

Washington Public Power Supply System
A JOINT OPERATING AGENCY

EA-80-20
Recd 7-16-80

10/4

P. O. Box 968 3000 GEO. WASHINGTON WAY RICHLAND, WASHINGTON 99352 PHONE (509) 375-5000

July 11, 1980
G02-80-151

United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Victor Stello, Jr.
Director
Office of Inspection and Enforcement

Re: Washington Public Power Supply System Nuclear Project No. 2;
Docket No. 50-397; CPPR-93, EA-80-20; Answer to Notice of Proposed
Imposition of Civil Penalties

Gentlemen:

Washington Public Power Supply System ("WPPSS" or "Supply System") hereby answers the Notice of Proposed Imposition of Civil Penalties which was transmitted to us as Appendix B to your letter dated June 17, 1980. Our answer pursuant to 10 C.F.R. paragraph 2.205 consists of this letter and Exhibit A. We are also today responding separately under 10 C.F.R. paragraph 2.201 to the Notice of Violation, Appendix A to your June 17, 1980 letter. We will respond separately to your request for information under 10 C.F.R. paragraph 50.54(f) also dated June 17, 1980. We incorporate the final two paragraphs, pertaining to civil litigation, of the letter portion of our reply under 10 C.F.R. paragraph 2.201. The scope of our reply includes the matters relating to civil penalties in your June 17, 1980 transmittal letter as well as in Appendix B to that letter.

As a general response, the Supply System agrees with the majority of the NRC's findings as accurately reflecting deficiencies found by our contractor, by WPPSS/Burns and Roe, and by the Nuclear Regulatory Commission's Region V staff.

In Exhibit A, we protest, in part, the imposition of certain of the proposed civil penalties, deny the item of noncompliance or point out error in the Notice, and ask for remission or mitigation of the associated proposed penalties. The format of Exhibit A is to quote the alleged item of non-compliance which we deny or consider erroneous, discuss the reasons for our contention, and conclude that the proposed penalty should be remitted or mitigated.

D

8007310 498

Page Two

The Supply System understands that it will have a subsequent opportunity pursuant to 10 C.F.R. paragraph 2.205(d) to request a hearing should you determine not to mitigate or remit those penalties which we have protested. As to the balance of the penalties, the Supply System stands ready to pay the amounts proposed, either in advance of or following your determination on the disputed items, as you may prefer.

Very truly yours,



N. O. STRAND
Managing Director

cc: RH Engelken, NRC
RC Will, Health Services Division, Olympia, WA
Hon. Slade Gorton, Office of the Attorney General, Olympia, WA
RC Barley, Utilities & Transportation Commission, Olympia
ND Lewis, EFSEC, Olympia
JR Lewis, BPA
RC Root, B&R, Site

EXHIBIT A

SUMMARY

NONCOMPLIANCE
ITEM NUMBER

REASON FOR PROTEST

I.A	Acknowledged, with correction in basis of citation
I.B.1	Denied
I.C.1	Denied in Part
I.C.3	Mitigating Circumstances
I.D.2.b	Mitigating Circumstances
II.A.1	Denied in Part
II.B.2.b	Denied in Part

I. Items of Noncompliance Relating to the Sacrificial Shield Wall

- A. 10 CFR 50, Appendix B, Criterion V, states that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Paragraph D.2.5.5 of the QA Program states in part, that "Activities affecting quality . . . shall be accomplished in accordance with these instructions, procedures, or drawings"

The erection of the reactor building sacrificial shield wall is prescribed, in part, by drawing No. 2808-5836, Revision 2, Note NN, which states, in part, " . . . Each segment shall now be attached to the lower SSW by welding columns to inner and outer column splice plates and slot welding bottom segment ring beam to top of box ring beam . . . also remove temporary shims before welding"

Contrary to the above requirements, on June 14, 1978, assembly of the sacrificial shield wall in the reactor building was completed with temporary shims still in place at the interface of the bottom segment ring beam and the top of the box ring beam. These shims prevented several slot welds from joining the ring beams.

This Violation resulted in the as built structure being incapable of performing its intended safety function during design basis earthquake conditions and certain postulated pipe break accidents (Civil Penalty - \$5000.00).

