p-hrs/plant-yr x 104 plants). This estimate is based on discussion with an authorized nuclear inspection (ANI) organization, but the impact has been assigned to the owners who ultimately pay for ANI services.
- IWA-2210 (1990 Addenda) improves visual examination requirements and requires calibration records for light meters and test charts. Based on discussion with licensee personnel, it is estimated that the records associated with this change will result in an average of 1 p-hr per plant per year. The recordkeeping burden is estimated to be 104 p-hrs/yr (i.e., 1 p-hr/plant-yr x 104 plants).
- IWA-2322 (1991 Addenda) requires that, before the near-distance test chart is used for the first time, an optical comparator or other suitable instrument be used to verify the height of a representative lower case character. It is estimated that the records associated with this change will result in an average of 2 p-hrs at each plant. The annualized recordkeeping burden is estimated to be 208 p-hrs (i.e., 2 p-hrs/plant x 104 plants). (one-time recordkeeping).

- IWA-4130 (1989 Addenda) requires more detail to be documented in repair plans. It is estimated that the records associated with this change will result in an average of 1 p-hr for each repair operation. Based on discussions with licensee personnel, an average of 100 repair plans per plant per year is assumed. Therefore, the recordkeeping burden is estimated to be 10,400 p-hrs/yr (i.e., 100 p-hrs/plant-yr x 104 plants). (one-time recordkeeping).
- IWA-4340 (1991 Addenda) eliminates a surface examination for certain repair removal cavities. Records will decrease approximately 16 p-hrs per plant per 10-year ISI interval because of the elimination of a need to submit a relief request. The decrease in recordkeeping burden is estimated to be 166 p-hrs/yr (i.e., 16 p-hrs x 104 plants/10 yr interval).
- Table IWB-2500-1 (1994 Addenda) requires an estimated 2 p-hrs for each plant per 10-year ISI interval for records associated with additional pump and valve internal surface visual examinations. The recordkeeping burden is estimated to be 21 p-hrs/yr (i.e., 2 p-hrs x 104 plants/10 yr interval).
- IWB-4300 (1989 Addenda) requires an estimated 4 p-hrs for records for each pressurized water reactor (PWR) plant in conjunction with each series of steam generator sleeving operations during any refueling outage. The additional records include the Sleeving Procedure Specification, procedure qualification, performance qualification for personnel, location records, and examination records. If sleeving operations are performed an average of three times each ten-year interval for each PWR plant, the recordkeeping burden is estimated to be 83 p-hrs/yr (i.e., 69 PWR plants/3 times in 10 years x 4 hrs each).
- IWB-1220, IWC-1220, and IWD-1220 (1991 Addenda) each give an exemption for inaccessible integral attachments. Recordkeeping burden will be reduced about 16 p-hrs per plant per 10-year ISI interval since it will no longer be required to document these inaccessible integral attachments in requests for relief. The decrease in recordkeeping burden is estimated to be 166 p-hrs/yr (i.e., 16 p-hrs x 104 plants/10 yr interval).
- IWC-5222(e) (1991 Addenda) exempts open-ended lines from hydrostatic tests. Records will decrease about 16 p-hrs per plant per 10-year ISI interval because of the elimination of the need for a relief request. The decrease in recordkeeping burden is estimated to be 166 p-hrs/yr (i.e., 16 p-hrs x 104 plants/10 yr interval).
- IWD-2420 (1991 Addenda) adds successive examination requirements for Class 3 components. Records will increase about 8 p-hrs per plant per year. The recordkeeping burden is estimated to be 832 p-hrs/yr (i.e., 8 p-hrs/plant-yr x 104 plants).
- IWA-5221, Table IWB-2500-1, IWB-5200, Table IWC-2500-1, IWC-5200, and IWD-5240 (1993 Addenda) have all been revised to stipulate a "system leakage test" in lieu of a system hydrostatic test during each 10-year interval. Records will decrease about 16 person hours per boiling-water reactor (BWR) plant per 10-year interval through the elimination of the need for a relief request. (Note, the cost

decrease applies only to BWR plants which encounter problems with obtaining the Code-required pressure for hydrostatic testing of Class 2 portions of the main steam system.) The decrease in recordkeeping burden is estimated to be 56 p-hrs/yr (i.e., 16 p-hrs/10 yrs x 35 BWR plants).

