MANUAL CHAPTER 2517

WATTS BAR UNIT 2 CONSTRUCTION INSPECTION PROGRAM

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2517-01 PURPOSE

01.01 To provide the policies and requirements for the Watts Bar Nuclear Plant (WBN) Unit 2 construction inspection program during that unit's resumption of construction. The WBN Unit 2 construction activities have been suspended since the mid 1980's.

01.02 To establish a record of the inspection activities, applicant actions taken and technical issues resolved to support the decision for issuing an operating license.

2517-02 OBJECTIVES

02.01 To verify that the WBN Unit 2 inspection status for Inspection Manual Chapter (IMC) 2512, "Light Water Reactor Inspection Program – Construction Phase," is understood through a reconstitution of the inspection program.

02.02 To provide guidance for implementation, planning and scheduling completion of IMCs 2512; 2513, "Light Water Reactor Inspection Program – Preoperational Testing and Operational Preparedness Phase;" and 2514, "Light Water Reactor Inspection Program Startup Testing Phase."

02.03 To verify the proper implementation of the applicant's design control programs, the installation and testing of modifications, the Corrective Action Programs (CAPs) and Special Programs (SPs) listed in Attachment 2 of the WBN Unit 2 Reactivation letter dated August 3, 2007 (Reference 1 in Section 14 of this IMC), and the completion of any required actions for outstanding generic-communication issues.

02.04 To provide WBN Unit 2-specific requirements for the training and qualification of construction and post-construction inspectors to ensure that they have the necessary knowledge and skills to successfully implement the WBN Unit 2 construction and post construction inspection program.

02.05 To provide guidance on disposition and documentation of inspection findings.

02.06 To provide guidance on a WBN Unit 2-specific assessment program to identify performance trends and determine if an expansion of NRC inspections is necessary based on inspection findings.

02.07 To confirm the readiness of Structures, Systems, and Components (SSCs) at WBN Unit 2 to transition to IMC 2513 and IMC 2514 activities based on inspections of the applicant's programs.

02.08 To verify the operational readiness of WBN Unit 2 based on inspections during its construction, preoperational testing and operational preparedness, and startup testing phases.

02.09 To provide an objective and documented basis for recommendations on the issuance of an operating license for WBN Unit 2.

02.10 To provide guidance for the process to transition WBN Unit 2 into the IMC 2515 reactor oversight process (ROP).

02.11 To provide a mechanism for communicating the status of NRC's inspection activities, issues and corrective actions to the public and other external stakeholders.

2517-03 APPLICABILITY

03.01 This IMC was developed to provide inspection program guidance for the WBN Unit 2 construction program. This inspection program remains effective through the completion of IMC 2514 activities and the full implementation of the IMC 2515 reactor oversight process.

03.02 Archived IMCs, Inspection Procedures (IP) and temporary instructions (TI) will be re-issued and utilized to perform the required inspections or reviews of outstanding design, licensing, and regulatory issues for WBN Unit 2. Planned exceptions to IMCs, IPs, and TIs are discussed in Section 2517-08. These exceptions are necessary because the IMCs, IPs, and TIs are being re-issued without being updated and contain outdated references, NRC organizational codes, and processes.

03.03 WBN Unit 2 remains within the scope of the Commission's current Enforcement Policy for nuclear power plants in the construction phase. Traditional enforcement, i.e. the use of Severity Levels, will be used for any Severity Level IV and above non-compliances that are identified during inspections. Once a cornerstone has been determined to be monitorable under the ROP, then the enforcement for any findings from NRC inspections for that cornerstone should be administered in accordance with the Commission's current enforcement policy for operating reactors.

03.04 The transition of WBN Unit 2 to the full oversight provided by the ROP will be a phased approach on an individual cornerstone basis with the understanding that IMC 2515 and IMC 0305 cannot be fully applied until all cornerstones are monitorable by the ROP. Once a cornerstone is monitorable by the ROP, IMC 0609 "Significance Determination Process" (SDP) will be utilized to characterize the significance of findings resulting from the routine inspection effort of IMC 2515 for that cornerstone.

03.05 Region II may elect to pilot portions of 10 CFR Part 52 inspection program processes at WBN Unit 2 once they are developed. These pilots will be initially conducted in parallel with the process specified in this IMC and if successful, they may be used for the remainder of the inspection program, e.g., IP 35007, Quality Assurance Program Implementation During Construction.

2517-04 DEFINITIONS

04.01 Construction Activities. The set of activities associated with the construction of the WBN Unit 2 plant including but not limited to, procurement, erection, modifications, design control, quality inspection, corrective action program, training and qualification.

04.02 Construction Inspector. A qualified NRC staff member who inspects a sample of safety significant construction documents, programs and activities as directed by IMC 2512 in order to obtain a reasonable assurance that they adhere to the applicable design and licensing requirements.

04.03 Construction Deficiency Report. A reportable defect or failure to comply that could create a substantial safety hazard were it to remain uncorrected [refer to 10 CFR 50.55(e)].

04.04 Cross-Cutting Aspect. A performance characteristic associated with an inspection finding that is the most significant contributor to a performance deficiency. The different cross-cutting aspects which can be ascribed to an inspection finding are fully described in IMC 0305, "Operating Reactor Assessment Program."

04.05 Full Oversight of the ROP. For this IMC, the condition when all cornerstones are monitored by baseline inspection and either performance indicators (PIs) or compensatory inspections above the baseline in accordance with IMC 2515. The regulatory response for findings resulting from such inspections will be in accordance with the Action Matrix in IMC 0305.

04.06 Limited Oversight of the ROP. For this IMC, the condition when some, but not all, the cornerstones are monitorable by baseline inspection and either PIs or compensatory inspections above the baseline in accordance with IMC 2515. The regulatory response for findings resulting from such inspections for any of these cornerstones will be determined by Region II management.

04.07 Monitorable Under the ROP. For an individual cornerstone, it means that the IMC 2515 baseline inspection and either PIs or compensatory inspections above baseline performed due to the unavailability of PIs can provide sufficient information for determining applicant performance for that cornerstone of safety.

04.08 Performance Deficiency. An issue that is the result of an applicant not meeting a requirement or standard where the cause was reasonably within the applicant's ability to foresee and correct, and that should have been prevented. A performance deficiency can exist if an applicant fails to meet a self-imposed standard or a standard required by regulation.

04.09 Post-construction Activities. The set of activities associated with the Pre-operational Testing and Operational Preparedness Phase and the Startup Testing Phase.

04.10 Post-construction Inspector. A qualified NRC staff member who inspects a sample of safety significant post construction documents, programs and activities, as directed by IMCs 2513 and 2514, in order to obtain a reasonable assurance that they adhere to the applicable design and licensing requirements.

04.11 ROP Transition Plan. The requirements developed by Region II for determining when all the cornerstones of safety can be deemed to be ready to be monitorable under the ROP. The Transition Plan mainly consists of transition matrices developed by

Region II for each ROP cornerstone. Each matrix specifies the criteria which must be met for that cornerstone to be monitorable under the ROP.

04.12 WBN Unit 2 Reactivation Assessment Group. A WBN Unit 2 Reactivation Assessment Group (WRAG) consisting of participants from NRR (primarily DORL, and other divisions as necessary) and Region II that has the responsibility to oversee project completion and serve as the focal point for status of the project and for coordination between the Region and the Offices at Headquarters.

2517-05 RESPONSIBILITIES AND AUTHORITIES

05.01 Director, Office of Nuclear Reactor Regulation (NRR)

a. Provides overall program direction for the WBN Unit 2 inspection program.

b. Develops policies, programs, and procedures for performing inspections at WBN Unit 2 within or in addition to the WBN Unit 2 inspection program.

c. Assesses the effectiveness, uniformity, and completeness of implementation of the WBN Unit 2 inspection program.

d. Concurs with the decision of the Regional Administrator for Region II to transition WBN Unit 2 into the full oversight of the ROP.

05.02 Associate Director for Operating Reactor Oversight and Licensing (ADRO) Directs the development of the WBN Unit 2 inspection program within the Office of Nuclear Reactor Regulation (NRR).

05.03 Director, Division of Inspection and Regional Support (DIRS)

a. Manages WBN Unit 2 inspection program development within NRR.

b. Develops and prepares revisions to this IMC and other applicable inspection program documents.

c. Oversees regional implementation of WBN Unit 2 inspection program.

d. Serves as the NRR contact with the Region II office for WBN Unit 2 inspection program development and implementation.

05.04 Director, Division of Operating Reactor Licensing (DORL)

a. Serves as NRR contact in regard to licensing and licensing policy issues related to the WBN Unit 2 inspection program.

b. Assigns a Project Manager to address day-to-day matters concerning licensing issues for WBN Unit 2.

c. Coordinates with Region II to ensure licensing efforts and the inspection program are integrated.

05.05 Director, Office of Enforcement (OE)

a. Ensures consistent application of the enforcement process to violations of NRC regulations with the appropriate focus on the severity level of the finding.

b. Provides representatives as necessary to support the Escalated Enforcement process in order to ensure consistent application of the enforcement process.

05.06 Regional Administrator for Region II

a. Has responsibility and authority for the overall direction of the implementation of the WBN Unit 2 inspection program.

b. Establishes contacts with the applicant on inspection-related issues and any required corrective actions either directly or through the assigned Region II Branch Chiefs.

c. Maintains contacts with NRR and the Office of Nuclear Security and Incident Response (NSIR) on inspection related issues and the overall WBN Unit 2 inspection program either directly or through the assigned Region II Branch Chiefs. Ensures routine assessment of applicant performance in restart activities is considered.

d. Approximately 30 days before the operating license is scheduled to be issued, transmits the status report by memorandum to the Director of NRR. This memorandum will include the results of the region's inspection efforts; items that remain to be completed, with appropriate milestones; a statement concerning the implementation of the applicant's QA program; and the region's recommendations for issuance of an operating license. See IP 94300 for more information.

e. Makes the decision to allow WBN Unit 2 to transition completely to the full oversight of the ROP with the concurrence of the Director, NRR.

05.07 Watts Bar Unit 2 Reactivation Assessment Group

The WRAG consisting of participants from NRR (primarily DORL, and other divisions as necessary) and Region II has responsibilities to:

a. Oversee project completion.

b. Serve as the focal point for status of the project and for coordination between the Region and the Offices at Headquarters.

c. NRR Office Instruction LIC-110, Watts Bar Unit 2 License Application Review and the WRAG specific charter provide additional information for the group, including organization and reporting responsibilities.

2517-06 BACKGROUND AND OVERVIEW

The Tennessee Valley Authority (TVA) is the NRC-regulated applicant for the WBN Plant located in southeastern Tennessee. The WBN site has two Westinghouse-designed pressurized-water reactors. WBN has a unique licensing history and regulatory framework. TVA received construction permits for the units in 1973 under 10 CFR Part 50. Construction proceeded until 1985, when WBN Unit 1 was thought to be essentially complete and nearly ready to receive an Operating License (OL), as documented in NUREG-0847, "Safety Evaluation Report Related to the Operation of WBN Plant, Units 1 and 2," through Supplement 4.

As a consequence of the identification of a large number of deficiencies shortly before the WBN Unit 1 license was expected to be issued, the Nuclear Regulatory Commission (NRC) sent a letter to TVA on September 17, 1985, requesting information under 10 CFR 50.54(f), on TVA's plans to address the deficiencies for its operating and construction activities at Watts Bar and TVA's other nuclear facilities. In response to this letter, TVA developed a Nuclear Performance Plan (NPP) to address corporate and site-specific issues, establishing programs to address a wide variety of material, design, and programmatic deficiencies. WBN Unit 2 construction was suspended at about that time, with major structures in place and equipment such as reactor coolant system piping installed. On October 13, 1999, TVA filed a request for extension of the completion date for Unit 2, and by letter dated July 14, 2000, TVA informed the NRC that WBN Unit 2 meets the NRC's definition for deferred nuclear plant units as described in the Commission's Policy Statement on Deferred Plants, 52 FR 38077 (Oct. 14, 1987). On October 24, 2000, the NRC issued an order extending the Unit 2 construction permit to December 31, 2010.

The NRC staff reviewed components of the NPP for WBN Unit 1 and, as documented in NUREG-1232, Volume 4, "Safety Evaluation Report on Tennessee Valley Authority: Watts Bar Nuclear Performance Plan, Watts Bar Unit 1" (January 1990), the staff endorsed the general approaches of various corrective actions. The staff determined that when implemented thoroughly, the proposed corrective actions should address the identified deficiencies for WBN Unit 1; however, no final conclusions were stated for WBN Unit 2.

TVA addressed WBN Unit 1 construction quality issues as part of the implementation of its NPP. IMC 2512 was used to ensure that WBN Unit 1 was constructed in accordance with NRC approved design and construction standards. In 1985, the NRC had completed its initial IMC 2512 inspection program for the construction of WBN Unit 1. However, the initial WBN inspection program was found to have some weaknesses, which were identified and corrected after the construction inspection program was completed for Unit 1, but before the facility was licensed. Because of the complexity of the rework activities under the NPP, the NRC implemented a "reconstitution" of the construction inspection program to verify that construction related inspections

conducted after 1985 met the requirements of the IMC 2512 program. The results of this program were published in NUREG-1528, "Reconstitution of the IMC 2512 Construction Inspection Program for Watts Bar Unit 1." The staff had completed a substantial number of IMC 2512 inspections for WBN Unit 2, as well; however, TVA suspended WBN Unit 2 construction before the inspection program was completed, and the staff then suspended its licensing and inspection activities.

In a Staff Requirements Memorandum dated July 25, 2007 (ML072060688), the Commission stated that it "supports a licensing review approach that employs the current licensing basis for Unit 1 as the reference basis for the review and licensing of Unit 2," and that "Significant changes to that licensing basis would be allowed only where the existing backfit rule would be met as necessary to support dual unit operation." Licensing review guidance documents will reflect this guidance.

This IMC establishes the policy for the conduct of WBN Unit 2 inspection program covering WBN Unit 2's construction and startup process under IMCs 2512, 2513, and 2514. All aspects of the WBN Unit 2 construction project will be inspected in accordance with the Region II inspection plan and this IMC. Region II will manage all elements of the WBN Unit 2 inspections, e.g., reviews, assessment of applicant corrective actions, evaluation of findings, tracking open items, and transition to the ROP.

2517-07 GENERAL INSPECTION POLICY

This section covers the inspection procedure closure process, inspection of CAPs and SPs, and the use of inspectors. The inspection procedure closure process consists of three phases: reconstitution of WBN Unit 2 inspection status, inspection scoping, and inspection planning and completion. If documented inspection results do not provide adequate assurance that an IMC 2512 inspection procedure can be completed and re-inspection is not feasible, NRC Region II management will make a case-by-case decision concerning an alternative means to establish that the requirements had been satisfied. Region II will manage and coordinate the WBN Unit 2 inspection program, required technical support, and the verification that inspection hours are being properly charged.