ADMISSION OR DENIAL

While the Supply System does not dispute that the as built structure fails to satisfy our requirements and will require repair,^{1/} we are constrained to point out that the theory of this particular violation is incorrect. The theory of the violation is that an activity affecting quality, assembly of

^{1/} A matter which has been the subject of prior meetings and reports and which will be the subject of a final report, including a proposed repair program to be submitted in approximately 30 days.

the sacrificial shield wall, was not performed in accordance with drawings which required removal of temporary shims before welding, with the result that such temporary shims were still in place and prevented slot welds from joining the ring beams. In fact, the temporary shims referred to in the drawing were removed as required. The shims which interfered with proper welding and joinder were permanent shims, the use of which was approved in advance and required to be shown by the subcontractor on as built drawings. These permanent shims were approved in RFI No. 215-2571, August 4, 1977. The fault lay in failure of the RFI disposition to specify shim placement so as to avoid interference with structural welding. The underlying fault may have been focus on the shielding function, rather than the structural aspects, of the shield wall.

The use of permanent shims, if properly located, represented an accepted practice in order to meet vertical tolerances.

Details

The incomplete connection of the shield wall resulted from failure of the design approval to specify correct shim placement and not a failure of installers to follow drawings or failure of QC/QA to detect deviations from drawings or specifications. The lack of connection was detected by our contractors and reported to us and in turn to NRC; the Supply System has been investigating and evaluating the problem and developing a repair procedure to assure both shielding and structural integrity which will be submitted in the near future. In the circumstances, the proposed penalty based on the theory of violation set forth in the notice of violation should be reconsidered.

The specific sequence of events described in paragraphs 3 and 4 of this Item of Noncompliance is in error. Note NN of Drawing 2808-5836, Rev. 2 does make reference to removal of temporary shims. However, these specific shims are not the shims which prevented the proper welding between Rings 3 and 4. Temporary shims were an integral part of the erection/installation process of the sacrificial shield wall and were used to slide the 3 segments of Ring 4 into its final location. Such temporary shims were then removed.

Temporary Shims

Note CC of Drawing 5836, Rev. 2 states, "Each segment shall be set down 2'-8" outboard radially from its final azimuth position over the lower portion of the sacrificial shield wall and shall rest on temporary shims set on platform beams as per Drawing 5835, Rev. 5. A coordinated effort among erection rig, winches, and come-alongs shall be made."

Following movement of the sacrificial wall segments into their final position (described in Notes KK and LL of Drawing 5836, Rev. 2) the segments were permanently attached by welding columns to inner and outer column splice plates. As noted in Note NN all welding was done from the outboard face. The removal of the temporary shims was performed as indicated and since these temporary shims were located on the outboard face of the sacrificial shield wall, removal was performed as indicated.

Permanent Shims

The use of permanent shims was not covered by any drawings; however, contract specification 2808-215 section 15A requires that levelness tolerance between the upper and lower sacrificial shield wall mating surfaces not exceed 1/8".

In paragraph 4 of Section 15A it states, "Should the gap be fabricated with a dimension greater than 1/8" any repair procedure would have to include the insertion of suitable shielding material to fill the gap. The use of lead wedges down into the oversized gap will be considered." RFI No. 215-2571, dated 8/4/77, approved the use of steel shims ranging from 10 ga. to 3/16" in lieu of lead to fill the gaps. The location of these shims was to be shown on the as-built drawings to be submitted by Leckenby.

Appendix A

- B. 10 CFR 50, Appendix B, Criterion XI states "A test program shall be established to assure that all testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified and performed in accordance with written test procedures"

Paragraph 2.5.11 of the QA Program states in part, "Test procedures shall include provisions for assuring that prerequisites for the given tests have been met"

1. The fabrication, erection, and testing of the sacrificial shield is prescribed in part by WPPSS Contract Specification No. 2808-215. Appendix D of this specification, entitled "Technical Documentation and Procedure Requirements" states, in part, that ". . . Document (including test procedures) is to be submitted for approval and must be approved or approved as noted by owner before affected work can proceed"

Contrary to the above requirements, ultrasonic testing of the weld joints listed below was performed before an owner-approved procedure was provided.

<u>Component</u>		<u>Weld Joint</u>	<u>Date</u>
Ring Beam	113B	Joints 23, 24	June 17, 1976
	113C	Joints 31, 32, 114C	
		Joints 23, 24	
Box Column	29B	Joints 21-28	June 16, 1976
	29A	Joints 1-8	
Weld Maps	W45	Joints 9-10	July 24, 1976
	W21	Joints 1-6, 8-10, 12, 13	
	W22	Joints 1-4, 6-8, 10, 11	
		12, 13, 167	
	W22	Joints 15, 16, 22, 132, 140,	
		30, 168, 144, 32, 33, 35,	
		37, 166	
Electro-Slag	X-100		June 2, 1976
	X-102		

The contractor's ultrasonic test procedure (Quality Control Procedure 8.0, Rev. 1, "Ultrasonic Testing") was approved by the owner (owner's agent) on September 27, 1976. This nonconforming condition was not identified nor were the weld joints retested after an approved procedure was provided.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

The Item of Noncompliance is denied.