- IWF-1230 (1990 Addenda) exempts examination of inaccessible supports. Eliminating the need for a relief request is estimated to save 16 person-hours per plant per 10-year interval. The decrease in recordkeeping burden is estimated to be 166 p-hrs/yr (i.e., 16 p-hrs/10 yrs x 104 plants).
- IWF-2430, IWF-2510, and Table IWF-2500-1 (1990 Addenda) - The exemption for supports of multiple components allowed under previous versions of IWF-2510(b) has been deleted. However, this change does not increase the number of supports required to be examined. In conjunction with the deletion of the IWF-2510 exemption, Table IWF-2500-1 adopts for the first time representative sampling (i.e., grouping) which reduces the number of supports required to be examined by over 100. Even though the adoption of representative sampling is considered an improvement over present procedures in that there is more assurance that defective supports will be detected, the ASME added the provisions of IWF-2430(c) and (d) which would require that if the examinations performed under IWF-2430(a) and (b) result in the detection of a large number of defective supports, additional examinations may be required. The reduction in the number of examinations attained through sampling is estimated to save 12 p-hrs in recordkeeping per plant per year. Records associated with possible additional examinations could add 8 p-hrs per plant per year which gives a net decrease of 4 p-hrs in recordkeeping per plant per year. Thus, the recordkeeping burden is estimated to decrease by 416 p-hrs/yr (i.e., 4 p-hrs/plant-yr x 104 plants).
- Appendix VIII, Article VIII-5000 (1996 Addenda) requires that qualification records be kept. The records will be generated when the qualification activities are performed. A conservative estimate is that ten percent of the total initial Appendix VIII qualification costs per plant will apply to records. The costs are equivalent to an average per plant total of 260 person-hours (p-hrs) for Appendix VIII records. The recordkeeping burden is estimated to be a one-time total of 27,040 p-hrs or an annualized 9,013 hours (i.e., 260 p-hrs/plant x 104 plants/3). (one-time recordkeeping)

### **OM Code**

- Record the results of the preservice and inservice pump tests in accordance with OM Code Subsection ISTB, which provides rules for the preservice and inservice testing of pumps to assess the operational readiness of certain centrifugal and positive displacement pumps. The inservice tests, like the inservice examinations, are established for a 10-year interval, but the testing is performed on a quarterly basis. A record of each test would include the pump identification, date of test, reason for test, values of measured parameters, identification of instruments used, comparisons with allowable ranges of test values, and requirements for corrective

action. It is estimated that it would take 80 p-hrs to document the testing of the quarterly pump tests for each plant, which would result in a yearly burden for each plant of 320 p-hrs. This results in a total burden of 33,280 p-hrs for 104 plants.

