

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-528/89-18, 50-529/89-18 and 50-530/89-18

Docket Nos. 50-528, 50-529 and 50-530

License Nos. NPF-41, NPF-51, NPF-74

Licensee: Arizona Nuclear Power Project
P. O. Box 52034
Phoenix, Arizona 85072-2034

Facility Name: Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2 and 3

Inspection at: Palo Verde Site, Wintersburg, Arizona

Inspection Conducted: April 3-14, 1989

Inspector: Clifford A. Clark
C. A. Clark, Reactor Inspector

5/4/89
Date Signed

Approved by: S. A. Richards
S. A. Richards, Chief
Engineering Section

5/4/89
Date Signed

Inspection Summary:

Inspection During the Period April 3-14, 1989 (Report Nos. 50-528/89-18, 50-529/89-18, 50-530/89-18)

Areas Inspected: An unannounced routine inspection by one regional inspector of Inservice Inspection (ISI) activities and the Unit 3 ISI outage examinations. Inspection procedures nos. 30703, 73051, 73052, 73753 and 73755 were used as guidance for the inspection.

Results:

General Conclusions

While the licensee's basic ISI program appeared to be adequate in the areas reviewed, the inspector identified a concern with the instructions in some of the licensee's ISI examination procedures regarding ISI nonconformances. This item is discussed in paragraphs 3 and 5 of the report. The licensee has agreed to review this area and make changes as necessary by July 1989.

Significant Safety Matters: None

Summary of Violations or Deviations: None

Open Items Summary: One new unresolved item (paragraph 3) was identified during this inspection.



DETAILS

1. Persons Contacted

The below listed technical and supervisory personnel were among those contacted:

Arizona Nuclear Power Project (ANPP)

- *R. Butler, Director, Standards/Technical Support
- *T. Shriver, Manager, Compliance
 - K. McCandless, Compliance Engineer
- *R. Kropp, Supervisor, Technical Support
- *D. Hansen, Lead Material and NDE Engineer
- *B. Strickler, Senior Mechanical Engineer (ISI)
 - M. Anderson, Senior Mechanical Engineer (ISI)
 - A. Morrow, Senior Mechanical Engineer (ISI)
 - J. Matteson, Supervisor, QA Monitoring
 - J. Gratza, QA Monitoring Engineer

Contractor Personnel

- R. Bagget, Authorized Nuclear Inservice Inspector (ANII), Kemper Group
- E. Thomas, ISI Examiner, Lambert, MacGill, Thomas Inc.
- D. Richey, ISI Examiner, Lambert, MacGill, Thomas Inc.

- * Denotes those personnel in attendance at the exit meeting on April 7, 1989.

The inspector also held discussions with other licensee and contractor personnel involved with Inservice Inspection activities.

2. Inservice Inspection - Review of Program (73051)

a. Program Approval

The latest Inservice Inspection (ISI) program plans for Palo Verde Units 1, 2 and 3, were submitted to NRC/NRR by letters dated August 26, 1985, July 17, 1986, and March 11, 1987 respectively and supplemented by a letter dated August 7, 1987.

The NRR latest response on their review of the ISI programs, is contained in an October 21, 1987, letter from Mr. E. A. Licitra to Mr. E.E. Van Brunt, Jr. The NRR staff determined that the ISI programs for Units 1, 2 and 3 were acceptable and, with one exception, the requested relief from certain ASME code Section XI requirements were granted since the examinations were identified as impractical.



The Unit 3 ISI plan is described in a document entitled, "Inservice Inspection Program Summary Manual, program no. ISI-3, Revision No. 0."

The Unit 3 ISI program review was documented on a cover sheet which indicated the following: a technical review, Engineering Manager's approval, Authorized Nuclear Inservice Inspector's (ANII) concurrence, and the Plant Review Board's approval. The ANII services were procured from the Kemper Group under the Lumbermens Mutual Casualty Company.

During the inspector review of the Unit 3 ISI program summary manual, it was identified that this document and the similar manuals for units 1 and 2 are not maintained as controlled documents in the licensee Drawing and Document Control (DDC) system. The licensee ISI group identified the following:

- ° The ISI group is the only group on site that should be working with these ISI program summary manuals. The ISI group is controlling the ISI programs as controlled by user (CBU) documents, which is allowed by Administrative Procedure 84AC-ORM03, Revision 0, "DDC Document and Manual Control".
- ° The individual ISI engineer for each unit maintains one master copy of the Unit's ISI program summary manual, in which he is allowed to enter changes, which are undated and unsigned. At the end of 1989, these marked up master copies of the ISI program summary manuals will be reissued as revision 1 to incorporate all the changes identified in the first ISI periods for the three units.