In essence, this item of noncompliance presents on the theory that criterion XI of 10 C.F.R. Part 50 Appendix B governs nondestructive examination of welding. This is incorrect. Criterion XI relates to proof tests, function tests and the like, as opposed to nondestructive examination. Nondestructive examination is instead a "special process" governed by Criterion IX of 10 C.F.R. Part 50 Appendix B. The Supply System has an NRC approved Quality Assurance program to assure that special processes such as nondestructive examination (in this instance ultrasonic testing) are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, and other applicable requirements. This program does not require that the owner or the engineer review and approve special process procedures such as ultrasonic testing. The contract specifications referred to in the item of noncompliance did not require advance approval of the owner or engineer of ultrasonic test procedures. In any event, Burns and Roe Engineering Conference Notes, recently discovered from a June 2 and 3, 1976 meeting at Leckenby's Shop, shows that the UT procedure No. QCP 8, Rev. 0 "was reviewed and tentatively approved" by Burns & Roe Engineering at that meeting.

Background

The specific requirement for ultrasonic examination of electroslog welds on the sacrificial shield wall was not made a part of the 215 specification until 7/21/76.

The Ultrasonic Testing procedure, QCP-8, was approved and revised as noted below:

- o QCP-8, Rev. 0 was tentatively approved on 6/2/76 by Burns & Roe at Leckenby;
- o QCP-8, Rev. 0 was approved by B&C/G on 7/22/76 and approved as noted by B&R on 8-5-76.
- o QCP-8, Rev. 1 was approved by B&C/G on 9/22/76 and approved as noted by B&R on 9/22/76, and
- o QCP-8, Rev. 2 (incorporated A435 lamellar tearing UT) was approved by B&C/G on 1/20/77 and approved by B&R on 2/7/77.

Therefore, this apparent noncompliance is denied in whole and the proposed penalty should be remitted.

Appendix A

- C. 10 CFR 50, Appendix B, Criterion IX, states that "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Paragraph 2.5.9 of the QA Program states: "Measures shall be established and documented by the contractor to assure that special process, including welding, heat treating, cleaning, and nondestructive examination, are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria and other special requirements, using qualified personnel and procedures. Documentation shall be maintained for currently qualified personnel, processes, or equipment in accordance with the requirements of pertinent codes and standards. For special processes not covered by existing codes or standards, or where item quality requirements exceed the requirements of established codes or standards, the necessary qualifications of personnel, procedures, or equipment shall be defined."

The fabrication of the sacrificial shield wall is prescribed in part, by WPPSS Contract Specification No. 2808-215. This document specifies that welding shall be in accordance with the AWS Structural Welding Code D.1.1-1974.

1. Paragraph 3.7.2.4 of the Structural Welding Code states, in part, that for the repair of cracks in welds or base metal, ". . . Ascertain the extent of the crack by use of acid etching, magnetic particle testing or other equally positive means: remove the crack and sound metal 2 inches beyond each end of the crack, and reweld . . ."

Contrary to the above requirements, repair instructions and completion signatures dispositioning "Incomplete/Rejection Tags" Nos. 5257, 5325, 5412, 6055, 6056, 6058, 6059, 5443, 5444, 5445, 5446, and 5447 demonstrate that the repairs made to cracks in shield wall subassemblies during the period of April 1976 to April 1977 were made without using acid etching, magnetic particle testing, or other positive means to define the cracks, and sound metal 2 inches beyond each end of the cracks was not removed as required by the code.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

We agree that certain aspects of this apparent item of noncompliance have safety significance, however, we question the validity of a number of items in the citation.

This item is partially denied on the basis that there is an error in the facts. Only six (6) of the identified tags were concerned with cracks in welds or base material. Of these six, the extent of the cracks on four was determined by positive means. We acknowledge that the 2-inch excavation criteria may not have been implemented.

The following specific information is provided.

Cracks

<u>Tag</u>	<u>Summary Information From Tags and Repair Slips</u>
o 5325 -	weld crack, air arced out to sound metal, post-repair UT performed
o 5412 -	base material crack, ground to sound metal, post excavation dye penetrant exam performed.
o 6055 -	base material and weld cracks, gouged out, post-repair UT of multiple related defects on weld performed, cannot verify if UT was extended to base material repair areas.
o 6056 -	weld cracks, gouged out defective weld and base metal.
o 6058 -	weld cracks, excavated cracks by arc gouging and/or grinding to sound material.
o 6059 -	weld crack and lack of fill, excavated crack to sound metal or removed defective weld completely in cracked area, this area, in conjunction with subsequent defects located during repairs had dye penetrant, MT and UT performed.