- Record the results of the preservice and inservice valve tests in accordance with OM Code Subsection ISTC, which provides rules for the preservice and inservice testing of valves to assess the operational readiness of certain valves and pressure relief devices. The inservice tests, like the inservice examinations, are established for a ten-year interval, but the testing is performed on a frequency, depending on the valve, from quarterly to every two years. The types of records to be retained for valve testing would be similar to those identified above for pump testing. Because of the greater number of valves tested, it is estimated that it would take 200 p-hrs to document the periodic valve tests for each plant, which would result in a yearly burden for each plant of 800 p-hrs, or 83,200 p-hrs for 104 plants.
- Table ISTB 4.7.1-1 (1994 Addenda) requires more accurate pressure instruments for the comprehensive and preservice pump tests. Additional records would be required for the procurement and periodic calibration of these instruments. The burden is estimated at one p-hr per plant per instrument per year. Assuming three new instruments per plant, it is estimated that the increased burden would be 312 p-hrs/yr (i.e., 3 instruments x 1 p-hrs/yr x 104 plants).
- ISTB 5.2.2(b) and Table ISTB 4.1-1 (1994 Addenda) have eliminated the requirement for quarterly measurement of vibration and either flowrate or pressure for standby pumps. This would result in fewer test records and a decrease in burden estimated at 2,080 p-hrs/yr (i.e., 10 standby pumps x 1/2 p-hr/test x 4 tests/yr x 104 plants).
- Appendix I, 1.3.7(a) (1994 Addenda) changes the test frequency for containment vacuum breakers from 6 months to 2 years or during a refueling outage, whichever is sooner. Assuming 2 vacuum breakers per PWR, the estimated reduction in recordkeeping requirements is 52 p-hrs/yr (i.e., 1.5 less tests/yr x 1/2 p-hr/test x 69 PWR plants).
- Appendix I, 4.1.2(a) and 8.1.2(a) (1994 Addenda) allow air or nitrogen to be substituted at the same temperature without the additional alternate test media requirements. This will result in fewer records. Assuming two correlation evaluations per plant, the estimated decrease in recordkeeping requirements is 832 p-hrs/yr (i.e., 2 x 4 p-hrs/evaluation x 104 plants).

#### **50.55a**

- The recordkeeping burden for Sections 50.55a(b)(2)(viii)(B), (C), (D), and (E), which are modifications to Subsection IWL, and Section 50.55a(b)(2)(ix)(A) which is a modification to Subsection IWE, is estimated to average 12 p-hrs/yr per plant. Assuming that 10 plants per year would be updating their containment ISI plans, this would result in an industry burden of 120 p-hrs/yr.

- Section 50.55a(b)(2)(xiii) permits licensees to voluntarily adopt the provisions of Code Case N-513 for temporary acceptance of a flaw in certain Class 3 piping. Item 2.0(d) of the Code Case requires a flaw evaluation to be performed. In addition, Item 2.0(e) of the Code Case allows the licensee to perform a flaw growth analysis to establish the allowable time for temporary operation. Periodic examinations of no more than 90-day intervals shall be conducted to verify the analysis. It is estimated that each licensee will apply the Code Case 20 times each year. The increase in burden is estimated to be 2080 p-hrs/yr (i.e., 20 occurrences x 1 p-hr/flaw evaluation-flaw growth analysis x 104 plants).
- Section 50.55a(b)(2)(xiii) also permits licensees to voluntarily adopt the provisions of Code Case N-523-1 for temporary use of mechanical clamping devices for Class 2 and Class 3 piping. Section 9.0 of the Code Case requires the Owner to prepare a plan for monitoring defect growth, and perform periodic examinations of no more than 90-day intervals to verify the analysis. It is estimated that each licensee will apply the Code Case 20 times each year. The increase in burden is estimated to be 2080 p-hrs/yr (i.e., 20 occurrences x 1 p-hr/flaw evaluation-flaw growth analysis x 104 plants).
- Section 50.55a(b)(3)(iii)(A) requires that the adequacy of the initial test interval for certain electric operated valve assemblies be evaluated between 5 and 6 years after implementation of Code Case OMN-1. The Code Case is a voluntary alternative, and this would be a one-time burden occurring 5 to 6 years after the rule is issued. Because this one-time burden will not start to occur until approximately November 22, 2004, this one-time requirement is being included for information only. The one-time burden will be included in the next clearance renewal.
- Section 50.55a(b)(3)(iv)(B) requires trending and evaluation of test data to support changes in the check valve test frequency. This one-time evaluation is to be performed at a maximum of 3 years after implementation of Appendix II. Appendix II provides alternative requirements that licensees may implement as an option to OM Code requirements. On average, there are 260 safety-related check valves per plant. The time required for trending and evaluation of test data is estimated at 1 p-hr/valve. Assuming that 12 plants implement the optional appendix, the burden is estimated to be an annualized 1,040 p-hrs/yr (260 check valves x 1 p-hr/evaluation x 12 plants/3). (one-time recordkeeping)
- Section 50.55a(g)(6)(ii)(A) required all licensees to augment their reactor vessel examination by expediting the essentially 100% examination of reactor vessel shell welds that is specified in the Section XI 1989 Edition. Because of certain deferral and acceptance provisions provided in § 50.55a for this examination, many plants did not have to perform any additional examinations while others, estimated at about 50%, had to expand the scope (essentially 100% of reactor vessel shell welds instead of just two beltline welds) of the reactor vessel examination. This resulted in some additional recordkeeping requirements. As noted above (Section XI Recordkeeping), the recordkeeping requirement associated with the full reactor vessel examination requirement is estimated to be 200 p-hrs/plant per examination. As an expansion to the ongoing examination in the present interval, the additional recordkeeping is estimated to be 160 p-hrs/plant per examination.