07.01 Reconstitution of WBN Unit 2 Inspection Status.

Phase 1 in the inspection procedure closure process consists of conducting a reconstitution of IMC 2512 IPs. The reconstitution process will compare the results of previous inspections at WBN Unit 2, as documented in historical inspection reports, to the inspection requirements specified in IMC 2512 IPs. This comparison will determine the status of previously completed inspections in satisfying IP requirements. RII management will determine the applicable IPs listed in IMC 2512, Appendix I that need to be reconstituted. The assigned inspector will be provided the information required to perform the reconstitution for an inspection procedure. Information provided will include a historical library of previous construction inspection reports. The reconstitution results will be documented in the quarterly WBN Unit 2 construction resident inspector report.

07.02 Inspection Scoping.

Phase 2 in the inspection procedure closure process involves inspection scoping and consists of the following attributes:

a. Inspection scoping for each IP will be based on the results of the reconstitution of that IP and additional considerations. This will determine what IP attributes will need further inspections. Additional considerations will be determined based on screening such items as historical WBN allegations; applicable generic communications; historical construction deficiency reports (CDRs); WBN Unit 1 operating experience, such as Licensee Event Reports (LERs) and Level 1 and 2 Problem Event Reports (PERs), that could impact WBN Unit 2; historical open items such as Unresolved Items (URIs), Inspector Follow-up Items (IFIs), deficiencies, deviations and violations; new work or rework; and historical TIs other than those associated with CAPs and SPs.

As determined by the inspection scoping effort, the relevant IPs and historical TIs to be utilized for inspection will be reactivated if previously archived. The following IMC 2512 IPs will not be re-activated because they were determined not to be applicable to WBN Unit 2:

- IP 35051, Site Erected RV - QA Procedures
- IP 47051, Containment (Post-Tensioning) Procedure Review
- IP 47053, Containment (Post-Tensioning) Work Observation
- IP 47055, Containment (Post-Tensioning) Record Review
- IP 50082, Site Erected RV Procedures (Mechanical)
- IP 50083, Site Erected RV Work Observation (Mechanical)
- IP 50085, Site Erected RV Record Review (Mechanical)
- IP 55092, Site Erected RV Work Observation (Welding and NDE)

b The inspection scoping will address inspections for IMC 2512, IMC 2513, and IMC 2514. In addition, it will also include additional inspections identified by Region II management to address construction issues and NRR during the licensing review, and the transition of WBN Unit 2 into the full oversight of the ROP.

c. The inspection plan will include Problem Identification and Resolution (PI&R) inspections to verify that the applicant's processes for identifying, tracking, and resolving problems at WBN Unit 2 are adequate.

d. This IMC will establish the justification for allowing each cornerstone to be monitored by the ROP. Region II will develop a Transition Plan based on the Transition Matrices for the cornerstones so that the major steps are identified and defined (refer to Section 12 of this IMC).

e. The inspection plan will either refer to or include the detailed Transition Matrices to be developed by Region II for the seven cornerstones of safety.

07.03 Inspection Planning and Completion

Phase 3 in the inspection procedure closure process involves inspection planning and consists of the following attributes:

a. Region II will develop site-specific inspection plans and schedules to complete the inspections required by IMC 2512, IMC 2513, and IMC 2514 taking into account the considerations discussed in Section 07.02 above. This schedule will take into account IPs determined to be complete by the reconstitution effort, discussed in Section 07.01. The inspection plan should attempt to minimize the number of inspections by grouping similar issues and programs together. In addition, it should provide sufficient flexibility for rescheduling inspections to accommodate applicant schedule changes. The inspection schedule will use Reactor Programs System (RPS) and other specific tools to accomplish its purposes.

b. Region II and NRR will coordinate inspection and licensing activities to ensure that both efforts reflect the accepted facility design and as-built condition. Inspection results identifying differences between the as-built plant and the licensing basis will be communicated to NRR. Differences between the as-built plant and the licensing basis may require additional NRR licensing reviews. Similarly, NRR will notify Region II if licensing reviews indicate additional inspections are required.

c. Region II can increase the sample sizes of IPs or TIs as needed to satisfactorily complete the inspection without NRR concurrence if budgeted resources will still envelope the estimated resources to be expended after allowances for any alterations are made.

d. The inspection plan and schedule should allow for additional inspections that may be identified by Region II or NRR. Region II will establish tracking mechanisms for the large number of historical open items and CDRs that will initially be open and whose tracking numbers make them unsuitable to track using the RPS. New items such as URIs, CDRs, and VIOs will be tracked using the RPS.

e. Region II will identify and implement changes to the inspection plan based on the results of the WBN Unit 2 assessment process discussed in Section 2517-11.

07.04 Inspection of CAPs and SPs

Construction Phase TIs associated with CAPs and SPs are listed in Appendix A. They will not require reconstitution and will be completed. A significant amount of previous NRC inspection of construction activities associated with WBN Unit 2, especially prior to 1985, has occurred. However, except for common SSCs, very little actual inspection of applicant activities associated with CAPs and SPs for WBN Unit 2 has occurred. Region II will inspect these activities as they take place and will

verify that the applicant closure packages adequately address the related CAPs and SPs.

07.05 Use of Inspectors.

a. Region II should assign inspectors based on their qualifications. Specific qualification requirements for the construction inspectors are discussed in Section 2517-09. Generally, resident inspectors should verify applicant performance for all general activities while the regional specialists should perform more specialized activities (technical reviews associated with specific types of inspections for each specialist).

b. Programs and procedures should be reviewed once a performance problem is identified to ensure the applicant determines the cause and extent of condition. Inspectors will focus on the applicant's efforts to implement long-term resolutions.

07.06 Management Entrance and Exit Meetings. In general, inspectors should use the guidance on management entrance and exit meetings in IMC 2515, section 12 as supplemented by the following:

a. All inspection results to be included in an inspection report must be covered in the exit meeting. This includes both findings and observations.

b. Inspections performed in support of the resident's office are generally covered by the resident's quarterly exit meeting. However, an interim exit meeting is required for inspections requiring individual inspection plans. In addition, unique inspections performed by visiting inspectors working independently, may require interim exit meetings especially if their results will be included in an inspection report.

2517-08 BASIC REQUIREMENTS/POLICY FOR INSPECTION PROGRAM

This section provides the basic requirements and policy for the WBN Unit 2 construction inspection program. It also identifies certain exceptions to the requirements of IMC 0040, IMC 2512, IMC 2513 and IMC 2514 and offers alternate approaches to meet their intent. Although this section discusses three different phases of inspection (construction, preoperational testing and startup testing), all inspections for a particular phase do not need to be completed before entering the next phase.

08.01 Level of Effort. The level of effort will be determined by Region II by taking into account the total estimated resources allotted in the budget developed jointly by Region II and NRR. Inspectors should charge to the IPs, TIs and activity codes listed in Appendix A. Every applicant program, (e.g., CAP or SP) will be inspected per the following:

a. For each applicant program, inspect its programmatic aspects only once. This inspection should review the implementing administrative processes to ensure

that quality assurance is instilled in the program. All applicant CAPs and SPs are listed in Attachment 2 of the WBN Unit 2 Reactivation letter dated August 3, 2007 (Reference 1 in Section 13 of this IMC). If the programmatic aspects of a those aspects do program were previously verified by NRC inspections for WBN Unit 1, then not have to be re-verified for WBN Unit 2 if it has not been altered, there is no potential impact on the program as a result of changing the vendor, construction and the NRC determines that the program is acceptable for WBN Unit 2.

b. An appropriate representative sample of the implementation results for each applicant program shall be inspected. The acceptance criteria for those results for each CAP or SP will be as stated in the respective package, test procedure verifying the functionality of the results, or in the basis document for the program. Region II WBN Unit 2 project management will approve alternate inspection approaches where standard inspections are impractical.

08.02 Implementation of IMC 0040, IMC 2512, IMC 2513 and IMC 2514. The WBN Unit 2 construction inspection program will comply with the requirements delineated in IMC 0040 for document preparation, IMC 2512 for construction inspection activities, IMC 2513 for preoperational testing inspection activities and IMC 2514 for startup and testing inspection activities, using the alternate approaches described below.

a. The WBN Unit 2 construction inspection program guidance documents used to implement this program, such as IMCs, IPs and TIs, will not be updated prior to issuance.

b. Since the archived IPs and TIs are not being revised, their format will not comply with the current requirements of IMC 0040.

c. The inspector can consult Attachment 1 of reference 1 to determine the applicability of the various Regulatory Guides for WBN Unit 2 along with the corresponding level of compliance. The inspector may also seek clarifications regarding the correct reference documents used at WBN Unit 2 in the current revision of the Watts Bar Operating License application Final Safety Analysis Report. If questions regarding the correct references to use still persist, the inspector is directed to contact DCP or the WBN Unit 2 Project Manager for direction.

d. An alternate approach to Section 07.03 of IMC 0040 will be used for the WBN Unit 2 construction project. The CAP and SP TIs and other TIs determined to require inspection will be reopened for use at WBN Unit 2. These TIs may remain open for longer than 24 months if necessary, in order to accommodate the construction schedule of WBN Unit 2. In cases where technical help is needed and the technical contacts listed in the TIs are no longer available, the inspectors should contact DCP or the WBN Unit 2 Project Manager for guidance.

e. Some of the processes listed in the construction IMCs are no longer utilized. In this case, the alternate processes described in this IMC should be used. An

example of that is Section 2517-11 of this IMC which provides an alternate applicant performance assessment to the Systematic Assessment of Licensee Performance (SALP). If after reviewing this chapter questions remain regarding a specific process, the inspector is directed to contact DCP or the WBN Unit 2 Project Manager for guidance.

f. To the extent practical, IMC 2512 will be used to perform inspections during the construction phase of the WBN Unit 2 project. The reconstitution effort described in Section 07 of this IMC may result in some deviations from the requirements of IMC 2512. This may be due to the inability to find specific inspection reports and/or the practicality to perform certain inspections. In these cases, Region II management will make a case-by-case decision regarding acceptable alternate means to establish that the requirements have been satisfied. An example of an acceptable justification may be a WBN Unit 1 inspection report for a similar activity. In all cases, the intent of IMC 2512 will be met.

g. At the discretion of Region II and NRR management, the NRC may implement the Construction Appraisal Team (CAT) inspection program described in IMC 2512, Section 08.01 for WBN Unit 2.

h. Consistent with the exceptions identified above, IMC 2513 and IMC 2514 will be used in their entirety to perform inspections during the preoperational testing and operational preparedness phase and the startup testing phase of the WBN Unit 2 project.

2517-09 INSPECTOR TRAINING AND QUALIFICATIONS

Only staff members who have been previously qualified as inspectors through IMC 1245 or IMC 1252 will be qualified to this section. The training completed by fully qualified inspectors combined with their field experience can be used, at management's discretion, to establish equivalency for many of the activities specified herein. The initial training and qualification requirements are divided into two phases: the construction phase and the post-construction phase. Refresher and continuing training activities are required as a means for updating and maintaining qualification to keep up-to-date on changes to the inspection program and as a result of lessons learned from industry events and agency activities. Just-in-time training and additional specialized training may also be required to support critical inspection activities. Detailed requirements are listed in Appendix D.

2517-10 INSPECTION FINDINGS AND ENFORCEMENT

10.01 Reports. Routine WBN Unit 2 construction inspection reports will be issued on a quarterly basis. Appendix B will be used to evaluate and document construction inspection observations and to classify them as findings, if appropriate, after they have been placed in context and assessed for significance. The findings will then be

categorized as violations (VIO), non-cited violations (NCV), minor violations, open items, or. URIs

Traditional enforcement will be in effect for the construction of WBN Unit 2 until a specific cornerstone is transitioned to the ROP as discussed in section 12 of this IMC. Findings from inspections will be processed in accordance with 10 CFR Part 2 and applicable enforcement guidance using traditional enforcement tools, e.g., the use of severity levels and civil penalties as appropriate. The determination of the severity level of an apparent violation should consider its significance per Appendix B, Section 05, and the Commission's current Enforcement Policy.

10.02 Cross-cutting Aspects. Inspectors will use the applicable guidance in IMC 0305 to review inspection findings to identify the cause(s) associated with the cross-cutting areas, if any exists. The inspectors should identify the cause(s) that provide(s) the most meaningful insight into the performance deficiency and document it with the associated finding in the Inspection Report (IR). The inspectors will use the cross-cutting aspects defined in IMC 0305.

10.03 NRC Identified and Self-revealing NCVs. NRC identified and self-revealing NCVs will be documented in an IR. Initially, NCVs will not be closed based on the applicant entering them into their corrective action program but will be kept open pending a follow-up inspection to verify the adequacy of the applicant's corrective actions. The results of the follow-up inspection will be documented in an IR and the corresponding open item will be closed. This practice will stop when the applicant's corrective action program is deemed effective. At this point, NCVs will be closed based on the applicant entering them into their corrective action program and their corrective actions will be sampled during PI&R inspections.

10.04 Applicant-identified Violations. The NRC will consider not issuing a Notice of Violation (NOV) for applicant-identified items that would fall into the severity level IV category and if the NCV criteria are met. This consideration will be based on the results of the NRC's review of the applicant's corrective action program. Applicant-identified violations that are severity level III or higher will be documented in an Inspection Report and a NOV will be issued. Applicant-identified violations are those items found through their own efforts rather than NRC inspections. The NRC will sample these items for documentation in the corrective action program, adequacy of extent of condition reviews, and appropriate resolution.

Applicant-identified NCVs will be documented in Section V.X2 of the report. The documentation will include the requirement(s) violated, describe how it was violated, identify the applicant's corrective action tracking number(s), and provide a very brief justification why the violation is not greater than severity level IV. Section V.X2 must include the following introductory paragraph:

> "The following violations of very low safety significance were identified by the applicant and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy for being dispositioned as a Non-Cited Violation."

10.05 ROP Findings. For those cornerstones monitorable by the Reactor Oversight Process (ROP), any noncompliances will be documented and reported following the applicable guidance in IMC 0612. The significance of noncompliances will be assessed in accordance with the SDP per IMC 0609 or through the current enforcement policy. Any findings will be dispositioned in accordance with the ROP for such cornerstones with enforcement of these findings being handled in accordance with Commission's current Enforcement Policy.

10.06 The same inspection report may include noncompliances assessed by Appendix B, if the ROP is not applicable, and noncompliances assessed by IMC 0612, if its cornerstone is monitorable by the ROP.