Other Flaws - not subject to cited paragraph 3.7.2.4 of AWS

o 5257 -	material flaws, not defined as cracks, post-excavation dye penetrant exam performed.
o 5443 -	lack of fusion, post-repair UT performed.
o 5444 -	lack of fusion.
o 5445 -	lack of fusion.
o 5446 -	porosity.
o 5447 -	lack of fusion.

In Summary

- o Only six (6) of the identified tags dealt with cracks (5325, 5412, 6055, 6056, 6058, 6059).
- o One of six crack defects had dye penetrant exam (5412).
- o One of six crack defects had dye penetrant, MT and UT on multiple weld related defects (6059).
- o Two of six cracks had post-repair UT (5325, 6055).
- o Cannot confirm whether two (2) inch crack excavation criteria was implemented.

Therefore, the apparent noncompliance as written is partially in error and there is basis for remission or mitigation of the proposed penalty.

- I.C 3. The Structural Welding Code. Paragraph 3.7.3 of this code, states, in part, that "... Members distorted by welding shall be straightened by mechanical means or by carefully supervised application of a limited amount of localized heat. The temperature of the heated areas as measured by approved methods shall not exceed . . . 1200F"

Contrary to the above requirements, no documented instructions, procedures, or drawings were provided to control the application of localized heat during the straightening of each segment of sacrificial shield wall ring beam No. 3 and segment 2A of ring beam No. 2, and other shield wall components as documented on Manufacturing Order Nos. 00094, 000913, 000916, 1193, 1666, and others during 1976. Control of the maximum temperatures in the heated areas was not assured nor is there documentation of the methods used to measure the temperature or the actual temperatures reached during this activity. Temperature control during the heat straightening process is important in assuring retention of the as built physical properties of the material.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted with mitigating circumstances.

The Supply System and its Engineer Burns and Roe takes the position that heat straightening is not "Heat Treatment" and thus not a special process. "Heat Treatment" refers to such processes as tempering or quenching which are designed to change material properties. Therefore it was never a specification requirement that a procedure be written or submitted for routine straightening operations.

Paragraph 3.7.3 of AWS D1.1-74 contains the only heat straightening guidelines applicable to the fabrication and erection of the SSW. However, Leckenby did comply with AWS guidelines and requirements based on the following information provided by Leckenby at meetings in early 1980.

- o Heat straightening was used on the subject SSW segments to correct segment radius out of tolerance due to weld distortion and to correct segments that acquired a twist.
- o Heat in conjunction with "come-alongs" exerting mechanical force were used to correct the dimensional discrepancies.
- o The segments never reached a dull red color (according to AWS D1.1, paragraph 3.7.3 at 1200°F steel has a dull red color).

There is no reason to expect degradation of the A36 plate material properties as a result of the heat straightening applied by Leckenby. A36 plate is supplied in the hot rolled condition with a typical finishing temperature of 1600°F to 1800°F. Because of the high finishing temperature coupled with the relatively thick section and sparse alloy content, the application of straightening heat would not degrade properties.

Subcritical temperatures (below approximately 1340°F) would be expected to alter microstructure and therefore properties, only if those temperatures were reached and held for long periods of time (one or more hours). This circumstance is outside the scope of heat straightening operations used by Leckenby.

It is therefore concluded that heat straightening as applied by Leckenby did not degrade material properties. Furthermore, even substantially exceeding AWS D1.1 guidelines would not be expected to degrade properties.

Therefore, there is no safety significance to this apparent noncompliance as stated. It is our position that there is basis for remission or mitigation of this proposed penalty.

I.D.

10 CFR 50, Appendix B, Criterion XVII, states that "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records shall also include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location and assigned responsibility."

Paragraph D.3.4.17 of the QA Program states in part, that "Sufficient records will be prepared as work is performed to furnish documentary evidence of the quality of items and of activities affecting quality . . . The Records include, as a minimum, the results of reviews, inspections, tests, audits, monitoring of work performance. . .

Inspection and test records will, as a minimum identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Required records will be identifiable and retrievable . . ."

Contrary to the above requirements:

2. On January 23, 1980, information contained in quality records was inconsistent and did not accurately reflect activities performed on the shield wall as indicated by the following examples:
 - b. Shield wall Manufacturing Order No. 000917 indicates that welds 1-4 on drawing 75 were performed using welding procedure No. 0001-13-06 (the electroslag welding process); the weld map for these welds indicates the welds were made using procedure No. 0001-01-10 (the shielded metal arc welding process).