Assuming that half of the plants have implemented this requirement, the remaining burden over the next 5 years applies to about 26 plants (i.e., 25% of the operating plants), or about 5 plants/year. This would result in a recordkeeping burden of 800 p-hrs/year for all plants (160 p-hrs/plant/examination x 5 exams/yr).

## Reporting Requirements

### ***Section III***

The following reporting requirement is specified in Section III:

- A copy of the Design Specifications shall be made available to the Inspector at the manufacturing site before fabrication begins, and a copy filed with the NRC before components are placed in service (NCA-5242). No significant time is associated with this reporting requirement since it only represents a transfer of documents that have been routinely and previously prepared. It is conservatively estimated that 40 p-hrs are required to prepare the documentation to transfer the Design Specifications to the appropriate authorities.

### ***Section XI***

The following reporting requirement is specified in Section XI:

- Prepare and submit Summary Report to NRC within 90 days following the refueling outage in which the ISI program is implemented (IWA-6230/6240). The Summary Report is prepared to document preservice and inservice examinations for Class 1 and Class 2 pressure retaining components and their supports. This includes documentation on ASME Form NIS-1 of examinations and tests performed, and documentation on ASME Form NIS-2 of repairs and replacements performed since the preceding summary report. On the average, there are two ISI programs per inspection period for each plant (there are three inspection periods per 10-year inspection interval).

Whenever a plant shuts down for refueling, an ISI is performed. Assuming an average refueling schedule of 18 months results in about 69 plants being inspected per year. Each inspection results in a Summary Report. It is estimated that 160 p-hrs/plant are required to prepare the summary report. This results in an industry burden of 11,040 p-hrs/year (69 plants x 160 p-hrs/plant) for all plants.

The following additional reporting requirements result from implementation of specific Section XI technical requirements:

- The reporting burden for Sections 50.55a(b)(2)(viii)(B), (C), (D), and (E), which are modifications to Subsection IWL, Section 50.55a(b)(2)(ix)(A) which is a modification to Subsection IWE, is estimated to average 12 p-hrs/yr per plant. Assuming that 10 plants per year would be responding to the reporting requirements related to the containment ISI program, this would result in an industry burden of 120 p-hrs/yr.

#### **OM Code**

- ISTA 3.2.1 (1990 Edition) does not include the existing Section XI requirement for preparing and submitting a summary report for Class 1 and Class 2 pump and valve tests to the NRC. The decrease in burden is estimated to be 4,160 p-hrs/yr (i.e., 40 p-hrs/plant/year x 104 plants).
- ISTB 3.2 and 4.3 (1994 Addenda) require bypass/test loops to accommodate within  $\pm 20\%$  of design flow when used for the comprehensive or Group A tests. For the purpose of this analysis, it is assumed that all PWRs would have to modify the test loops in the containment spray system or prepare and submit a relief request to the NRC for approval. The estimated burden to prepare a relief request is 16 p-hr per PWR per ten-year inspection interval. This gives an increased burden of 110 p-hrs/yr (i.e., 16 p-hrs/10 yrs x 69 plants).