2517-11 ASSESSMENT

11.01 Overall Assessment Process. Applicant performance will be reviewed over a 12-month period. The 12-month assessment cycle will be January 1 through December 31 of each year. The assessments will be based on the findings and conclusions documented in NRC IRs. Overall applicant performance will be based on Severity Level I, II, and III violations and substantive cross-cutting issues. Assessment of cornerstones that have been transitioned to the ROP will be completed under the ROP assessment process.

11.02 Performance Reviews. The assessment process consists of a series of reviews which are described below.

a. Quarterly Review. The resident inspectors and Chief, Construction Projects Branch 3 (CPB3) will conduct a quarterly review using the inspection findings and inspection report conclusions compiled over the previous twelve months. The review will be conducted within five weeks after the conclusion of each quarter of the annual assessment cycle. An assessment follow-up letter will be issued if the quarterly review identified significant performance issues that resulted in changes to planned inspections. If required, the assessment follow-up letter should be issued within two weeks after completing the quarterly review.

b. Mid-Cycle Review. Region II will conduct mid-cycle reviews using documented inspection findings and inspection report conclusions compiled over the previous twelve months. The output of the mid-cycle review is a mid-cycle letter.

In preparation for the mid-cycle review, Region II will prepare a summary of all inspection findings (including associated cross-cutting aspects) and documented conclusions related to applicant performance conducting special programs, a summary of open allegations, and proposed inspections.

The mid-cycle review is chaired by the DCP Division Director or his/her designee. The DCI branch chiefs shall coordinate with the Chief, CPB3, to provide adequate support for the presentation and development of the inspection plan. Other participants should include representatives from the

Division of Operating Reactor Licensing (DORL), applicable resident inspectors and a representative from the Division of Inspection and Regional Support (DIRS). Additional participants may include the regional allegations coordinator or the agency allegations advisor, and any other additional resources deemed necessary by the regional office. The following representatives should also participate if there are pertinent performance issues that should be factored into the performance assessment: Office of Investigations, Office of Enforcement, Office of Nuclear Security and Incident Response, and Office of Research

The mid-cycle letter shall be issued within nine weeks of the end of the completion of the second quarter assessment period. Refer to IMC 0305 for examples of the types of items to be included in the letter.

c. End-of-Cycle Review. Region II will conduct an end-of-cycle review using documented inspection findings and inspection report conclusions compiled over the previous twelve months. This review incorporates activities from the mid-cycle and quarterly reviews.

In preparation for the end-of-cycle review, Region II will prepare a summary of all inspection findings (including associated cross-cutting aspects) and documented conclusions related to applicant performance conducting special programs, a summary of open allegations, and proposed inspections.

The end-of-cycle review is chaired by the Region II Deputy Regional Administrator for Construction or his/her designee. The DCI branch chiefs shall coordinate with the Chief, CPB3, to provide adequate support for the presentation and development of the inspection plan. Other routine participants should include DRP and DRS branch chiefs, representatives from the Division of Operating Reactor Licensing, applicable regional and resident inspectors, a representative from the Division of Inspection and Regional Support (DIRS), and any other additional participants deemed necessary by the regional office. The following representatives should also participate if there are pertinent performance issues that should be factored into the performance assessment: the regional Allegations Coordinator or the Agency Allegations Advisor, Office of Investigations, Office of Enforcement, Office of Nuclear Security and Incident Response, and Office of Research.

The annual assessment letter shall be issued within nine weeks of the end of the assessment cycle. Refer to IMC 0305 for examples of the types of items to be included in the letter.

11.03 Annual Meeting with Applicant. Region II will conduct an end of cycle public meeting in the vicinity of the plant to communicate the results to the local stakeholders. Region II will coordinate with NRR for their participation in the meeting. This meeting should be conducted within 16 weeks of the end of the cycle. Region II will use the applicable portions of IMC 0305 as guidance for conducting this meeting. The WBN Unit 2 annual meeting will not be combined with the WBN Unit 1 annual meeting.

11.04 Assessment Areas. The following assessment areas and associated attributes will be used to assess WBN Unit 2 performance. Depending on the stage of the construction project, not all assessment areas would be applicable during a given assessment period.

a. Quality Assurance Program. The requirements of the quality assurance program are effectively implemented.

b. Management Oversight and Control.

1. Construction Activities. Construction activities are conducted in accordance with the construction permit and quality assurance program. The applicant recognizes non-routine events affecting safety and effectively implements the corrective action program. Effective controls are in place to prevent adverse affects to WBN Unit 1 due to construction activities.

2. Maintenance Activities. Maintenance activities are conducted in accordance with maintenance procedures and the quality assurance program. Activities are effective in preparing SSCs for operation. Effective controls are in place to prevent adverse affects to WBN Unit 1 due to maintenance activities.

3. Engineering Activities. Engineering activities are conducted in accordance with plant procedures and the quality assurance plan. Engineering activities are effective in ensuring the plant is constructed in accordance with the approved design and authorized design changes. Effective controls are in place to prevent adverse affects to WBN Unit 1 due to engineering activities.

4. System Turnovers. System turnovers are conducted in a controlled manner. Procedures are effectively implemented to maintain plant systems until transition to operations. Effective controls are in place to prevent adverse affects to WBN Unit 1 due to system turnover activities.

5. Pre-Operational Activities. Pre-operational activities are effective and ensure systems and components important to the safety of the plant are fully tested to demonstrate that they satisfy design requirements. Management controls and procedures necessary for operation of the facility are effectively implemented. Effective controls are in place to prevent adverse affects to WBN Unit 1 due to pre-operational activities.

6. Startup Testing Activities. Startup testing activities are effectively implemented to provide for the safe startup testing of the facility during both routine and upset conditions, to recognize non-routine events affecting safety, utilize an internal reporting system, and to identify and execute corrective actions to return the facility to a safe and secure pre-operational condition after possible upsets. Effective controls are in place to prevent adverse affects to WBN Unit 1.

7. Training and Qualification of Plant Personnel. The training and qualification program is effective in training of personnel including managers, designers, technical staff, construction personnel, technicians, Inspectors and other personnel whose level of knowledge is relied on for safety.

c. Operational Readiness Activities. Activities completed during the operational preparedness phase to support the transition from construction to operation. Since Watts Bar is a dual plant site with one operating plant, WBN Unit 1, the assessment of these activities should take into consideration dual plant operation and the potential impact of WBN Unit 2 activities on the safe operation of WBN Unit 1.

1. Operations. The operational procedures and the technical specifications are adequate and support dual plant operation. The operations department is well staffed with qualified individuals whose training covers dual plant operation.

2. Fire Protection. The applicant has established an effective fire protection program to assure the protection of safety related SSCs.

3. Surveillance Testing. The applicant has established an effective surveillance testing program that takes into account dual plant operation, and has instituted adequate test and measurement equipment controls.

4. Plant Water Chemistry. The applicant has identified the plant systems affecting water chemistry and has instituted effective water chemistry control and analysis processes to assure the protection of impacted safety related SSCs.

5. Radiation Safety. The radiation safety program is effective in protecting workers' health and safety from exposure to radiation. The program is effective in protecting public health and safety and the environment from exposure to radioactive material released into the public domain.

6. Security. The security program is effective in protecting the plant against (1) the design basis threat of radiological sabotage from external or internal threats, and (2) the theft or loss of radioactive materials.

7. Emergency Preparedness. The emergency preparedness (EP) program is effective in protecting the public health and safety in the event of a radiological emergency."

d. Other. These are issues that may arise on an occasional basis, but are not included in the review on a routine basis unless the significance of the issue rises to a level that is perceived to affect the quality of applicant performance. An example of an item that would be in this category is quality of application and licensing submittals.

11.05 Substantive Cross-Cutting Issues. WBN Unit 2 performance reviews will be based on conclusions and findings documented in NRC IRs. The assessment will also review cross-cutting aspects associated with the inspection findings. Region II will use the guidance contained in IMC 0305 to identify cross-cutting aspects and themes.

A substantive cross-cutting issue would exist in the human performance or PI&R cross-cutting areas if all of the following criteria were met:

- There are four or more findings with cross-cutting aspects for the current 12-month assessment period with the same documented cross-cutting aspect (i.e., a cross-cutting theme (s)).

- The agency has a concern with the applicant's scope of efforts or progress in addressing the cross-cutting theme.

A substantive cross-cutting issue would exist in the Safety Conscious Work Environment (SCWE) cross-cutting area if, during the extended time frame of an 18 month assessment period (the current 12 month assessment period and the prior 6 months) the following two criteria are met:

- A finding with a cross-cutting aspect in the SCWE cross-cutting area. Observations or violations that are not findings should not be considered in this determination, OR

  The applicant has received a chilling effect letter OR,

  The applicant has received correspondence from the NRC which transmitted an enforcement action with a severity level of I, II, or III, and which involved discrimination, or a confirmatory order which involved discrimination.

  Additionally, for any of the situations which exist, there is an impact on safety conscious work environment that was not isolated.

- The agency has a concern with the applicant's scope of efforts or progress in addressing the individual and collective performance deficiencies.

Refer to IMC 0305 for more details.

11.06 NRC Actions in Response to Applicant Performance Issues. The mid-cycle/end-of-cycle assessment panels will determine the NRC response to significant performance issues. Significant performance issues are defined as:

- Severity Level I, II, and III violations

- Substantive cross-cutting issue

To the extent possible, Exhibit 2 to IMC 2505, Construction Response Table, should be used as a guide. Possible NRC responses as a result of significant performance issues include but are not limited to:

- Increase sample sizes for IPs focused in the area of concern.
- Require applicant root cause evaluation and corrective action with NRC oversight.
- Focused NRC inspection in area of concern.
- Focused NRC team inspection in area of concern.
- Reactive NRC team inspection in area(s) of concern.
- Applicant performance improvement plan with NRC oversight.
- Applicant senior managers meet with NRC management.

At the discretion of Region II management, the regulatory responses prescribed by the ROP Action Matrix may be used even though the Action Matrix is not in effect prior to the transition of WBN Unit 2 to the ROP. As an example, following startup a performance deficiency associated with a mitigating system will be assessed using the SDP. However, the Mitigating System Cornerstone may not have been transitioned to the ROP because the performance indicators are not valid due to insufficient historical data. Because the performance deficiency has been assessed using the SDP, the ROP Action Matrix could then be used to determine the appropriate regulatory response.

2517-12 TRANSITION TO THE ROP ACTIVITIES

12.01 The overall approach for transitioning to the ROP will be in accordance with this IMC as stated below.

a. The transition of WBN Unit 2 to the ROP will be a phased approach on an individualized cornerstone basis. The basis for why a certain cornerstone will be declared ready to be monitorable under the ROP will be contained in the WBN Unit 2 ROP Transition Plan which shall be developed by Region II prior to the end of implementation of IMC 2513 or no later than the beginning of implementation of IMC 2514 at WBN Unit 2.

b. The Region II Transition Plan will adhere to the guidelines stated in this IMC and will be composed of Transition Matrices for each cornerstone. Each Transition Matrix will contain all the records that verify that a cornerstone is fully monitorable (what inspection criteria were performed and when; whether inspection criteria were completed in their entirety or just in part with any exceptions or deviations noted; what significant open items, startup issues, licensing actions, or regulatory issues were resolved; the identified inspection findings and the corresponding applicant corrective actions). Based on the

decision of Region II management with the concurrence of NRR, that cornerstone will be placed under the oversight of the ROP.

c. The ROP Transition Plan should specify the required inspection procedures to be performed, when one or several cornerstones are ready to be monitored by the ROP. The transition plan should also include verification that all startup issues, if applicable, have been resolved and confirm that the applicant's corrective actions were effective.

d. The ROP Web Site will be updated for WBN Unit 2 inspection findings and available WBN Unit 2 PI results when all cornerstones are monitorable by the ROP and the Action Matrix is put into effect.

e. The transfer of WBN Unit 2 to the full oversight of the ROP will be by written approval of the Regional Administrator with the concurrence of NRR. This transfer may occur even if all PIs are not available, provided compensatory inspections are conducted as provided for by IMC 2515. Prior to this point in time, identifying the need for additional NRC inspections and determining the response to inspection findings or events will be by the assigned Region II branch chiefs in accordance with the assessment process in Section 11 of this IMC. Subsequently, the ROP will dictate what inspections should be implemented and what PIs should be reviewed in determining the performance of WBN Unit 2 and also what will be the regulatory response for inspection findings or events.

2517-13 INTERFACE WITH RELATED PROGRAMS

13.01 Emergency Preparedness, Security and Safeguards Inspections. As with all other cornerstones, Region II will determine, as early as possible, when the EP and security cornerstones are ready to be monitored under the ROP baseline and PIs. NRR and Region II will work closely with NSIR to ensure the EP and physical protection inspections are appropriate for any specific WBN Unit 2 activities that are unique to WBN Unit 2.

2517-14 REFERENCES

1. W. R. McCollum, Jr., to U.S. Nuclear Regulatory Commission, Watts Bar Nuclear Plant (WBN) – Unit 2 – Reactivation of Construction Activities", dated August 3, 2007. (ADAMS #ML072190047)

END

Appendices:
A. Inspection Procedures, Temporary Instructions and Activity Codes
B. Documenting Inspection Findings
C. Minor Violations and Findings

D. WBN Unit 2 Construction Inspector Qualification Requirements

APPENDIX A

Inspection Procedures, Temporary Instructions, and Activity Codes

1. PURPOSE

To list applicable IPs, TIs, and activity codes for conducting the WBN Unit 2 construction inspection program.

2. BACKGROUND

WBN Unit 2 construction was suspended in 1985. Since then, the NRC inspection processes and tracking systems have changed. The construction inspection program has undergone revisions including deletions and additions. In addition, specialized TIs were developed to address construction issues identified at the TVA sites during the 1980's including activity codes for tracking inspection efforts.