ADMISSION OR DENIAL

Admitted with mitigating circumstances

Welds 1 through 4 on weld map W75 and shop drawing 75 are buttering welds used in conjunction with flux cored arc welded tee joints. The correct welding procedure for buttering, 00-01-01-10, is referenced on weld map W75 and shop drawing 75. Electroslag welding procedure 0001-13-06 would not be appropriate or feasible for these welds.

Therefore, we believe that the note on the manufacturing order is a documentation error (similar to a typo) and that there is no safety significance in this apparent noncompliance. Our position is that there is basis for remission or mitigation of the proposed penalty.

- II.A 1. The fabrication of safety-related pipe whip restraints is prescribed in part by WPPSS Contract Specification No. 2808-90. Division 5, Section 5A, "Technical Specifications for Pipe Whip Restraints," Paragraph 3.8.2, of the contract specification states, in part, that ". . . Contractor shall submit to owner . . . all quality assurance procedures required . . . Contractor shall not proceed with the affected work until its . . . procedures have been approved by the owner."

Contrary to the above requirements, ultrasonic testing was performed on pipe whip restraints Nos. PWS 30-5, PWS 27-17, - and PWS 6-1 in September and October 1976 before owner-approved procedure were provided. Contractor procedures for this work (QCP 8.0, Revision 0, "Nondestructive Testing Procedure for Ultrasonic Inspection;" QCP 8.2, Revision 0, "Qualification and Certification Procedure for Nondestructive Test Personnel;" and QCP 8.4, Revision 0, "Nondestructive Test Qualification Criteria") were approved by the owner (owner's agent) on November 8, 1976. This nonconforming condition was not identified nor were the weld joints retested after an approved procedure was provided.

This is an Infraction (Civil Penalty - \$3000.00)

ADMISSION OR DENIAL

Our investigation of the details cited in this apparent item of noncompliance disclosed that all three cited procedures had been "approved as noted" in September 1976.

Procedure QCP 8.0, Rev. 0 "Nondestructive Testing Procedure for Ultrasonic Inspection" was tentatively approved by B&R Engineering on June 2, 1976 for the 215 contract. This is the same procedure submitted for Contract 90 for UT of the PWR. Both QCP 8.0 Rev. 0 and QCP 8.2 Rev. 0 were "approved as noted" for Contract 90 on 9/15/76 after formal submittal. QCP 8.4 Rev. 0 was "approved as noted" on 9/29/76. Under the terms of Contract 90, the contractor can work to "approved as noted" procedures. Final approval for all three procedures was done on 11/8/76.

Therefore, the apparent noncompliance as written is in error and there is basis for remission or mitigation of the proposed penalty.

II.B.2 On January 23, 1980, information contained in quality records was inconsistent and did not accurately reflect activities performed on safety-related pipe whip restraints as indicated by the following examples:

- b. Ultrasonic test reports for restraints Nos. PWS 1-1 and 2-1 reported that the ultrasonic testing was performed on October 5, 1976 after post weld heat treatment (PWHT); the manufacturing orders for the same restraints recorded PWHT as occurring on October 6, 1976.

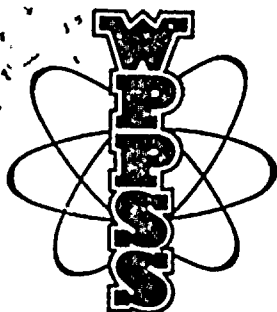
This is an Infraction. (Civil Penalty - \$3000.00)

ADMISSION OR DENIAL

Investigation of the facts related to this apparent item of noncompliance disclosed that certain significant facts were omitted.

In our view the key quality assurance record for special operations such as examinations (ultrasonic testing) and heat treatment (stress relief) are the actual record for each operation. These records have the correct dates. The manufacturing order is used as a traveler and the dates listed for the PWHT and UT inspection were listed after the fact. The stress report dated by the vendor and the UT report by the inspector are the correct dates. The stress relief report from Seattle Boiler Works dated 10/11/76 states that the stress run date for PWR 1-1 and 2-1 was 9/28/76. The original UT report for both PWR 1-1 and 2-1 is dated 10/5/76. Both reports fall in the proper sequence of time.

The Manufacturing Order is used as a tracking device to make sure all operations and inspections are completed. As such, the manufacturing order does accurately reflect the activities performed but not the dates the activities were performed. The review of all documentation provides the relationship between dates and activities. This apparent noncompliance has no safety significance and it is our position that there is basis for remission or mitigation of the proposed penalty.