While the inspector did not identify this practice as a violation of a requirement, other facilities have experienced problems in this area. Examples of problems that have occurred at other facilities using a similar tracking system include lost of plant configuration control and program inconsistency. The licensee stated that as a result of having a staff of four knowledgeable people directly involved in the ISI work for the three units, they did not expect to experience the problems identified at other sites.

b. Program Organization

Administrative Procedure No. 73AC-OXI01, Revision 0, entitled, "ASME Section XI Inservice Inspection," of November 1, 1988, establishes the methods for preparing, controlling, and implementing the ISI program. This procedure requires the ISI program summaries (plans and schedules) to be submitted to the NRC at least 90 days (or as required by the operating license) prior to the first refueling outage for each specific unit. This procedure also defines the responsibilities of the persons involved with the final evaluation and acceptance of the ISI results. This inspection information is documented in the "ISI Summary Report." Section 3.7.1 requires the following records to be stored and maintained for the life of the plant: ISI Program Summary, ISI Summary Reports, all Examination



Data Sheets and associated material, and equipment and personnel certifications.

Administrative Procedure No. 73AC-OEE04, Revision 0, entitled, "Qualification and Certification of NDE Personnel," of November 1, 1988 establishes the qualification, training, certification, and recertification of NDE personnel at all levels. This procedure, for personnel qualification, is consistent with ASME Section XI and SNT-TC-1A (1980 Edition) requirements.

c. Quality Assurance Program

The "Operations Quality Assurance Criteria Manual," Criterion 9, addresses requirements for the control of special processes. The QA program contains provisions to oversee contractor/subcontractor ISI activities. The inspector reviewed audit report no. 89-01, "Control of special processes", which was performed January 9-20, 1989; document 89-004-216, Monitoring Plans for Units 1 and 3 Refueling Outage," and the 1989 auditing and monitoring schedule, and no concerns were identified.

No violations or deviations were identified in the areas reviewed.

3. Inservice Inspection - Review of Procedures (73052)

A sample of the latest revisions of applicable ISI procedures, issued since the last ISI review, were reviewed by the inspector to assure compliance with the ISI program. Some of the procedures reviewed were:

- a. 73TI-9ZZ05, Revision 2, PCN 01 of February 15, 1989, "Dry Magnetic Particle Examination"
- b. 73TI-9ZZ06, Revision 4, PCN 01, of February 1, 1989, "Wet Magnetic Particle Examination"
- c. 73TI-9ZZ07, Revision 2, PCN 01, of February 1, 1989, "Liquid Penetrant Examination"
- d. 73TI-9ZZ09, Revision 3, of February 15, 1989, "Ultrasonic Examination of Pipe Welds"
- e. 73TI-9ZZ10, Revision 2, of February 15, 1989, "Ultrasonic Examination of Welds in Ferritic Components"
- f. 73TI-9ZZ12, Revision 2, of February 22, 1989, "Ultrasonic Examination of Nozzle Inner Radius"
- g. 73TI-9ZZ14, Revision 2, of February 15, 1989, "Ultrasonic Examination of Studs and Bolts"
- h. 73TI-9ZZ15, Revision 2 of February 22, 1989, "Ultrasonic Examination of Studs, Bolts, and Nuts Using Back Reflection"



- i. 73TI-9ZZ17, Revision 2, of February 1, 1989 "Visual Examination of Welds and Bolting"
- j. 73TI-9ZZ18, Revision 3, of February 1, 1989, "Visual Examination of Support Components"

All the reviewed procedures specified qualification and certification of NDE personnel, where applicable. The technical content, such as, method of examination, extent, and technique, were adequately described in conformance with the requirements and guidance of the ASME Code, Section V. The methods of recording, evaluating, dispositioning, and reporting normal ISI findings were addressed in the applicable procedures. During the procedure review of how the licensee procedures evaluated and dispositioned nonconforming conditions identified during an ISI examination, the following concerns were identified:

- (1) Various ISI procedures, such as procedure 73TI-9ZZ18, Revision 3, "Visual Examination of Support Components", contain sections such as section 8.5.2 which states, "an EER per procedure 73AC-0EE01 (or another approved nonconformance document) shall be initiated for all items reflecting an unacceptable condition." Taken alone, this reference to the EER process appears to implement the intent of 10 CFR Part 50, Appendix B, Criterion XVI, which states in part, "Measures shall be established to assure that conditions adverse to quality, such as...nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management." The item of concern identified in this procedure, is that Subsection 8.5.2.1 of this same section states, "This EER process is not required to be initiated when the unacceptable condition can be readily corrected in accordance with 30AC-9ZZ01, work control." The subsection 8.5.2.1 statement that the EER process is not required and that the work control process may be substituted in its place, without defining how or when this substitution can be made, is questionable.