3. DISCUSSION

The IPs or TIs identified below are available for use in Region II's inspection plan and schedule. Region II will determine the applicability of the TIs and IPs to WBN Unit 2 when developing the inspection plan and schedule. The activity codes for the WBN Unit 2 project are provided to allow consistent tracking of resources.

a. Inspection Procedures

Region II will use the IPs listed in:
IMC 2512 Appendix I, LWR – Construction Phase Inspection Procedures
IMC 2513 Appendix A, LWR – Preoperational Testing Phase
IMC 2513 Appendix B, LWR – Operational Preparedness Phase
IMC 2514 Appendix A, Startup Test Program Inspection Procedures

b. Temporary Instructions

Temporary Instruction (TI) No.	Temporary Instruction Title
TI 2512/15	Inspection of Watts Bar Nuclear Plant Employee Concerns Program
TI 2512/16	Inspection of Watts Bar Nuclear Plant Cable Issues Corrective Action Program
TI 2512/17	Inspection of Watts Bar Nuclear Plant Cable Tray and Supports Corrective Action Program Plan
TI 2512/18	Inspection of Watts Bar Nuclear Plant Electrical Conduit and Supports Corrective Action Program Plan
TI 2512/19	Inspection of Watts Bar Nuclear Plant Design Baseline Corrective Action Program Plan

TI 2512/20	Inspection of Watts Bar Nuclear Plant Electrical Issues Corrective Action Program Plan
TI 2512/21	Inspection of Watts Bar Nuclear Plant Equipment Seismic Corrective Action Program Plan
TI 2512/22	Inspection of Watts Bar Nuclear Plant Fire Protection Corrective Action Program Plan
TI 2512/23	Inspection of Watts Bar Nuclear Plant Hanger Update Corrective Action Program Plan
TI 2512/24	Inspection of Watts Bar Nuclear Plant Heat Code Traceability Corrective Action Program Plan
TI 2512/25	Inspection of Watts Bar Nuclear Plant HVAC Duct and Supports Corrective Action Program Plan
TI 2512/26	Inspection of Watts Bar Nuclear Plant Instrument Lines Corrective Action Program Plan
TI 2512/27	Inspection of Watts Bar Nuclear Plant Piece Parts/Procurement Corrective Action Program Plan
TI 2512/28	Inspection of Watts Bar Nuclear Plant QA Records Corrective Action Program Plan
TI 2512/29	Inspection of Watts Bar Nuclear Plant Q-List Corrective Action Program Plan
TI 2512/30	Inspection of Watts Bar Nuclear Plant Seismic Analysis Corrective Action Program Plan
TI 2512/31	Inspection of Watts Bar Nuclear Plant Vendor Information Corrective Action Program Plan
TI 2512/32	Inspection of Watts Bar Nuclear Plant Welding Corrective Action Program Plan
TI 2512/33	Inspection of Watts Bar Nuclear Plant Concrete Quality Special Program
TI 2512/34	Inspection of Watts Bar Nuclear Plant Containment Cooling Special Program
TI 2512/35	Inspection of Watts Bar Nuclear Plant Control Room Design Review Special Program
TI 2512/36	Inspection of Watts Bar Nuclear Plant Environment Qualification Special Program
TI 2512/37	Inspection of Watts Bar Nuclear Plant Master Fuse List Special Program
TI 2512/38	Inspection of Watts Bar Nuclear Plant Mechanical Equipment Qualification Special Program
TI 2512/39	Inspection of Watts Bar Nuclear Plant Microbe Induced Corrosion Special Program
TI 2512/40	Inspection of Watts Bar Nuclear Plant Moderate Energy Linebreak Special Program
TI 2512/41	Inspection of Watts Bar Nuclear Plant Radiation Monitoring System Special Program
TI 2512/42	Inspection of Watts Bar Nuclear Plant Soil Liquefaction Special Program
TI 2512/43	Inspection of Watts Bar Nuclear Plant Special Program Use-As-Is CAQRS Special Program

c Activity Codes

The following activity codes are to be used for time and labor reporting for construction inspection-related effort at Watts Bar, Unit 2:

Activity Code	Description
OA	Direct inspection effort - Time spent actually conducting inspections related to Watts Bar, Unit 2, construction activities. This includes conducting any IPs, TIs, or any other procedures as determined by Region II management.
OAD	Watts Bar, Unit 2, routine inspection documentation – Time spent documenting the results of Watts Bar, Unit 2, construction inspections charged to OA.
OAP	Watts Bar, Unit 2, routine inspection preparation – Time spent preparing for Watts Bar, Unit 2, construction inspections charged to OA.
AF	Watts Bar, Unit 2, allegation followup – Time spent on inspecting allegations related to Watts Bar Unit 2.
AFT	Watts Bar, Unit 2, allegation followup travel – Time spent traveling to and from Watts Bar, Unit 2, to support Watts Bar, Unit 2, allegation followup.
BJ2	Watts Bar, Unit 2, allegation followup (prep/doc) – Time spent preparing for and documenting the results of allegation followup at Watts Bar, Unit 2.
AT	Watts Bar, Unit 2, construction inspection related travel - Time spent traveling to and from Watts Bar, Unit 2, to support Watts Bar, Unit 2, construction inspections
ENF	Watts Bar, Unit 2, construction inspection enforcement - Time spent processing Watts Bar, Unit 2, construction inspection findings.
COM	Watts Bar, Unit 2, construction inspection routine communication - Time spent by SRI/RI in non-inspection related activities such as drop-in visits by plant management, tours with NRC management, teleconferences and discussions with NRC management.
PS	Watts Bar, Unit 2, plant status - Time spent by SRI/RI in gathering and analyzing information regarding current plant status and ongoing activities that are directly applicable to inspection planning. Control room and plant walkdowns,

attendance at applicant status meetings, and inspection entrance and exit meetings.

ASM — Watts Bar, Unit2, assessment - All time spent evaluating assessment inputs and determining follow-up action. This includes preparation, documentation, and conduct of Quarterly, Mid-Cycle, End-of-Cycle Reviews, Annual Assessment Meetings, and Meetings with Local Officials; and time spent scheduling both baseline and supplemental inspection activities.

Resource requirements for these inspection activities will be budgeted in the appropriate PA budget code and will be tracked during the period prior to Watts Bar 2 transition to IMC 2515. After the date of Watts Bar 2 transition to IMC 2515, time and labor reporting for inspection-related effort will be done according to standard ROP reporting procedures.

APPENDIX B

Documenting Inspection Results

1. PURPOSE

To provide guidance for documenting WBN Unit 2 construction inspection results.

2. BACKGROUND

WBN Unit 2 is the only construction site currently being inspected under the 10 CFR Part 50 construction inspection program. The IMC that provided guidance for documenting inspection findings for a construction site no longer exists. This appendix was developed using the 1998 version of IMC 0610.

3. DEFINITIONS

Apparent violation. A potential noncompliance with a regulatory requirement that has not yet been formally cited as a violation in a Notice of Violation or order.

Applicant. The applicant for or the holder of an NRC license, construction permit, or combined license.

Applicant-Identified: For the purpose of this IMC, "applicant-identified" findings are those findings that are not NRC-identified or self-revealing. Most, but not all, applicant-identified findings are discovered through an applicant program or process. Some examples of applicant programs that likely result in such findings are testing, drills, critiques, event assessments, evaluations, or audits conducted by or for the applicant. Other examples of applicant-identified findings are those findings that are identified by the applicant as a result of their deliberate and focused observation during the course of performing their normal duties.

Closed Item. A matter previously reported as a noncompliance, an exercise weakness, an unresolved item, an inspection follow-up item, or a construction deficiency report that the inspector concludes has been satisfactorily resolved, based on information obtained during the current inspection.

Conclusion. As used in this chapter, an assessment of inspection results to the broader context of an applicant program.

Draft Inspection Report. Any version of the inspection report before its official issuance.

Escalated Enforcement Action. A Notice of Violation for any Severity Level I, II, or III violation (or problem), or a civil penalty or order based on a violation.

Finding. A NRC-identified or self-revealing issue of concern that is associated with an applicant performance deficiency. Findings may or may not be associated with a regulatory requirement and, therefore, may or may not result in a violation.

Inspection. The examination and assessment of any applicant activity to determine its effectiveness, to ensure safety, and/or to determine compliance.

Inspection Document. Any material obtained or developed during an inspection that is considered to be an NRC record (see below).

Integrated Inspection Reports. A single inspection report that combines inputs from all inspections (resident, in-office document review, and/or one or more visits by regional or headquarters inspectors) conducted within a specific period.

Minor Violation. A violation that is less significant than a Severity Level IV violation, is not the subject of formal enforcement action, and is not usually described in inspection reports or inspection records.

Non-Cited Violation (NCV). A violation for which the staff chooses to exercise discretion and refrain from issuing a 10 CFR Part 2.201 Notice of Violation.

Noncompliance. A violation, non-cited violation, or nonconformance.

Nonconformance. A vendor's or certificate holder's failure to meet a contract requirement related to NRC activities (e.g., 10 CFR Part 50, Appendix B), where the NRC has not placed the requirement directly on the vendor or certificate holder.

Notice of Violation (NOV). A formal written citation in accordance with 10 CFR 2.201 that sets forth one or more violations of a legally binding regulatory requirement.

NRC Record. Any written, electronic, or photographic record under legal NRC control that documents the policy or activities of the NRC or an NRC applicant (see also the definition in 10 CFR Part 9).

Observation. A fact; any detail noted during an inspection.

Open Item. A matter that requires further inspection. The reason for requiring further inspection may be that the matter has been identified as a noncompliance, unresolved item, inspector follow-up item, or a construction deficiency report.

Performance Deficiency. An issue that is the result of an applicant not meeting a requirement or standard where the cause was reasonably within the applicant's ability to foresee and correct, and that should have been prevented. A performance deficiency can exist if an applicant fails to meet a self-imposed standard or a standard required by regulation.

Potentially Generic Issue. An inspection finding that may have implications for other licensees, certificate holders, and vendors whose facilities or activities are of the same or similar manufacture or style.

Regulatory Commitment. An explicit statement to take a specific action, agreed to or volunteered by an applicant, where the statement has been submitted in writing on the docket to the NRC.

Requirement. A legally binding obligation such as a statute, regulation, license condition, technical specification, or order.

Self-revealing. For the purpose of documentation (versus enforcement), self-revealing findings are those findings that become self-evident and require no active and deliberate observation by the applicant or NRC inspectors to determine whether a change in process or equipment capability or function has occurred. Additionally, self-revealing findings will normally be documented in the inspection report for the time period in which the self-revealing event occurred. Self-revealing findings become readily apparent to either NRC or applicant personnel through a readily detectable degradation in the material condition, capability, or functionality of equipment or plant operations. Self-revealing findings are treated the same as NRC-identified findings for the purposes of documenting them in inspection reports. Some examples of self-revealing findings include those resulting from: failure of emergency equipment to operate; unanticipated or unplanned actuations; obvious failures of fluid piping or plant equipment; and identification of large quantities of water in areas where you would not normally expect such a condition; and conditions revealed by an alarm.

Unresolved Item. A matter about which more information is required to determine whether the issue in question is an acceptable item, a nonconformance, or a violation.

Vendor. A supplier of products or services to be used in an NRC-licensed or permitted facility or activity. In some cases, the vendor may be an NRC or Agreement State licensee (e.g., nuclear fuel fabricator, radioactive waste broker) or the vendor's product may be required to have an NRC Certificate of Compliance (e.g., certain transport packages such as waste casks or radiography devices).

Violation. The failure to comply with a legally binding regulatory requirement, such as a statute, regulation, order, license condition, or technical specification.

Willfulness. An attitude toward compliance with requirements that ranges from the careless disregard for requirements to a deliberate intent to violate or to falsify.

4. RESPONSIBILITIES

All NRC inspectors conducting inspections at WBN Unit 2 are required to prepare inspection reports in accordance with the guidance provided in this attachment. General and specific responsibilities are listed below.

4.01 General Responsibilities. Each inspection of WBN Unit 2 should be documented in a report consisting of a cover letter, a cover page, an executive summary, and inspection details.

4.02 Report Writing.

a. Inspectors have the primary responsibility for ensuring that observations and findings are accurately reported, that referenced material is correctly characterized, and that the scope and depth of conclusions are adequately supported by documented observations and findings. Advice and recommendations are not to be included in inspection reports.

b. Inspectors are responsible for ensuring that the content of the report, as issued, is consistent with the content of the exit meeting presentation. When the report differs significantly from the exit meeting, the inspector (or the report reviewer) should discuss those differences with the applicant before the report is issued.

c. Report writers and reviewers should ensure that inspection reports follow the general format given in this attachment.

d. For inspections conducted by regional and resident inspectors, the report number is in the following form:

Docket No./Year - sequential number of the report in that year (e.g., 05000360/2007601). A 600 series report numbering system is reserved for WBN Unit 2 construction inspections.

NOTE: The report number format given here is for use in the inspection report itself. This format may be modified as needed for other applications (e.g., for Inspection Reporting System (IRS) entries), due to electronic constraints and other considerations.

4.03 Report Review and Concurrence..

a. Before issuance, each inspection report should, as a minimum, be reviewed by a member of NRC management familiar with NRC requirements in the area inspected.

b. The report reviewer (i.e., the member of management referred to above) should establish that conclusions are logically drawn and sufficiently supported by observations and findings, and that the observations, findings, and conclusions are consistent with NRC policies and requirements.

c. The report reviewer should ensure that assessments made in the inspection report represent the judgment of the issuing organization and established NRC policy rather than solely the personal views of an individual inspector or group of inspectors.

4.04 Report Issuance.

a. The applicable division director or designated branch chief is responsible for the report content, conclusions, and overall regulatory focus. For integrated construction reports, the Division of Construction Projects (DCP) division

director or the Construction Projects Branch 3 (CPB3) branch chief is responsible for issuing the report to the applicant.

4.05 Report Timeliness

a. General Timeliness Guidance. Inspection reports should be issued no later than 45 calendar days after inspection completion.

NOTE: Inspection completion is normally defined as the day of the exit meeting. For integrated inspection reports, inspection completion is normally defined as the last day covered by the inspection report.

b. Reports Preceding Escalated Enforcement Actions. Timeliness goals should be accelerated for inspection reports covering potential escalated enforcement actions. For specific enforcement timeliness goals, see the NRC Enforcement Manual.

c. Expedited Reports for Significant Safety Issues. Whenever an inspector identifies an issue involving significant or immediate public health and safety concerns, the first priority is facility and public safety; issues of documentation or enforcement action are secondary. Based on the circumstances of the case, an expedited inspection report may be prepared that is limited in scope to the issue, or expedited enforcement action may be taken before the inspection report is issued. The NRC Enforcement Manual provides additional guidance on matters of immediate public health and safety concern.

5. GUIDANCE - INSPECTION REPORT CONTENT

This section relates primarily to matters of content in the inspection report details. For guidance on the content of report cover letters refer to IMC 0612. The report should include a paragraph for each inspection procedure, temporary instruction or generic communication inspected. The paragraphs should be organized in ascending order.

5.01 Observations, Findings, and Conclusions. As used in this chapter, the term "observation" refers to a fact--any detail noted during an inspection. The term "finding" designates an observation that has been placed in context and assessed for its significance. The term "conclusion" is used for an assessment of inspection results to the broader context of an applicant program or an assessment area.

Adherence to the use of these terms is less important than appreciating the underlying process. Achieving relative consistency in inspection report content first requires a common understanding of how inspection observations are assessed for significance, and how the inspection results may be combined to reach a conclusion about the adequacy of the program or assessment area.

a. Observations. The most basic results of an inspection are the facts an inspector gathers--through watching work activities, examining equipment, interviewing applicant employees, reviewing records, and other inspection methods.