Washington Public Power Supply System
A JOINT OPERATING AGENCY

EA-80-20
Rec'd 7-16-80

P. O. Box 968 3000 GEO. WASHINGTON WAY RICHLAND, WASHINGTON 99352 PHONE (509) 375-5000

July 11, 1980
G02-80-150

United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Victor Stello, Jr.
Director
Office of Inspection and Enforcement

Re: Washington Public Power Supply System
Nuclear Project No. 2, Docket No. 50-397;
CPPR-93 EA-80-20; Reply to Notice of Violation

Gentlemen:

Washington Public Power Supply System ("WPPSS" or "Supply System") hereby replies to the Notice of Violation in the captioned matter which was transmitted to us as Appendix A to your letter dated June 17, 1980. Our reply pursuant to 10 C.F.R. paragraph 2.201 consists of this letter and Attachment A. We are also responding separately under 10 C.F.R. paragraph 2.205, to Appendix B (Notice of Proposed Imposition of Civil Penalties) to your June 17, 1980 letter, as required by its terms. We will respond to your separate request under 10 C.F.R. paragraph 50.54(f), also dated June 17, 1980, within the required thirty days. The scope of our reply to the Notice of Violation includes the matters relating to that Notice discussed both in your transmittal letter and in the text of Appendix A itself.

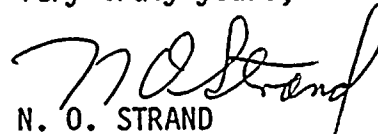
In Attachment A, we quote, the items of noncompliance from the Notice of Violation, Appendix A, of your June 17, 1980 letter transmitting the same, admit or deny the item; address the reasons for the noncompliance if admitted or discuss our reasons for denial where the item is denied; address such corrective actions as have already been taken, identify, where applicable, corrective actions which will be taken to avoid further items of noncompliance; and the date when full compliance will be achieved.

In the attachment, we acknowledge that in most of the instances cited, certain work was either not performed correctly or was not properly documented in accordance with NRC and Supply System quality requirements.

Page Two

As the owner of the Project, and especially as an agency of the State of Washington, the Supply System also has the responsibility to see to it that contractual obligations are fulfilled and accountability of contractors for defective work assured. For this reason, the Supply System is pursuing civil remedies against the contractors and sub-contractors and their sureties who, we believe, are responsible to us for many of the items you have identified as items of noncompliance. The bases for recovery which we have asserted against the contractors, subcontractors, and sureties include breach of contract, breach of warranty, negligence, and fraud. To the extent that we acknowledge items of noncompliance which also relate to matters at issue in the litigation, we do not do so for any purpose other than our ultimate accountability as the holder of a construction permit under the Atomic Energy Act and the Commission regulations.

Very truly yours,



N. O. STRAND
Managing Director

cc: RH Engelken, NRC
RC Will, Health Services Division, Olympia, WA
Hon. Slade Gorton, Office of the Attorney General, Olympia, WA
RC Barley, Utilities & Transportation Commission, Olympia
ND Lewis, EFSEC, Olympia
JR Lewis, BPA
RC Root, B&R, Site

Attachment A

I. Items of Noncompliance Relating to the Sacrificial Shield Wall

- A. 10 CFR 50, Appendix B, Criterion V, states that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Paragraph D.2.5.5 of the QA Program states in part, that "Activities affecting quality . . . shall be accomplished in accordance with these instructions, procedures or drawings"

The erection of the reactor building sacrificial shield wall is prescribed, in part, by drawing No. 2808-5836, Revision 2, Note NN, which states, in part, " . . . Each segment shall now be attached to the lower SSW by welding columns to inner and outer column splice plates and slot welding bottom segment ring beam to top of box ring beam . . . also remove temporary shims before welding"

Contrary to the above requirements, on June 14, 1978, assembly of the sacrificial shield wall in the reactor building was completed with temporary shims still in place at the interface of the bottom segment ring beam and the top of the box ring beam. These shims prevented several slot welds from joining the ring beams.

This Violation resulted in the as built structure being incapable of performing its intended safety function during design basis earthquake conditions and certain postulated pipe break accidents (Civil Penalty - \$5000.00).

ADMISSION OR DENIAL

We agree with the fundamental safety implications of this apparent item of noncompliance, however, items in noncompliance citation are in error.

REASON FOR NONCOMPLIANCE

The use of permanent shims was not covered by any drawings; however, contract specification 2808-215 section 15A requires that levelness tolerance between the upper and lower sacrificial shield wall mating surfaces not exceed 1/8".