Procedure 30AC-9ZZ01, Revision 4, "Work Control" was reviewed by the inspector. He identified to the licensee that it did not appear to implement the intent of 10 CFR Part 50, Appendix B, Criterion XVI for nonconformances identified during ISI examinations. The work control procedure does not assure that the cause of the conditions adverse to quality is determined and corrective action taken to preclude repetition. This procedure also does not assure that the cause of the condition, and the corrective action taken, are documented and reported to appropriate levels of management. The licensee agreed that this could be interpreted as a questionable area, but they identified that they used procedure 430P-9ZZ11, Revision 2, "Mode Change Checklists" in conjunction with the EER and Work Control processes, to ensure the implementation of 10 CFR Part 50, Appendix B, Criterion XVI requirements. Although no significant



examples were identified, the inspector remained concerned that misuse of the procedures could result in significant nonconforming conditions not receiving appropriate evaluations. This item will be carried as an unresolved item.(50-530/89-18-1).

On April 14, 1989 the licensee identified to the inspector, that to resolve the concern on the implementation of 10 CFR Part 50, Appendix B, Criterion XVI requirements for nonconformances identified during ISI examinations, they would perform the following actions by July 1989:

- Review the controlling ASME Section XI ISI Administrative Control (AC) document, 73AC-OXI01, Revision 0, "ASME Section XI Inservice Inspection", to evaluate what changes may be required to ensure any significant nonconforming condition identified during an ISI examination is evaluated per the EER process (or any other approved nonconformance document). The licensee identified that they would prefer adding instructions to their AC documents, in place of revising the ISI examination procedures.
 - Issue approved necessary AC document changes to resolve this concern.
 - Identify any examination procedures that may require additional changes.
- (2) At the time of this inspection, the inspector identified that there was no other approved nonconformance document, as referenced in section 8.5.2 of procedure 73TI-9ZZ18. The licensee identified that this statement had been added to some ISI procedures in anticipation that a new nonconformance document might be issued in the future, and that the presence of this statement would preclude the necessity of issuing another procedure revision. The licensee response to this concern resolved the inspector's question in this area.

No violations or deviations were identified in the areas reviewed.

4. Inservice Inspection - Observation of Work and Work Activities (73753)

During the inspection, the licensee was conducting the Unit 3 cycle 1 refueling outage, which is the first refueling outage of the first period of the first ten year ISI interval. The ISI examinations were performed by the licensee staff and contractor ISI examiners provided by Lambert ° MacGill ° Thomas Inc. (LMT, Inc.).

The inspector reviewed the qualification and certification records for the ISI examiners, and the equipment certifications. Available visual (VT) and ultrasonic (UT) examinations performed on the Safety Injection System, Letdown Heat Exchanger System (zone 69) and Atmospheric Dump no. 1 System (zone 51) were observed by the inspector.

No violations or deviations were identified in the areas reviewed.



5. Inservice Inspection - Data Review and Evaluation (73755)

The inspector reviewed all the available NDE ISI data sheets generated this outage, prior to and during this inspection, on approximately 560 examinations. At the time of this inspection, a total of eleven rejected ISI examinations out of the 560 examinations, had been identified. Three of the eleven rejected examinations were found by magnetic particle testing (MT), two by liquid penetrant testing (PT) and six by visual testing (VT). The licensee was in the process of performing corrective action and reinspection.

The inspector identified that the licensee had issued "Work Control" documents to perform some of the corrective actions. The use of a work control document instead of an EER process document, to identify and provide corrective actions for nonconformances, has been identified as an unresolved item in paragraph 3 of this inspection report.

No violations or deviations were identified in the areas reviewed.

6. Exit Meeting

The inspector met with licensee management representatives denoted in paragraph 1 on April 7, 1989. The scope of the inspection and the inspector's finding up to the time of the meeting were discussed. At this meeting the inspector identified that he had obtained some information that would be reviewed later in the Region, with the findings documented in this report. The information was reviewed and the findings included in paragraphs 3 and 5 of this report.