Observations should be factual and not hunches, speculation, unsubstantiated hearsay, or unverified opinions and they should only be documented in the report when they are relevant to the inspection program or support a programmatic conclusion.

b. Findings. In order to become a finding, an observation has to be placed in context and assessed for significance by addressing the following.

1. Requirements and Standards. To place an observation into context, it should be related to a requirement or a standard. For example, to place an observation about the applicant's replacement of in-core detectors with a different design into context, the inspector may wish to reference 10 CFR 50, Appendix B, Criterion III, "Design Control," or may choose to reference, more specifically, an approved applicant procedure.

When the area of the finding is not specifically covered by regulatory requirements, the inspector should clearly state the expected standard of performance when placing it into context. In such a case, the inspector should use inspection procedures and discussions with NRC and applicant management to arrive at a clear statement of expected performance.

2. Assessment of Significance. When assessing the significance of an observation, the inspector should answer questions such as:

(a) Is the SSC installed, inspected and/or tested in accordance with its design and licensing requirements?

(b) Are any deviations from the original design and licensing requirements documented in the applicant's corrective action program and properly reconciled?

(c) Will the deviations have an immediate or latent impact on nuclear safety, either directly or indirectly?

(d) Did the applicant maintain configuration management by clearly recording the as-built configuration of the SSC and updating impacted documentation and databases in a way that promotes conservative decision making over the entire life of the plant?

(e) Will inadequate configuration management have the potential to cause latent failures or impede conservative operational decision making?

(f) What were the causes?

(g) Inspector or applicant identified?

(h) Should it have been found by the applicant sooner?

(i) Promptness, adequacy and thoroughness of corrective actions.

(j) How does the applicant characterize the significance of this matter?

(k) Who was involved in the issue?

The above questions are not meant to be all inclusive nor do they apply to every situation. The inspector should weigh the circumstances impartially, and should include in the report those details that contribute to understanding the significance of the observation--regardless of whether they make it appear more severe or more benign.

NOTE: Inspectors should always document certain supporting details for enforcement-related findings. On the other hand, inspectors should be careful not to make direct statements, in the report details, regarding the safety significance of the noncompliance (see Section 5.04.b. of this Appendix)

The inspector should make every effort to understand and fairly characterize the applicant's perspective. In addition, the inspector's final assessment of a finding's significance should be validated through discussion with other inspectors and with NRC management.

c. Conclusions. Conclusions should not be drawn in inspection reports when the scope of the inspection is too limited to make them meaningful. When used, conclusions can relate inspection results to the broader context of an applicant program. They can also be used to document an assessment of a program or a significant inspection activity. Examples include closure statements for CAPs and SPs and an assessment of the corrective action program based on a PI&R inspection. The report writer's task is to match the scope of the conclusions to what the inspection results will support and not make them too narrow or too broad. For example, if an inspection reviewed a limited number of PERs, the report writer's should not draw a conclusion regarding the effectiveness and adequacy of the corrective action program. The following is a sample statement to use when a conclusion cannot be drawn: "The inspection results are too limited to support a conclusion at this time".

1. Conclusion Scope. The scope of a conclusion is usually dependent upon what amount of inspection focus was directed toward a given area. At a minimum, the conclusion should highlight the important details of the i inspection results including the associated requirements and the impacted assessment areas. In addition, it should include any cross-cutting aspects identified using the guidance in IMC-0305.

2. Conclusion Focus. In general, conclusions should focus on the capability of the program or activity to accomplish its design basis function. In assessing this capability, the conclusion statements may take various forms, but they should in all cases be concrete and supportable.

(a) For inspections of SSCs, conclusions should seek to answer questions such as the following:

- Are the safety functions of the SSC required by either its design or licensing basis, negatively impacted by the deficiency?
- Is testing [and/or maintenance] adequate to demonstrate that the component or system would perform all of the safety functions required?
- Is training adequate to ensure proper operation and maintenance of the component or system?
- Are control functions effective and reliable?
- Are human factors considerations relating to the component or system (e.g., accessibility and labeling of components) adequate to ensure proper system operation?
- Are system procedures adequate to ensure proper system operation under normal and accident conditions?

Additional, similar questions may be developed based on the applicable inspection procedure. Inspectors could use the above questions to make statements such as: based on the sample inspected, the training was adequate to ensure proper operation and maintenance of the component or system. For portions of a program, an example of a conclusion statement could be, "the implementation of the portion of the program related to the inspected samples was adequate"

(b) For an inspection that has focused on an overall program, the conclusion should assess the basic capability of that program in meeting its safety objectives. In some cases, the safety objectives may be found in the applicable inspection procedure. If the safety objectives have not been specified elsewhere in the report, the conclusion should make the objectives clear.

(c) Finally, conclusion statements should note any noncompliances described in that section of the report and their associated cross-cutting aspects, if any.

5.02 Thresholds of Significance. As part of maintaining a focus on safety, inspectors continually use NRC requirements, inspection procedures, risk assessment documents, industry standards, regional and headquarters guidance, and their own training and insight to make judgments about which issues are worth pursuing and which are not.

To communicate effectively, inspection reports must give evidence of that judgment and prioritization, discussing significant safety issues in appropriate detail, treating less significant issues succinctly, and avoiding excess verbiage. To maintain some consistency in how minor issues are treated, report writers must recognize certain

"thresholds of significance": that is, they must use similar criteria in deciding whether an issue is important enough to document, track or follow up.

The NRC Enforcement Policy acknowledges that some violations of minor safety, environmental, and regulatory concerns are below the level of significance of Severity Level (SL) IV violations. Because of their minor nature, these minor violations are not the subject of formal enforcement action and are not usually documented in inspection reports.

NOTE: For additional guidance in this area, see the NRC Enforcement Manual and Appendix C of this IMC.

a. Minor Violations--Determining Significance. Use Appendix C of this IMC to determine the significance of the violations.

b. Minor Violations--Determining Whether to Document. In general, minor violations should not be documented; however, certain exceptions apply. Documentation may be necessary as part of the resolution to an allegation or to close a CDR. In other cases, while the violation itself is minor, the associated technical information may relate directly to an issue of agency-wide concern (e.g., the inspection was performed in response to an NRC TI). If, for these reasons or any other reason, the report writers and reviewers wish to document a minor violation, then it should be documented as a minor violation, with a reference to Section IV of the NRC Enforcement Policy. For example, "This failure constitutes a violation of minor significance and is not subject to formal enforcement action."

c. Applicant Identified Violations Under certain circumstances, even a violation that could be classified as SL IV ("more-than-minor") need not be documented. This is generally justified when the violation has been identified and corrected as part of an applicant self-assessment effort. As a matter of policy, NRC enforcement seeks to encourage applicant self-assessment efforts, and seeks to avoid the negative impact that can result from a redundant NRC emphasis on problems which the applicant's responsible action has already identified and corrected.

For example, suppose that while evaluating the applicant's quality assurance efforts in the fire protection area, an inspector reviews relevant audits and surveillances conducted over the previous year. The review reveals that the audits have been probing and thorough; the findings are well-developed and technically sound, and include six noncompliance issues, four of which might be classified at SL IV.

In such a case, the inspector should follow up on the noncompliances and other audit findings to ensure that causes have been appropriately assessed, that appropriate and comprehensive corrective actions have been taken, and that no new examples of the violations exist. Provided, however, that no new problems are revealed by this follow-up, the inspector is normally not expected to cite the four violations individually, nor to report the details of those violations in the

inspection report. Instead, the NRC report findings and conclusions should assess the adequacy of the applicant's quality assurance efforts, including a clear reference to the name, dates, and general subject matter of the audit or self-assessment.

NOTE: This expectation only applies to SL IV violations. Even when identified through an applicant self-assessment, violations that could be categorized at SL III or above must be documented in the inspection report and given appropriate follow-up.

If, for any reason, the inspector decides to discuss in the inspection report a particular applicant self-assessment finding or audit finding, and that finding involves a violation, then the violation must be clearly dispositioned in the report. If the criteria of Section VI.A.8 of the NRC Enforcement Policy have been met (including applicant corrective action, etc.) the SL IV violation should be documented as an NCV. If the issue represents a minor violation, it should be documented as follows: "This failure constitutes a violation of minor significance and is not subject to formal enforcement action."

NOTE: The NRC Enforcement Manual provides additional guidance on documenting and dispositioning violations.

5.03 Level of Detail. Just as inspectors must use judgment in determining what issues are worth including in the inspection report, they must also determine the appropriate level of detail for issues that are included. Some issues should be discussed in more detail than others, based on safety or regulatory significance, technical complexity, and other factors.

a. Level of Detail on Inspection Scope. Describe the inspection scope. Do not repeat any portion of the Scope in the Findings section. The scope should include the following:

1. Identify how the inspection was conducted (i.e., the methods of inspection.) Methods can include a walk-down, an in-office review, observation of test from the control room, discussion with specific personnel, or participation in an exercise.

2. Identify what was inspected. Include sufficient detail on which and how many samples were inspected. If more than six documents were reviewed, then list the items in an attachment and reference the attachment in the Scope section.

3. Identify the inspection objectives and the criteria that were used to determine whether the applicant is in compliance.

4. Include inspection dates to clarify inspection scope context if it helps with understanding the scope. For example, inspection dates may be helpful when discussing event follow-up.

5. If a substantive portion of the inspection activity was conducted at a location other than the plant, (e.g., an in-office review), then identify where the inspection took place.

b. Level of Detail on Observations and Findings. Once the inspector has decided that an observation or a finding is important enough to be included in the report, the same questions used in making that decision (see Section 5.01 of this Appendix) can assist in determining the appropriate level of detail. The following guidance applies:

1. The degree of actual or potential safety consequence associated with a finding should be a primary consideration in determining the level of appropriate detail. Items of higher significance generally merit more discussion.

2. If the inspector has concluded that a finding has programmatic aspects (e.g., multiple examples of the problem, a related series of failures, an underlying procedure or training deficiency, or diverse effects resulting from the same root cause), enough detail should be given to support this conclusion.

3. Findings of greater technical significance--that is, findings that give insights into SSCs or human performance issues, or findings that could have generic significance--should be discussed in sufficient detail to communicate those insights.

4. When initiating an unresolved item or inspection follow-up item, the issue description should provide enough background information that a different inspector, using that information, would be equipped to perform the follow-up inspection.

5.04 Documenting Noncompliances. The primary guidance for all matters related to enforcement, including documentation, is given in the NRC Enforcement Policy and the NRC Enforcement Manual. These documents can be found at http://www.nrc.gov/about-nrc/regulatory/enforcement/guidance.html. The following discussion summarizes certain aspects of that guidance related to inspection reports.

a. Types of Noncompliances. The manner of documenting a noncompliance in the inspection report depends on how that noncompliance will be dispositioned. A noncompliance may be addressed as a non-escalated enforcement action (i.e., a SL IV violation or a nonconformance); as an escalated enforcement action (i.e., an apparent SL I, II, or III violation); or as an NCV.

If a violation does not exist (e.g., no requirement exists in this area), it may be appropriate to clarify the finding by stating that "this condition [or event] does not constitute a violation of NRC requirements."

1. Non-Escalated Enforcement Actions. Most violations of very low significance (i.e., more than minor concerns) fall into the SL IV category.

If at the time of issuing the inspection report a violation has been categorized at SL IV, and it does not meet the criteria for an NCV, then an NOV is generally sent out with the inspection report as a “non-escalated” enforcement action. The cover letter for reports that include non-escalated enforcement actions should follow the appropriate NRC Enforcement Manual guidance.

2. Potential Escalated Enforcement Actions. When an issue is being considered for escalated enforcement action, the inspection report narrative should refer to the potential noncompliance as an "apparent violation." The report details should not include any speculation on the severity level of such violations nor on expected NRC enforcement sanctions. Potential escalated actions, by their nature, require further agency deliberation (and, usually, additional applicant input) to determine the appropriate severity level and NRC action.

   Similarly, report narratives that discuss apparent violations should be carefully constructed to avoid making explicit conclusions (i.e., final judgments) about the safety significance of the issue. The report should include any available details that give evidence of safety significance, or that would help in making such a decision; however, since a potential escalated enforcement action automatically entails further evaluative steps, neither the inspection report details nor the accompanying cover letter should present a final judgment on the issue.

3. Non-Cited Violations. Per Section VI.A. 1 of the NRC Enforcement Policy, SL IV violations are normally dispositioned as NCVs. The Enforcement Policy provides circumstances that will result in consideration of an NOV requiring a formal written response from the applicant. When SL IV violations are dispositioned as NCVs, the report should briefly describe their circumstances and the applicant's corrective actions.

4. Minor Violations. Minor violations should not be normally documented in inspection reports. However, to the extent that documentation is necessary, the standard language should be used: “This failure constitutes a violation of minor significance and is not subject to formal enforcement action.”

b. Supporting Details and Discussions of Safety Significance. The discussion of noncompliance issues must be sufficiently detailed to substantiate any NRC safety and regulatory concerns and to support any enforcement sanction the NRC may choose to issue. To the extent possible, for a violation, the report should state:

- what requirement was violated;
- how the violation occurred;
- when the violation occurred, and how long it existed;
- who identified it, and when;
- any actual or potential safety consequence;

- the root cause (if identified);
- whether the violation appears isolated or programmatic; and
- what corrective actions have been taken or planned.

The degree of detail necessary to support an enforcement action is a function of the significance and complexity of the noncompliance.

Although supporting details clearly assist in determining the safety significance of the violation, inspectors must be careful to avoid making direct statements regarding safety significance in the inspection report details. Violation severity levels, as described in the NRC Enforcement Policy, are based on the degree of safety significance involved. In addition, the NRC Enforcement Policy uses the term "safety significance" in a specific sense, which involves consideration of (1) actual safety consequence, (2) potential safety consequence, and (3) regulatory significance (e.g., willfulness or management involvement in a noncompliance, programmatic breakdowns, repetitive violations, etc.). As a result, if an inspection report refers to a noncompliance as being "of low safety significance" (meaning, in a general sense, that the noncompliance did not result in any actual adverse impact on plant equipment or personnel), the writer may have inadvertently made it difficult for the NRC to subsequently decide that the potential for an adverse impact or the regulatory significance of the noncompliance warrants issuance of a SL III violation.

c. Noncompliances Involving Willfulness. Inspection reports should neither speculate nor reach conclusions about the intent behind a violation, such as whether it was deliberate, willful, or due to careless disregard. As with any observation, the report discussion should include relevant details on the circumstances of the violation without making a conclusion about the intent of the violator.

Conclusions about the willfulness of a violation are agency decisions, and are normally not made until after the Office of Investigation (OI) has completed an investigation and a predecisional enforcement conference has been held. A premature or inaccurate discussion of the willfulness of an apparent violation in the inspection report could result in later conflicts based on additional input and review. Inspection reports that include potentially willful violations are to be coordinated with OI and the Office of Enforcement (OE).