In paragraph 4 of Section 15A it states, "Should the gap be fabricated with a dimension greater than 1/8" any repair procedure would have to include the insertion of suitable shielding material to fill the gap. The use of lead wedges down into the oversized gap will be considered." RFI No. 215-2571, dated 8/4/77, approved the use of steel shims ranging from 10 ga. to 3/16" in lieu of lead to fill the gaps. The location of these shims was to be shown on the as-built drawings to be submitted by Leckenby.

Therefore, since the use of these shims was not covered on any of the drawings used to inspect the installation of the sacrificial wall, they would not have been part of the overall inspection effort.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System's, Architect Engineer has designed an alternate weld that fulfills the same function as the slot welds. This alternative method of fulfilling the original design was forwarded to the NRC for review and approval. The letters transmitting the design information were G02-80-79 DL Renberger to RH Engelken dated 3/25/80, G02-80-95 DL Renberger to HR Denton dated 4/25/80 and G02-80-131 DL Renberger to BS Youngblood dated 6/20/80. In addition, a separate report documenting the results of inspections and record reviews is being submitted to the NRC to fulfill our commitment made in letter number G02-80-79.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE OF FULL COMPLIANCE

The date of full compliance cannot be determined until NRC approval of the alternate weld method described in letter number G02-80-95 is received. We will inform you at that time of the scheduled completion date.

- I. B. 10 CFR 50, Appendix B, Criterion XI states "A test program shall be established to assure that all testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified and performed in accordance with written test procedures"

Paragraph 2.5.11 of the QA Program states in part, "Test procedures shall include provisions for assuring that prerequisites for the given tests have been met"

1. The fabrication, erection, and testing of the sacrificial shield is prescribed in part by WPPSS Contract Specification No. 2808-215. Appendix D of this specification, entitled "Technical Documentation and Procedure Requirements" states, in part, that " . . . Document (including test procedures) is to be submitted for approval and must be approved or approved as noted by owner before affected work can proceed"

Contrary to the above requirements, ultrasonic testing of the weld joints listed below was performed before an owner-approved procedure was provided.

<u>Component</u>		<u>Weld Joint</u>	<u>Date</u>
Ring beam	113B 113C	Joints 23, 24 Joints 31, 32 114C Joints 23, 24	June 17, 1976

Box Column	29B 29A	Joints 21-28 Joints 1-8	June 16, 1976
------------	------------	----------------------------	---------------

<u>Component</u>		<u>Weld Joint</u>	<u>Date</u>
Weld Maps	W45 W21 W22 W22	Joints 9-10 Joints 1-6, 8-10, 12, 13 Joints 1-4, 6-8, 10, 11 12, 13, 167 Joints 15, 16, 22, 132, 140 30, 168, 144, 32, 33, 35, 37, 166	July 24, 1976

Electro-Slag	X-100 X-102		June 2, 1976
--------------	----------------	--	--------------

The contractor's ultrasonic test procedure (Quality Control Procedure 8.0, Rev. 1, "Ultrasonic Testing") was approved by the owner (owner's agent) on September 27, 1976. This nonconforming condition was not identified nor were the weld joints retested after an approved procedure was provided.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Denied. We discussed our denial of this noncompliance in our answer to Appendix B of your June 17, 1980, letter on the Notice of Proposed Imposition of Civil Penalties.

REASON FOR DENIAL

The subject procedure QCP 8 was tentatively approved on June 2, 1976, prior to its use.

- I. B. 2. The fabrication, erection, and testing of the sacrificial shield wall is prescribed in part by WPPSS Contract Specification No. 2808-215 which requires that nondestructive testing personnel be qualified in accordance with the requirements of the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A (Third Edition).

SNT-TC-1A specifies that individuals who read and interpret indications (test results) shall be certified NDT Level II or III and that the certification is not transferable between employers. For certification, as a NDT Level II, an individual must be administered a general written examination (covering basic test principles); a specific written examination (covering equipment, operating procedures, and techniques); and a practical examination (to demonstrate operation of equipment and analysis of resultant information). The practical examination should include at least 10 different check points. Further, an individual certified as a NDT Level III shall be responsible for conducting and grading examinations of NDT Level I and II personnel.