#### **50.55a**

- Section 50.55a(a)(3) allows applicants to use alternatives to the requirements of 10 CFR 50.55a paragraphs (c), (d), (e), (f), (g), and (h) when authorized by the NRC. It is estimated that all (104) of the plants will choose to use alternatives to the requirements of the 1995 Edition/1996 Addenda to the ASME *Boiler and Pressure Vessel Code* or the 1995 Edition/1996 Addenda to the ASME *Code for the Operation and Maintenance of Nuclear Power Plants*. The estimated burden to prepare and submit an alternative to the NRC for authorization is 20 person-hours per alternative. Assuming each plant submits an average of 6 alternatives per year (4 for ASME Section XI and 2 for the OM Code), the estimated increased burden is 12,480 p-hrs/year (i.e., 6 alternatives/year/plant x 20 p-hrs/alternative x 104 plants).

- Section 50.55a(b)(3)(v) requires that a licensee voluntarily choosing to use Subsection ISTD for the examination of snubbers may do so after processing a one-time plant technical specification change. It is estimated that one-half of the plants will choose to implement Subsection ISTD. The estimated one-time burden to prepare a technical specification change is 1,040 p-hrs/yr or an annualized 347 hours during the clearance period, i.e., 20 p-hrs/plant x 17 plants (52/3). (one-time reporting)
- Sections 50.55a(f)(5) and 50.55a(g)(5) allow applicants to request relief from Code requirements determined to be impractical. It is estimated that all (104) of the plants will need to request relief from some of the requirements of the 1995 Edition/1996 Addenda to the ASME B&PV Code or the 1995 Edition/1996 Addenda to the ASME OM Code. The estimated burden to prepare and submit a request for relief from Code requirements is 20 person-hours per relief request. Assuming each plant submits an average of 6 relief requests per year (4 for ASME Section XI and 2 for the OM Code), the estimated increased burden is 12,480 p-hrs/year (i.e., 6 relief requests/year/plant x 20 p-hrs/relief request x 104 plants).

#### A. JUSTIFICATION

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

The ASME B&PV and OM Code provides listings of information required and specific forms to assist in documenting required information. In general, Section III records are needed to provide documentation that construction procedures have been properly implemented. ASME B&PV Code, Section XI, and ASME OM Code records are needed to document the plans for and results of ISI and IST programs. 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 inspection or audit. ASME B&PV and OM Code requirements are incorporated in 10 CFR 50 to avoid the need for writing equivalent NRC requirements.

##### 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 B&PV and OM Code provisions for construction, inservice inspection, and inservice testing are being properly implemented in accordance with 10 CFR 50.55a of the NRC regulations, or whether specific enforcement actions are necessary.

##### 3. Reduction of Burden Through Information Technology

No responses are submitted electronically. 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 and Use Similar Information

ASME B&PV and OM Code requirements are incorporated by reference into the NRC regulations to avoid the need for writing equivalent NRC requirements. The provisions of this regulation do not duplicate the information collection requirements contained in any other regulatory requirement.

5. Effort to Reduce Small Business Burden

The provisions of 10 CFR 50.55a affect only the construction and operation of nuclear power plants and, therefore, do not affect small businesses.

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

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

7. Circumstances Which Justify Variation from OMB Guidelines

ASME B&PV Code, Section XI, and ASME OM Code requirements for ISI and IST programs, and 10 CFR 50.55a specify that records and reports must be maintained for the service lifetime of the component or system. Such lifetime retention of the records is necessary to ensure adequate historical information of 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.

8. Consultations Outside the NRC

In connection with rulemakings to incorporate by reference later editions and addenda of Section III, Division 1, and Section XI, Division 1, of the ASME B&PV Code and the OM Code, the NRC staff consults with personnel from manufacturers, utilities, DOE laboratories, and other users of the Code as the need for specific information arises.

A proposed rule was published in the *Federal Register* on December 3, 1997 (62 FR 63892), for comment to incorporate by reference the 1995 Edition with the 1996 Addenda of the ASME B&PV Code and the ASME OM Code, with specific limitations and modifications. Five-hundred and sixty four comments were received from 65 separate sources on the proposed rule. Some limitations and modifications were revised or deleted as a result of public comments. The final rule was published on September 22, 1999, and became effective on November 22, 1999. The final rule provisions have been incorporated into this clearance renewal.