5.05 Documentation of Performance-Based Inspection. Performance-based inspection focuses on issues of safety and reliability, with an emphasis on field observation rather than in-office procedural or record reviews. In addition, performance-based inspection tends to focus more on results (e.g., does the pump work?) than on process and method (e.g., was the pump maintenance procedure well-written?). For most areas of inspection, the range of relevant regulations, license requirements, industry guidelines, and applicant regulatory commitments is a mixture of performance-based (results-oriented; less prescriptive) and compliance-based (process-oriented; more prescriptive) standards.

a. Documenting Performance-Based Issues vs. Compliance-Based Issues. The first step in documenting "performance-based" findings is understanding the underlying flow of logic, and differentiating this logic from that of a finding based strictly on compliance. For compliance issues, the clearest manner of presentation is usually comparison/contrast, similar to the format of an NOV.

By contrast, a performance-based finding frequently begins with the field observation of a safety or reliability issue (e.g., an equipment problem, a deficient work practice, a questionable system response, etc.), which results in efforts to place the observation in context, pinpoint the root causes, understand any associated problems with the underlying processes or methods--all of which may or may not lead to an issue of noncompliance. When documenting such a finding, a three part format is used: Introduction,; Description and Enforcement. Consult IMC 0612, sections 06.01, 06.02 and 06.04 for a detailed description of each part.

b. Documenting Issues in Areas Not Covered by Regulatory Requirements. Although the NRC always seeks to focus the requirements of its regulations and licenses on safety considerations, mere compliance with those requirements does not automatically ensure safety. The NRC's safety mandate entails inspection and evaluation of applicant performance in areas that may not be covered by written requirements.

Presumably, judgments made in this realm, in areas not covered by NRC requirements, must still use some standard as a reference point. Various inspection procedures give specific criteria for the inspector to use in evaluating an applicant's performance including some criteria that are not directly related to an NRC requirement, and that might be more correctly characterized as matters of industry convention or standard nuclear safety practices. When inspection findings are made in these areas, that is, when safety issues are identified that do not relate directly to a regulatory requirement, the treatment of such findings can be extremely difficult.

1. Using Standards in Areas Not Covered by NRC Requirements. Whenever possible, the inspector should seek to tie the finding to a documented program or expectation (e.g., a generic communication on wrong-component or wrong-train events, an applicant's previously established self-checking program, etc.). In addition, once a clear standard is recognized, the inspector may be able to relate these findings to other instances in which the applicant's performance has not met these expectations.

   When multiple problems have been found, the inspector may, depending on the circumstances of the case, wish to use a more broad statement that applies to more than one of the observations.

2. Addressing the Need for Applicant Corrective Action. Since the standards discussed here may be in areas outside NRC requirements, they may not be used as the basis for requesting applicant corrective action either orally

or in the inspection report. When safety issues are involved, a responsible applicant will likely take corrective actions, and these actions should be documented in the inspection report as appropriate.

When questions exist about the adequacy of the applicant's taken or planned corrective actions, the inspector may choose to create an inspection follow-up item to ensure that the applicant's later actions are evaluated. In addition, if the applicant fails to take proper corrective action for a safety matter and the problem recurs or additional safety issues result, the applicant may be in noncompliance with 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action."

Finally, in extreme cases where the applicant refuses to take corrective action for a matter of immediate safety significance, the NRC may exercise its authority to impose an order, even if the applicant has not violated an existing regulation or license condition. Any such situation should result in prompt involvement by NRC management (including OE and the Office of General Counsel).

3. Avoiding Inadvertent Backfits. 10 CFR 50.109 establishes specific regulatory authority for the NRC to impose new requirements on reactor applicants involving the addition, elimination, or modification of structures, systems, or components at operating facilities. In order to impose a backfit, the Commission must make a finding that the action will result in substantial additional protection of public health and safety or the common defense and security.

4. As discussed in NRC Management Directive 8.4, an NRC staff recommendation that the Commission impose a backfit should only be made after extensive deliberation and evaluation of all associated circumstances. For routine discussions of safety issues in inspection reports, care must be exercised to avoid making an inadvertent recommendation that could be construed as an NRC backfit.

5.06 Treatment of Open Items in Reactor Inspection Reports. Issues that merit additional inspection are identified by a unique tracking number and entered into the Inspection Reporting System by the originating inspector or office. Open items include URIs, IFIs, deviations, deficiencies, violations, and CDRs.

a. Initiating Open Items. The action of initiating an open item is a commitment of future resources, and should therefore only be used when some specific applicant action is pending, or when needed information is not available at the time of the inspection. When the inspector believes that the additional information may reveal the issue to be a matter of noncompliance, an unresolved item should be initiated. For an unresolved item, the report should identify the actions or additional research needed to resolve the issue.

Issues of noncompliance should always be assigned an IRS number for tracking purposes. When an inspection involves multiple violations (or multiple examples

of a single violation), the inspector should be careful to ensure a one-to-one correspondence between the number of IRS entries and the number of "contrary to" statements in the accompanying Notice of Violation. The NRC Enforcement Manual provides additional guidance on tracking and following up issues of noncompliance.

Upon receipt, CDRs should be entered into the IRS system for tracking and follow-up.

b. Follow-Up and Closure of Open Items. The level of detail devoted to closing open items depends on the nature and significance of the additional information identified. For example, the closure of an unresolved item should summarize the topic, summarize the inspector's follow-up actions, evaluate the adequacy of the applicant's corrective actions, and include enough detail to justify the inspector's conclusion.

In closing out a violation, if the applicant's "Response to a Notice of Violation" already has given an accurate description of the root cause, corrective actions taken, and other aspects, and the inspector identifies no other instances of the violation, the close-out description should be correspondingly brief.

c. Treatment of CDRs. All new CDRs should be followed up and given formal closure in an inspection report; however, the level of detail provided in the report will vary depending on the significance of the CDR and the results of the inspector's follow-up. For example, CDRs involving minor issues, and where the inspector's follow-up does not result in new information or additional perspectives, require only a brief closure statement. On the other hand, a CDR that involves more than a minor issue, that has not been discussed and dispositioned in another section of this or a previous report, requires a closure that provides, at a minimum, a basic description of the event. This should include the applicant's immediate response and subsequent corrective actions, the root cause or causes, a summary of the inspector's follow-up actions, and a statement of how the finding was resolved. The discussion should be brief and concise, except in cases where the NRC's information and perspectives differ from the applicant's information and perspectives described in the CDR. If the inspector's follow-up does not result in new information or additional perspectives, the report should not uselessly reiterate the detailed event description.

Note that CDRs frequently involve violations. As with other report findings, if the CDR is discussed in a manner that implies a violation may have occurred (either as part of the event itself or in the underlying root cause), the noncompliance must be clearly dispositioned in the report as a violation, an apparent violation, or an NCV, as appropriate, or a statement included clarifying that "this event did not constitute a violation of NRC requirements." If such a violation would normally be categorized at SL III, then the inspection report must provide a full description of the event and surrounding circumstances, and the matter should be treated like any other potential escalated enforcement issue.

6. GUIDANCE - INSPECTION REPORT FORMAT

Whenever possible, NRC inspection reports should conform to the standard formats described in this section and illustrated in the attached exhibits. This standardization in format significantly enhances readability and information retrieval, which in turn increases efficiency and improves the ability to integrate inspection results. Exceptions should be made for major team inspection reports and other cases where the specifically directed focus of the inspection does not easily fit into the standardized report outline.

6.01 Cover Letter. Refer to IMC 0612 Section 11.08 and Exhibit 4 for guidance on format and content of the cover letter

6.02 Cover Page. Refer to IMC 0612 Section 11.04 and Exhibit 3 for guidance on format and content of the cover page.

6.03 Executive Summary. The summary should be informative but concise. An ideal inspection report summary will be useful as an overview tool for applicant management and for NRC staff when preparing for the periodic assessment or management briefings.

a. Introduction. The summary should begin with a one- or two-sentence introduction that covers the type of inspection, the scope (i.e., the applicant programs or assessment areas inspected), and any special details.

b. Presentation of Findings, Cross-cutting Aspects and Conclusions. The list of issues that follows should be in the same order as the report details (modeled after the standard inspection report outline included as Exhibit 1). In essence, the executive summary should be compiled by scanning each report section and writing a crisp, short summary sentence for each issue of noteworthy observations, noncompliances, findings, cross-cutting aspects and conclusions.

   NOTE: Unresolved items should not be discussed in the executive summary (i.e., where more information is needed to reach a finding or conclusion). If a finding or conclusion was reached in an area related to the open item, the executive summary may include that finding or conclusion.

   When findings are included in the executive summary, the usefulness of those findings will be increased by concisely stating the root cause (if the root cause has been determined). In addition, when broad conclusions are included indicating unusually negative performance in a particular area of inspection focus, the conclusions will be made more useful by giving a brief but supportive example.

6.04 Table of Contents. For reports of significant length (i.e., in which the report details section exceeds 10 pages), the writer should consider including a table of contents as an aid to clarity.

6.05 Report Details: Use of the Standardized Report Outline. The report details should be topically arranged in accordance with the standardized report outline, included as Exhibit 1. This does not mean, of course, that each outline topic should be covered in each report; however, to the extent that inspection is performed in a particular area (e.g., inspection of "general employee training in radiological protection"), the resulting findings should be placed in the corresponding standard section of the report (e.g., in R5 of the standardized outline; see Exhibit 1).

NOTE: Conformity to the standardized outline should not result in artificially fragmenting an event description or separating report details that would logically be presented together.

Regardless of what section the writer finds most appropriate, the basic details need only be presented once. Cross-references should be made in other sections as appropriate. For example, the writer might choose to discuss performance of a maintenance procedure under M1 because it is the most significant result related to how maintenance was conducted, but include cross-references under M5 or R4 because of implications related to those areas.

6.06 Report Details: Internal Organization of Specific Sections. Differences in the nature, significance, and complexity of individual findings results in considerable variety in how those findings are organized and presented. However, the overall organization of each report section should follow the same basic progression of logic: inspection scope, observations and findings, cross-cutting aspects and conclusions.

a. Inspection Scope. As discussed earlier, this description should be complete and factual but concise. A tabular format is frequently the clearest; the inspector can use this format to list systems and components inspected, specific work activities or plant evolutions that were monitored, procedures and records reviewed, etc. The inspector should not include observations and findings in this section.

b. Observations and Findings. This portion of each report section should be used to present, in a narrative format, the inspection results. At this stage in the report, the inspector may choose to simply number issues sequentially, with appropriate subheadings, or may use another method of organizing the inspection results. The inspector should only include observations that are relevant to the inspection program or support a programmatic conclusion. The inspector should not include inspection scope or conclusions in this section.

c. Conclusions. Conclusions should not be included in inspection report sections whose scope is too limited to make them meaningful. In addition, they should not merely repeat the statements made in the observations and findings section. When used, conclusions can relate inspection results to the broader context of an applicant program. They can also be used to document an assessment of a program or a significant inspection activity. The relationship among inspection results will vary: in some cases, the conclusions to be drawn will be specific to the individual report section; in other instances, the findings of several report sections can be integrated into a broader conclusion. The details and the extent

of the conclusions should be commensurate with the scope of the inspections, i.e., the inspectors should not draw conclusions regarding a program based on a few samples inspected. For example, rather than judging the adequacy of the corrective action program based on the review of a limited number of PERs, the inspector can state that the PERs reviewed were completed in accordance with established procedures and their corrective actions were reasonable. Document any cross-cutting aspects resulting from the review of inspection findings using the guidance of IMC-0305.

NOTE: When a given section of the report only involves closure of one or more open items, a separate conclusion section may not be appropriate or needed.

6.07 Exit Meeting Summary. The final section of each reactor inspection report should be a brief summary of the exit meeting. This summary should normally include the following elements:

a. Characterization of Applicant Response. In general, the report should not characterize an applicant's exit meeting response as one of wholehearted acceptance of the inspection findings. If the applicant generally agreed with the findings presented, the exit meeting characterization might read as follows:

EXAMPLE: "The inspectors presented the inspection results to members of applicant management at an exit meeting on June 12, 2007. The applicant acknowledged the findings presented."

On the other hand, when the applicant disagrees with the inspectors' assessment of a particular finding, this position should be briefly and specifically characterized. Specific items discussed elsewhere in the report should not be described in this section in detail.

b. Applicant Oral Statements and Regulatory Commitments. If, at the exit meeting or at any other time during the inspection, the applicant makes an oral statement that it will take a specific action, the report should attempt to accurately characterize that statement. As determined by the significance, complexity, subject area, and resource expenditure involved, the inspector should ensure that such oral statements are made or endorsed by the proper member of applicant management. Inspectors should be careful to differentiate between (1) applicant general descriptions of "voluntary enhancements" or general intent; and (2) oral statements of the applicant's intent to make a specific regulatory commitment (i.e., to submit, on the docket, a written commitment to take a specific action).

Because regulatory commitments are a sensitive area, the inspector should also ensure that any reporting of such an applicant oral statement is accurately characterized. To ensure a clear mutual understanding of such issues, when the applicant makes an oral statement reflecting the intent to make a regulatory commitment, the report issuing office may wish to restate, in the report cover letter, the NRC's understanding of that proposed commitment, and ask the applicant to clarify any differences in understanding.

c. Absence of Proprietary Information. At the exit meeting, the inspectors should verify whether or not the applicant considers any materials provided to or reviewed by the inspectors to be proprietary.

NOTE: When an inspection is likely to involve proprietary information (i.e., based on the technical area or other considerations of inspection scope), the topic of how to handle such information should be discussed at the entrance meeting.

If the applicant does not identify any material as proprietary, the exit meeting summary should include a sentence to that effect.

EXAMPLE: "The inspectors asked the applicant whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified."

d. Subsequent Contacts or Changes in NRC Position. The report writer should briefly discuss any significant contacts between the inspectors and applicant staff or management that occur after the exit meeting (e.g., to discuss new information relevant to an inspection finding). In addition, as discussed earlier, if the NRC's position on an inspection finding changed significantly after the exit meeting, that change should be discussed with the applicant before the report is issued.

6.08 Report Attachment. The areas discussed below should be included in an attachment at the end of the inspection report.

a. Partial List of Persons Contacted. The report writer should list, by name and title, those individuals who furnished significant information or were key points of contact during the inspection (except in cases where there is a need to protect the identity of an individual). An exhaustive list is neither required nor desirable; 5 - 10 key individuals are normally sufficient. The list should include the most senior applicant manager present at the exit meeting. The list should also include other NRC technical personnel who had significant involvement, if they were not listed as inspectors on the cover page.

b. List of Items Opened, Closed, and Discussed. The report should provide a quick-reference list of items opened and closed, including the item number, the IRS code for the item, and a brief phrase (10 words or less) describing the item. Open items that were discussed (but not closed) should also be included in this list.

c. List of Documents Reviewed. Include a listing of all the documents and records reviewed during the inspection that are not identified in the body of the report. "Reviewed" in this context means to examine critically or deliberately (see IMC 0620). The list does not include records that were only superficially reviewed. Lists consisting of more than six documents reviewed should be removed from the body of the report and included as an attachment.

d. List of Acronyms. Reports of significant length (i.e., in which the report details section exceeds 10 pages) should generally include a list of acronyms as an attachment. For reports in which a relatively small number of acronyms have been used, such a list is optional. In all cases, however, acronyms should be clearly defined when first used in text, regardless of whether a list of acronyms follows the report narrative.

APPENDIX B EXHIBIT 1

Standard Construction Inspection Report Outline

Cover Letter
Cover Page
Executive Summary
Table of Contents (optional)

Report Details:

Summary of Plant Status

I. Quality Assurance Program

II. Management Oversight and Controls

- C Construction Activities
- M Maintenance Activities
- E Engineering Activities
- SY System Turnovers
- P Pre-Operational Activities
- SU Startup Testing Activities
- T Training and Qualification of Plant Personnel

III Operational Readiness Activities

- O Operations
- F Fire Protection
- ST Surveillance Testing
- CH Chemistry
- R Radiation Safety
- S Security
- EP Emergency Preparedness

IV. Other Activities

V. Management Meetings

X1 Exit Meeting Summary

X2 Applicant-identified Violations

X3 Pre-Decisional Enforcement Conference Summary

X4 Management Meeting Summary

Partial List of Persons Contacted
List of Inspection Procedures Used
List of Items Opened, Closed, and Discussed
List of Documents Reviewed
List of Acronyms (optional)

APPENDIX C

Minor Violations and Findings

1. PURPOSE

This appendix provides guidance to assist inspectors in determining if a finding or violation is more than minor.

2. BACKGROUND

This guidance applies to thresholds for documenting findings and violations in WBN Unit 2 inspection reports. Although the following examples are all violations of requirements, findings not associated with requirements should be considered minor if the finding `is similar to the example guidance. Minor findings and violations are not the subject of formal enforcement action or documentation. Failures to implement requirements that have insignificant safety or regulatory impact or findings that have no more than minimal risk should normally be categorized as minor. While applicants must correct minor violations, minor violations or other minor findings do not normally warrant documentation in inspection reports or inspection records and do not warrant enforcement action.

3. DISCUSSION

Minor violations and findings have no potential to impact quality or safety, little to no impact on the regulatory process, and no willfulness. Minor violations and findings will not normally be documented in a report, unless they are linked to an applicant-identified issue such as a CDR.

A finding should be matched to the specific examples provided to determine if it is more than minor. If a match is not found, an answer of “yes” to any of the following questions determines that the finding is more than minor.

(1) Does the finding represent an improper or uncontrolled work practice that can impact quality or safety, involving safety-related SSCs?

(2) Does the finding represent non-compliance with the requirements of a design or fabrication code required by 10 CFR 50.55a?

(3) Does the finding represent an inadequate process, procedure, or quality oversight function, that if left uncorrected, could adversely affect the quality of the fabrication, construction, testing, analysis, or records of a safety-related SSC?

(4) Does the finding represent a deviation, that if left uncorrected, could adversely affect the environmental or seismic qualification of an SSC?

The following examples apply the above guidance and demonstrate a thought process that can be used in making the determination of whether a violation is minor. Examples of different categories of findings and violations that may be considered minor include, but are not limited to:

Record keeping issues would be minor if they do not preclude the applicant from being able to take appropriate action on safety-significant matters, or the NRC from objectively or properly assessing, auditing, or otherwise evaluating significant activities.

a. Magnetic particle examination personnel failed to record the inspection results which revealed the existence of a partial penetration weld where a full penetration was designated on the design drawing for the sacrificial shield wall.

The violation: Failure to follow procedure requirements for recording of indications.

Minor because: There were no weld process related flaws identified in the weld or surrounding base material, and if the existing partial penetration weld could be accepted for service with a drawing change and an engineering evaluation.

Not minor if: Partial penetration welds were unacceptable for this service and were required to be removed and replaced with full penetration welds.

b. The Welding Engineering Unit (the organization responsible for generation and issuing of weld maps and weld map change requests) were not controlling the weld maps and weld map change requests through the normal Document Control and Records Management system.

The violation: Failure to follow applicant procedure for the control of documents and records.

Minor because: The control system used by the Welding Engineering was similar to the control system used in the normal Document Control and Records Management system, and personnel using weld maps and weld map change requests were familiar with the system.

Not minor if: Weld map change requests were being processed against superseded weld maps, or superseded weld maps were being used in the field for inspection and documentation of quality-related welding activities.

c. An NRC inspector noted that inspection hold points had not been signed off for a weld that was partially completed.

The violation: Failure to follow procedure requirements concerning documentation of hold and witness points during welding activities.

Minor because: The inspection hold points in question are administrative in nature and are not code required.

Not minor if: The inspection hold points are code required and as a result, the weld quality is either unacceptable or indeterminate.

d. The records for the installation of some large, high-strength, bolted, Seismic Class I structural steel connections contained the serial number for the torque wrench used, but did not contain the serial number for the torque multiplier required to be attached to the torque wrench for this type of connection.

The violation: Failure to follow procedure for the documentation of Seismic Class I construction activities.

Minor because: Tool issue records showed that a calibrated torque multiplier had been checked out by the same person, and at the same time, as the documented torque wrench.

Not minor if: Tool issue records did not support the contention that the proper torque-multiplier was used for the job, or a post-use calibration check of the torque-multiplier found problems.

Nonsignificant Dimensional, Time, Calculation, or Drawing Discrepancies would be minor if they are characterized by minor discrepant values referred to in either the applicant's Final Safety Analysis Report (FSAR) or design documents.

a. The applicant failed to conduct a Quality Assurance Program required annual audit of Training.

The violation: Failure to conduct periodic audits in accordance with the applicant’s accepted Quality Assurance Program which endorses Regulatory Guide 1.144 regulatory position requiring annual audits.

Minor because: Neither the NRC nor the applicant had identified any construction program changes which would have required additional training, and neither NRC nor the applicant had identified problems which could have been attributed to a lack of training and the time between applicant audits did not exceed twice the time period required for audits.

Not minor if: Significant changes had been made in one or more construction programs and/or problems had been identified in the area of Training, or which could be attributed to improper, or lack of training, which would have been identified by an

audit, or the time between audits exceeded twice the time period required for audits.

b. The installation plans for a 240-volt, electrical circuit connecting a non-Class 1E circuit with a Class 1E circuit called for the use of 10-gauge wire. The inspector noted that the installation had been done using 8-gauge wire.

The violation: Failure to follow procedures, plans, and/or drawings for installation of a Class 1E electrical circuit

Minor because: The use of 8-gauge wire does not degrade the circuit, and can be accepted as-is.

Not minor if: The applicant's program for connections to Class 1E electrical circuits does not allow any deviations from plans and/or drawings, or the lowered resistance provided by the 8-gauge wire would cause problems with balancing or control of the circuit and must be re-worked..

c. A Seismic Class I support in the turbine building was fabricated using 4-inch tube steel. The inspector noted that the plan required the use of 3-inch tube steel for this particular support.

The violation: Failure to follow procedure for installation of Seismic Class I supports.

Minor because: The support design is such that the use of the larger structural shape does not degrade the final support, or affect the seismic qualification, (e.g., the support is a tripod or box design with all the weight of the support directly transferred to the foundation,) and the use of over-size material is documented in the corrective action program.

Not minor if: The support design is such that the additional weight from the over-size material causes increased stress on the attached structure and a negative affect on seismic calculations (e.g., cantilever structure attached to a building support,).

Procedural Errors would be minor if they are procedural errors or inadequate procedures that have no impact on safety-related equipment or personnel safety.

a. Five applicant procedures had undergone major revision and each still contained references to other site procedures which had been cancelled prior to the date of the revision.

The violation: Failure to follow applicant procedure for review of procedure revisions.

Minor because: Referenced procedures were not required to provide information necessary for complete actions required by the revised procedure(s)

Not minor if: At least one of the newly revised procedures was written in a way that it relied on one of the cancelled procedures to provide information, (e.g., acceptance criteria for an inspection,) vital to the completion of a procedure action.

b. A construction contractor's procedure for assembly of safety-related steel structures referenced a superseded edition of the applicant's administrative procedure for control of audits and responses to audits.

The violation: Failure to follow applicant and contractor procedures for updating of procedure references.

Minor because: Referenced procedure was not required for safety-related construction activities.

Not minor if: Use of superseded procedure had resulted in an audit finding not being recorded in the appropriate corrective action program.

c. A contractor crew was found to be using a fabrication drawing which did not have a recently issued change notice attached.

The violation: Failure to follow procedure for control of procedures, drawings, and plans.

Minor because: The recently issued change notice did not have any impact on the section of the drawing in use by the contractor crew, and the incident was noted in the applicant's corrective action program.

Not minor if: The change notice contained information that had an affect on the work activities in progress, or the acceptance criteria for the finished product.

d. During an inspection of construction activities involving installation of safety-related SSCs, an inspector found a superseded copy of the installation work procedure beside some tools staged at the job site.

The violation: Failure to control out-dated work procedures

Minor because: Work activities were not being conducted in accordance with the outdated procedure, the procedure was immediately removed from the work area, and the incident was documented in the applicant's corrective action program

Not minor if: The outdated procedure was discovered because workers were referring to it for direction rather than using the procedure provided in the work package.

Work in Progress Findings would be minor if they are identified in the course of performing work, prior to the applicant having the opportunity to perform quality control acceptance inspections, checks, or reviews, which would reasonably be expected to identify and correct them.

a. During conduct of an ASME Code required liquid penetrant examination, excess penetrant material was not properly removed prior to applying the developer during a pre-service inspection (PSI) of five welds resulting in a surface too pink for proper evaluation of the weld.

   The violation: Failure to follow applicant PSI nondestructive examination procedure.

   Minor because: This was work in progress. The error was identified prior to the documentation and acceptance by the Level II examiner of the inspection results, and immediate retest did not reveal any unacceptable indications.

   Not minor if: Retest of one of the welds revealed an unacceptable indication requiring analysis or repair of the weld.

b. Bends in stainless steel piping were made using an unapproved and unqualified pipe bender in accordance with an unapproved and unqualified pipe bending procedure.

   The violation: Failure to follow ASME requirements for qualification of pipe bending equipment.

   Minor because: Qualification status of the pipe bender and the approval and qualification of the pipe bending procedure were discovered prior to the pipe bends being welded into the system.

   Not minor if: Pipe bends were welded into the system and subsequent inspection found that an area of the wall thickness on one or more of the pipe bends were found to be below minimum wall thickness requirements.

c. Discovery of the failure to install lock nuts on three anchor bolts of a safety-related vertical steel structure. Installation of the lock nuts was specified by the applicable construction drawing. The installation of the columns had been considered to be complete by the project contractor installing the column and its bolting.

The violation: 10 CFR 50, App B, Criterion V, Failure to follow requirements of drawing for a safety-related structure.

Minor because: Structure had not yet received required quality control review or been accepted by the applicant, and the lock nuts were to provide protection against loosening of anchor bolts due to service induced vibration.

Not minor if: Quality control review failed to identify missing lock nuts, or structure accepted by the applicant, or if acceptance by project installation contractor constituted final acceptance for the project.

d. Procedure requirement that piping material be subjected to liquid penetrant examination after the removal of arc strikes was apparently not followed,

The violation: Failure to follow applicant Quality Assurance procedure for examination and evaluation of arc strikes.

Minor because: Subsequent evaluation of the arc strike removal sites did not reveal any recordable or rejectable indications

Not minor if: One or more arc strike removal sites were found to have unacceptable liquid penetrant indications during subsequent inspection(s).

e. Inspector found that a pipe support detail drawing had been downgraded from Quality Class I to Quality Class II as a result of an engineering change. (The design change was signed by a “Discipline Engineer”, a “Resident Group Supervisor”, and a “Resident Project Engineer.”)

The “Discipline Engineer” responsible for the engineering change was not aware that the FSAR, and the piping isometric drawing, both identified the piping system involved as Quality Class I piping. He was aware of the general policy that quality classification of a support will generally be the same as the classification of the piping which it supports.

Subsequently, the responsible design organization issued another engineering change which reclassified the identified supports as Quality Class I.

The violation: Failure to follow proper procedure for downgrading of design requirements.

Minor because: Error discovered prior to fabrication and installation of supports, and another engineering change issued to reclassify supports as Quality Class 1.

Not minor if: Error not discovered until after installation and acceptance of pipe supports, and re-classification to Quality Class 1 required rework to qualify the supports.

f. During an inspection of safety-related welding activities, an inspector discovered that the welding torch cover-gas hook-up for the welding machine to be used was attached to an Argon gas cylinder instead of the cylinder for the Helium-Argon mix gas required by the welding procedure.

The violation: Failure to follow procedure for the control of special processes.

Minor because: The error was discovered and corrected prior to the start of welding.

Not minor if: Subsequent inspection disclosed that previous welding had been accomplished using the improper cover gas.

g. During inspection of a piping weld fit-up, an inspector noticed a “come-along” attached to the run of the piping providing a horizontal force. When the “come-along” was removed, the piping moved horizontally and the required weld joint fit-up could not be achieved.

The violation: Failure to follow procedures for control of “cold-spring” in piping systems.

Minor because: The error was discovered prior to the weld fit-up being approved and signed off by Quality Assurance, and the problem was identified in the corrective action program

Not minor if: The weld fit-up had been approved by Quality Assurance and the welder was preparing to tack weld.

h. During observation of the installation of safety-related instrumentation and control components, the inspector noted that the craftsman was preparing to install lugs on the wiring using the wrong size crimping tool. The resulting installation would have resulted in connections which could come loose during operation of the equipment.

The violation: Failure to follow procedure for special processes during the installation of safety-related equipment.

Minor because: The error was discovered prior to the use of the incorrect tool and the problem was subsequently identified in the corrective action program.

Not minor if: The craftsman had already completed previous installations using the incorrect tool and those connections had been accepted by Quality Assurance.

Appendix D

WBN Unit 2 Construction Inspector
Qualification Requirements

1. PURPOSE

To provide guidance for qualifying inspectors to perform construction inspections at WBN Unit 2.