Notice of opportunity for public comment on this information collection has been published in the Federal Register.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

NRC provides no pledge of confidentiality for this collection of information. However, a confidential or proprietary submittal would be handled in accordance with 10 CFR 2.790.

11. Justification for Sensitive Questions

No sensitive questions are involved.

12. Estimated Industry Burden and Burden Hour Cost

a. Number and Type of Respondents

In general, the information collection requirements incurred by 10 CFR 50.55a through incorporation by reference of the ASME B&PV and OM Code could apply to the 104 nuclear power plants presently in operation.

b. Estimated Hours Required to Respond to the Collection

Tables 1 and 2, below, tabulate the estimated hours necessary to respond to the Section III, Section XI, OM Code, and 50.55a information collection requirements discussed above. The total continuing industry information collection burden (recordkeeping and reporting) is 257,002 p-hrs per year plus an additional annualized one-time burden (recordkeeping and reporting) of 10,608 p-hrs, for a total of 267,610 hours.

c. Estimated Cost Required to Respond to the Collection

Based upon an annual burden of 257,002 p-hrs and a rate of \$141/hr, it estimated that the cost to the industry for responding to the information collection is a total of \$36,237,282/year (257,002 p-hrs x \$141/hour) with an additional one-time annualized cost of \$1,495,728 (10,608 X\$141/hour).

13. Estimate of Other Additional Costs

None.

**Table 1**  
**Recordkeeping Burden**

Recordkeeping Requirement	Plants per Year	Annual Burden (hrs/plant)	Total Annual Burden (hours)	Retention Period
III/NCA-3230: Owner's Certificate; AIA Agreement	1	80	0	Life
III/NCA-3270: Owner's Data Report	1	400	0	Life
III/NCA-3260: Design Report	1	2,000	0	Life
III/NB/NC/ND-3220: Overpressure Protection Report	1	2,000	0	Life
XI/IWA-6220: Records of Exams: NIS-1 Forms	104	50	5,200	Life
XI/IWA-7520: Records of Repairs: NIS-2 Forms	104	100	10,400	Life
XI/IWA-6210: ISI and IST Plans and Schedules	10	2,000	20,800	Life
XI/IWB/IWC/IWD-2000: Records of Component Tests	104	400	41,600	Life
XI/Subsections IWE & IWL	10	780	7,800	Life
XI/IWB-2500: Reactor Vessel Exam	10	200	2,080	Life
XI/Appendix VII: Qualification of NDE personnel	104	65	6,760	Life
XI/Table IWA-1600-1: ASME N626 Specification	104	10	1,040	Life
XI/IWA-2210: Visual Examinations	104	1	104	Life
XI/IWA-2322: Near-distance Test Chart*	104	2	208*	Life
XI/IWA-4130: Repair Plans	104	100	10,400	Life
XI/IWA-4340: Surface Examinations for Repair	10	-16	-166	Life
XI/Table IWB-2500-1: Pump and Valve Surface Exams.	10	2	21	Life
XI/IWB-4300: PWR Steam Generator Sleeving	2	4	83	Life
XI/IWB/C/D-1220: Inaccessible Integral Attachments	10	-16	-166	Life
XI/IWC-5222(e): Open-ended line hydrostatic tests	10	-16	-166	Life
XI/IWD-2420: Class 3 examinations	104	8	832	Life
XI/IWA-5221: System Leakage Test	4	-16	-56	Life
XI/IWF-1230: Inaccessible supports	10	-16	-166	Life

XI/IWF-2430: Supports of multiple components	104	-4	-416	Life
XI/App. VIII: Qualification records*	104	260	9,013*	Life
OM/Subsection ISTB: Records of Pump Tests	104	320	33,280	Life
OM/Code Subsection ISTC: Records of Valve Tests	104	800	83,200	Life
OM/Table ISTB 4.7.1-1: Pump Pressure Instruments	104	3	312	Life
OM/ISTB 5.2.2(b): Standby Pump Vibrations	104	-20	-2,080	Life
OM/App. I: Containment Vacuum Breakers	69	-0.75	-52	Life
OM/App. I: Air or Nitrogen Alternate Test	104	-8	-832	Life
§ 50.55a(b)(2)(viii) and (ix): Subsections IWE/IWL	10	12	120	Life
§ 50.55a(b)(2)(xiii): Class 3 piping Code Case N-513	104	20	2,080	Life
§ 50.55a(b)(2)(xiii): Mechanical clamping N-523-1	104	20	2,080	Life
§ 50.55a(b)(3)(iii)(A): Code Case OMN-1	52	100	0*	Life
§ 50.55a(b)(3)(iv)(B): Appendix II Check Valve*	4	260	1,040*	Life
§ 50.55a(g)(6)(ii)(A): Augmented RV Exam	5	160	800	Life
<b>TOTAL</b>	<b>2,105</b>		<b>235,153</b>	

\* One-time recordkeeping requirements.

**Table 2**  
**Reporting Burden**

Reporting Requirement	Plants per Year	Annual Burden (hrs/plant)	Total Annual Hours	Retention Period
III/NCA-5242: Providing Construction Documents to Inspector	1	40	40	Life
XI/IWA-6000: ISI Summary Reports	69	160	11,040	Life
XI/Subsections IWE & IWL	10	12	120	Life
OM/ISTA 3.2.1: Class 1&2 Tests	104	-40	-4,160	Life
OM/ISTB 3.2 and 4.3: Bypass Loops	7	16	110	Life
§ 50.55a(a)(3): Alternatives	104	120	12,480	Life
§ 50.55a(b)(3)(v): Snubbers*	17	20	347*	Life
§ 50.55a(f)(5) and (g)(5): Relief Requests	104	120	12,480	Life
TOTAL			32,457	

\* One-time reporting burden.

#### 14. Estimated Annualized Cost to the Federal Government

NRC inspection personnel who routinely audit plant construction, ISI, and IST programs would include, in the audit, verification that the identified records have been properly prepared and maintained. Since NRC inspectors would generally verify these records as part of the normal NRC audit process, the annual cost to the Federal government is considered to be very small.

In addition to records which are prepared but are maintained at the plant site, the licensee submits summary reports of the inservice inspection program directly to the NRC. These summary reports are overviewed by the staff for the purpose of identifying generic issues. A licensee submits a summary report about twice during each inspection period. On the average, this results in about 70 summary report submittals to the NRC each year. A summary report is reviewed on the average in about 2 hours, resulting in a burden to the NRC of 140 p-hrs/year for all plants. This results in an annual cost to the Federal government of \$19,740 (140 hours x \$141/hour).

The frequency for containment inservice inspection would be once every 3 $\frac{1}{3}$  years (corresponding to the ASME Code Section XI inspection interval for components addressed by Section XI). 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 very small when the activity is performed as part of a normal quality assurance audit. Additional staff time would be required only for cases where containment degradation was reported by licensees. It is estimated that 80 hours of staff time would be spent reviewing licensee documents in such cases. The costs for such reviews would be \$11,280 (80 hours x \$141). The number of incidences reported on an annual basis where containment degradation has exceeded ASME Code limits is expected to be 4. Therefore, annual government burden is estimated to be 320 hours (4 reports x 80 hours), or \$45,120.

Based on the above, the total estimated annual Federal burden is 460 hours at a cost of \$64,860. This cost is fully recovered through fee assessments to NRC licensees pursuant to 10 CFR 170 and/or 171.

#### 15. Reasons for Change in Burden

The change in burden results from a reduction in operating plants (from 109 to 104) and the issuance of a rule to incorporate by reference the 1995 Edition with the 1996 Addenda of the ASME B&PV Code and ASME OM Code with certain limitations and modifications.

#### 16. Publication for Statistical Use

The information will not be published for statistical purposes.

17. Reason for Not Displaying the Expiration Date

The requirement is contained in a regulation. Amending the Code of Federal Regulations to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

None.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.