2. BACKGROUND

Construction inspections using IMC 2512, IMC 2513, and IMC 2514 were last performed in the early 1990's. Since then inspectors have been qualified using IMC 1245 to conduct inspections at operating plants. No inspectors have been trained and qualified to conduct construction inspections for a 10 CFR Part 50 applicants since the early 1990's. An updated construction inspector qualification has been developed but it is designed for inspectors performing construction inspections for 10 CFR Part 52 applicants. This appendix provides the qualification requirements for an IMC 1245 or IMC 1252 qualified inspector to conduct inspections at WBN Unit 2. At management's discretion, additional training specified by this IMC, may be waived or shortened for certain inspectors. This includes inspectors conducting site-wide inspections like security and emergency preparedness; inspections performed to IMC 2515 IPs; and impromptu or short term inspections not requiring knowledge of WBN Unit 2 unique historical issues or that are performed under the direct supervision of an IMC 2517 qualified inspector.

3. DISCUSSION

a. Construction Phase..

Inspectors previously qualified to IMC 1245 and 1252 need to complete the additional activities listed in Table 1, as applicable, to be fully qualified for the Construction Phase of WBN Unit 2. Form 1 is used to document the justification for using equivalent training or experience in place of a qualification requirement. When completed, a construction phase inspector certification is issued.

b. Preoperational Testing Phase..

Inspectors previously qualified to IMC 1245 and 1252 need to complete the additional activities listed in Table 2, as applicable, to be fully qualified for the Preoperational Testing Phase of WBN Unit 2. Form 2 is used to document the justification for using equivalent training or experience in place of a qualification requirement. When completed, a preoperational testing phase inspector certification is issued.

c. Start-up testing Phase..

Inspectors previously qualified to IMC 1245 and 1252 need to complete the additional activities listed in Table 3, as applicable, to be fully qualified for the Start-up Testing Phase of WBN Unit 2. Form 3 is used to document the justification for using equivalent training or experience in place of a qualification requirement. When completed, a start-up testing phase inspector certification is issued.

d. Refresher and Continuing Training.

This IMC does not require specific continuing or refresher training. However, inspectors qualified to this IMC, are expected to maintain their original qualifications to either IMC 1245 or IMC 1252 as applicable. In addition, at management's discretion, refresher and continuing training may be required as a means for updating and maintaining qualification for either individual inspectors or the entire population of WBN Unit 2 inspectors. The following are some situations that could necessitate the need for refresher and / or continuing training.

1. Just before a critical and/or complex activity takes place, i.e., just-in-time.

2. Evidence of declining performance

3. At the request of inspectors.

4. As a result of lessons learned from industry events and/or ongoing inspection activities.

5. An inspection area that requires specialized training.

6. Continuing industrial Safety training caused by changing conditions.

In addition, Region II management will consider requiring some or all WBN Unit 2 inspectors to complete new IMC 1252 construction courses as they become available. An example of that would be the Codes and Inspection courses described in Appendix C of IMC 1252.

e. Monitoring Program Effectiveness

The implementation of the WBN Unit 2 inspection training and qualification program will be monitored by Region II to identify any areas where performance may be declining. Staff may use the Feedback Process to provide comments and recommendations on the content and effectiveness of the inspector qualification program outlined in this section. Lessons learned, feedback forms, and changes to the current inspection policy and procedures will be reviewed by

management for possible impacts to the inspector training and qualification program outlined in this section.

Table 1: Construction Phase Inspector Qualification Requirements (for Inspectors Previously Qualified Under IMC 1245 and/or IMC 1252).

Signature Card and Division Director Certification

Inspector Name: _____	*IMC 1245*	*IMC 1252*	*Employee Initials/ Date*	*Branch Chief's Signature/Date*
A. Training Courses				
Construction Quality Assurance*		N/R		
Personal Safety at Construction sites*				
B. Individual Study Activity				
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program				
(ISA-WB2-2) IMC 2512, Light Water Reactor Inspection Program – Construction Phase*				

N/R: Not required because it is included in the IMC 1252 qualification.

* At management's discretion may be waived for certain inspectors performing impromptu or short term inspections.

Watts Bar 2 Construction Phase Inspector Qualification Certification

_____
(Name)

Has successfully completed all of the additional training requirements to be a

WBN Unit 2 CONSTRUCTION PHASE INSPECTOR

Branch Chief Signature: _____

Division Director Signature: _____

Date: _____

This signature card and certification must be accompanied by the appropriate Form 1, Construction Phase Equivalency Justification, if applicable.

Form 1: Construction Phase Equivalency Justification	
Inspector Name: _____	***Identify equivalent training and / or experience for which the inspector is to be given credit***
A. Training Courses	
Construction Quality Assurance	
Personal Safety at Construction sites	
B. Individual Study Activities	
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program	
(ISA-WB2-2) IMC 2512, Light Water Reactor Inspection Program – Construction Phase	

Branch Chief's Recommendation Signature / Date_____

Division Director's Approval Signature / Date_____

Copies to:
Inspector
HR Office
Branch Chief

This form must accompany the Signature Card and Certification, if applicable.

Table 2: Preoperational Testing Phase Inspector Qualification Requirements

Signature Card and Division Director Certification

Inspector Name: _____ _	*IMC 1245*	*IMC 1252*	*Employee Initials/ Date*	*Branch Chief's Signature/Date*
A. Training Courses				
Westinghouse systems course	N/R			
B. Individual Study Activity				
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program				
(ISA-WB2-3) IMC 2513, Light Water Reactor Inspection Program - Preoperational Testing And Operational Preparedness Phase				

N/R: Not required because taking a systems course is part of the IMC 1245 qualification.

Watts Bar 2 Preoperational Testing Inspector Qualification
Certification

_____
(Name)

Has previously qualified as an inspector under IMC 1245 or IMC 1252
and has successfully completed all of the additional training requirements to be a

WBN Unit 2 PREOPERATIONAL TESTING PHASE INSPECTOR

Branch Chief Signature: _____

Division Director Signature: _____

Date: _____

This signature card and certification must be accompanied by the appropriate Form 2, Preoperational Testing Phase Equivalency Justification, if applicable.

Form 2: Preoperational Testing Phase Equivalency Justification	
Inspector Name: _____	***Identify equivalent training and / or experience for which the inspector is to be given credit***
A. Training Courses	
Westinghouse full series	
B. Individual Study Activities	
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program	
(ISA-WB2-3) IMC 2513, Light Water Reactor Inspection Program - Preoperational Testing And Operational Preparedness Phase	

Branch Chief's Recommendation Signature / Date_____

Division Director's Approval Signature / Date_____

Copies to:
Inspector
HR Office
Branch Chief

This form must accompany the Signature Card and Certification, if applicable.

Table 3: Start-up Testing Phase Inspector Qualification Requirements

Signature Card and Division Director Certification

Inspector Name: _____	*IMC 1245*	*IMC 1252*	*Employee Initials/ Date*	*Branch Chief's Signature/Date*
A. Training Courses				
Westinghouse full series				
B. Individual Study Activity				
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program				
(ISA-WB2-4) IMC 2514, Light Water Reactor Inspection Program – Startup Testing Phase				

Watts Bar 2 Start-up Testing Inspector Qualification Certification

_____
(Name)

Has previously qualified as an inspector under IMC 1245 or IMC 1252
and has successfully completed all of the additional training requirements to be a

WBN Unit 2 START-UP TESTING PHASE INSPECTOR

Branch Chief Signature: _____

Division Director Signature: _____

Date: _____

This signature card and certification must be accompanied by the appropriate Form 2, Start-up Testing Phase Equivalency Justification, if applicable.

Form 2: Start-up Testing Phase Equivalency Justification	
Inspector Name: _____	***Identify equivalent training and / or experience for which the inspector is to be given credit***
A. Training Courses	
Westinghouse full series	
B. Individual Study Activities	
(ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program	
(ISA-WB2-4) IMC 2514, Light Water Reactor Inspection Program – Startup Testing Phase	

Branch Chief's Recommendation Signature / Date_____

Division Director's Approval Signature / Date_____

Copies to:
Inspector
HR Office
Branch Chief

This form must accompany the Signature Card and Certification, if applicable.

Basic-level Individual Study Activity

TOPIC: (ISA-WB2-1) IMC 2517, Watts Bar Unit 2 Construction Inspection Program

PURPOSE: The purpose of this activity is to familiarize you with IMC 2517 used to perform construction and post construction inspection activities at the Watts Bar Unit 2 nuclear power plant up until the time the plant transitions into the ROP inspection program. During this activity you will perform the tasks identified below to acquire a working knowledge of the requirements delineated in IMC 2517.

COMPETENCY AREAS:
INSPECTION
COMMUNICATION
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 8 hours

REFERENCES: IMC 2517, Watts Bar Unit 2 Construction Inspection Program

EVALUATION CRITERIA: Upon completion of this activity, you will be asked to demonstrate your understanding of the requirements delineated in IMC 2517 by successfully addressing the following criteria:

1. Discuss the purpose of IMC 2517.
2. Describe the impacts of the long delay in restarting the construction of WBN Unit 2.
3. Describe the general inspection policy of WBN Unit 2.
4. Discuss how you would use the results of the reconstitution effort to plan WBN Unit 2 inspections.
5. Discuss the purpose and contents of Inspection Planning and Scheduling and its relationship to the applicant schedule.
6. Discuss how TIs will be addressed at WBN Unit 2.
7. Discuss how plant modifications will be inspected.
8. Discuss the transition to the ROP.
9. Discuss the enforcement approach for WBN Unit 2.

10. Discuss the assessment approach for WBN Unit 2.

11. Discuss how to process and document inspection findings for WBN Unit 2.

12. Discuss the contents of inspection reports including the scope, observations and findings, and conclusions.

TASKS:

1. Obtain a paper copy, or locate and bookmark the electronic location of, IMC 2517 for personal use and future reference.

2. Review IMC 2517 to gain an understanding of the principles discussed in the evaluation criteria.

3. Review and discuss the evaluation criteria with your supervisor.

DOCUMENTATION: Construction Inspector Certification Signature Card Item ISA-WB2-1

Basic-level Individual Study Activity

TOPIC: (ISA-WB2-2), IMC 2512, Light Water Reactor Inspection Program – Construction Phase.

PURPOSE: The purpose of this activity is to familiarize you with IMC 2512 which provides inspection requirements and policy for implementation of the inspection program during construction and major plant modifications.

COMPETENCY AREAS:
INSPECTION
COMMUNICATION
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 16 hours

REFERENCES: IMC 2512, Light Water Reactor Inspection Program – Construction Phase

EVALUATION CRITERIA: Upon completion of this activity, you will be asked to demonstrate your understanding of the requirements delineated in IMC 2512 by successfully addressing the following criteria:

1. State the purpose of IMC 2512.
2. Describe the relationship between IMC 2512 and IMC 2517.
3. State the purpose of Construction Milestones.
4. Describe how the NRC will monitor the WBN Unit 2 project performance since SALP is no longer in use?

TASKS:

1. Obtain a paper copy, or locate and bookmark the electronic location of, IMC 2512 for personal use and future reference.
2. Review IMC 2512 to gain an understanding of the principles discussed in the evaluation criteria.
3. Familiarize yourself with the contents of the Inspection Procedures (IPs) listed in Appendix I of IMC 2512.
4. Review and discuss the evaluation criteria with your supervisor.

DOCUMENTATION: Construction Inspector Certification Signature Card Item ISA-WB2-2

Basic-level Individual Study Activity

TOPIC: (ISA-WB2-3), IMC 2513, Light Water Reactor Inspection Program – Preoperational Testing and Operational Preparedness Phase.

PURPOSE: The purpose of this activity is to familiarize you with IMC 2513 which provides inspection requirements and policy for implementation of the inspection program during the Preoperational Testing and Operational Preparedness Phase of a nuclear power plant.

COMPETENCY AREAS:
INSPECTION
COMMUNICATION
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 16 hours

REFERENCES: IMC 2513, Light Water Reactor Inspection Program –Preoperational Testing and Operational Preparedness Phase.

EVALUATION CRITERIA: Upon completion of this activity, you will be asked to demonstrate your understanding of the requirements delineated in IMC 2513 by successfully addressing the following criteria:

1. State the purpose of IMC 2513.
2. Describe the Categories of the Pre-operational Test Program. Who directs them? What do they entail? Why are they done?
3. Discuss the General Guidance of IMC 2513.

TASKS:

1. Obtain a paper copy, or locate and bookmark the electronic location of, IMC 2513 for personal use and future reference.
2. Review IMC 2513 to gain an understanding of the principles discussed in the evaluation criteria.
3. Familiarize yourself with the contents of the Inspection Procedures (IPs) listed in Appendix A of IMC 2513.
4. Review and discuss the evaluation criteria with your supervisor.

DOCUMENTATION: Construction Inspector Certification Signature Card Item ISA- WB2-3

Basic-level Individual Study Activity

TOPIC: (ISA-WB2-4) IMC 2514, Light Water Reactor Inspection Program – Startup Testing Phase.

PURPOSE: The purpose of this activity is to familiarize you with IMC 2514 which provides inspection requirements and policy for implementation of the inspection program during the Startup Testing Phase of a nuclear power plant.

COMPETENCY AREAS:
INSPECTION
COMMUNICATION
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 16 hours

REFERENCES:

1. IMC 2514, Light Water Reactor Inspection Program – Startup Testing Phase.
2. Regulatory Guide (RG) 1.68, Initial Test Programs for Water-Cooled Nuclear Power Plants.

EVALUATION CRITERIA: Upon completion of this activity, you will be asked to demonstrate your understanding of the requirements delineated in IMC 2514 and RG 1.68 by successfully addressing the following criteria:

1. State the purpose of IMC 2514.
2. Discuss the General Guidance in IMC 2514 and RG 1.68.
3. Describe the three types of the startup testing inspection program and associated categories. Discuss the degree of inspection coverage for each type.

TASKS:

1. Obtain paper copies, or locate and bookmark the electronic locations of IMC 2514 and RG 1.68 for personal use and future reference.
2. Review IMC 2514 and RG 1.68 to gain an understanding of the principles discussed in the evaluation criteria.
3. Familiarize yourself with the contents of the Inspection Procedures (IPs) listed in Appendix A of IMC 2514.

4. Review and discuss the evaluation criteria with your supervisor.

DOCUMENTATION: Construction Inspector Certification Signature Card Item ISA-WB2-4

END

Revision History - IMC 2517

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	02/15/08 CN 08-008	Revision history reviewed for the last four years. MC 2517 is being issued to provide the policies and requirements for the Watts Bar Unit 2 (WBN Unit 2) construction inspection program during that unit's resumption of construction after an approximately 20 year suspension of construction activities.	NO	N/A	ML073330142
N/A	04/30/10 CN 10-013	MC 2517 is being revised to include corrections and enhancements to the document identified by the inspection staff and to incorporate recommendations made during the 2008 and 2009 self-assessments.	NO	N/A	N/A