Contrary to the above requirements:

- a. An individual, who was never qualified by the contractor, performed nondestructive ultrasonic testing on the sacrificial shield wall plates Nos. b56 and f56 on June 2, 1976
- b. An individual performed ultrasonic testing (UT) on the sacrificial shield wall ring beam 113b, welds 23/24 on June 17, 1976; ring beam 1146, welds 15/16 on June 17, 1976; subassembly 56b for segment 22A, welds 212 to 235 on June 17, 1976; box column 29b, welds 21 to 28 on June 16, 1976; ring 3, dwg 56, welds 100 and 102 on June 2, 1976; ring 8, pc 252c, weld 115 on August 4, 1977, and others without having taken a practical examination which was in accordance with SNT-TC-1A. Specifically, no check points were defined or applied to the examination as required by SNT-TC-1A, and the examination document did not demonstrate that an individual certified as a NDT Level III conducted or graded the examination.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASON FOR NONCOMPLIANCE

Inadequate contractor implementation of contract and associated, approved quality assurance program and procedure requirements, and inadequate Bovee and Crail/GERI vendor surveillance of contractor qualification program caused this infraction.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

A reinspection plan was developed for accessible portions of the sacrificial shield. The reinspections included visual, ultrasonic testing and magnetic particle testing. The results of these reinspections and the associated technical evaluations of overall shield wall adequacy are being submitted to the NRC in a separate report in response to the NRC's immediate action letter dated November 21, 1979.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

- I. C. 10 CFR 50, Appendix B, Criterion IX, states that "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Paragraph 2.5.9 of the QA Program states: "Measures shall be established and documented by the contractor to assure that special process, including welding, heat treating, cleaning, and nondestructive examination, are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria and other special requirements, using qualified personnel and procedures. Documentation shall be maintained for currently qualified personnel, processes, or equipment in accordance with the requirements of pertinent codes and standards. For special processes not covered by existing codes or standards, or where item quality requirements exceed the requirements of established codes or standards, the necessary qualifications of personnel, procedures, or equipment shall be defined."

The fabrication of the sacrificial shield wall is prescribed in part, by WPPSS Contract Specification No. 2808-215. This document specifies that welding shall be in accordance with the AWS Structural Welding Code D.1.1-1974.

1. Paragraph 3.7.2.4 of the Structural Welding Code states, in part, that for the repair of cracks in welds or base metal, ". . . Ascertain the extent of the crack by use of acid etching, magnetic particle testing or other equally positive means: remove the crack and sound metal 2 inches beyond each end of the crack, and reweld . . ."

Contrary to the above requirements, repair instructions and completion signatures dispositioning "Incomplete/Rejection Tags" Nos. 5257, 5325, 5412, 6055, 6056, 6058, 6059, 5443, 5444, 5445, 5446, and 5447 demonstrate that the repairs made to cracks in shield wall subassemblies during the period of April 1976 to April 1977 were made without using acid etching, magnetic particle testing, or other positive means to define the cracks, and sound metal 2 inches beyond each end of the cracks was not removed as required by the code.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

We agree that certain aspects of this apparent item of noncompliance have safety significance, however, a significant number of items in the citation are in error.

REASONS FOR NONCOMPLIANCE

For incomplete/rejection tags 5325, 5412, 6055, 6056, 6058, 6059, it appears that the NDE requirements of AWS D.1.1 were overlooked by Leckenby when the repairs were performed and subsequently by Bovee and Crail/GERI during review.

Incomplete/rejection tags 5257, 5443, 5444, 5445, 5446, 5447, were rejected for flaws that are not subject to the cited requirements of AWS D.1.1, paragraph 3.7.2.4. Therefore, this part of the noncompliance citation is denied.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Accessible portions of the sacrificial shield have been reinspected. The results of this reinspection and the technical evaluation will be submitted to the NRC in a separate report.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

- I. C. 2. Paragraph 3.4.3 of the Structural Welding Code states, in part, that "... The contractor shall develop weld sequences which will produce members and structures meeting the quality requirements specified. These sequences and any revision necessary in the course of the work shall be sent for information and comment to the engineer. . . ."

Contrary to the above requirements, as of December 7, 1979, the weld sequences developed by the contractor and used during fabrication of the shield were not submitted to the engineer (Burns & Roe, Inc.). These weld sequences are delineated in a document, entitled, "Sacrificial Shield Wall Assembly Procedure" which was an informal document, not signed or controlled by the contractor.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

There apparently was confusion as to the required contents of the fabrication and erection procedure required by contract and the weld sequences required by the Structural Welding Code. The contract required document was submitted and approved in 1975 with revisions approved in 1976. The weld sequences were never submitted by the contractor. Bovee and Crail/GERI, also, failed to identify that weld sequences had not been submitted.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Sacrificial Shield Wall Technical Evaluation Report addresses this item. The report will be submitted to the NRC separately.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

- I. C. 3. The Structural Welding Code. Paragraph 3.7.3 of this code, states, in part, that "... Members distorted by welding shall be straightened by mechanical means or by carefully supervised application of a limited amount of localized heat. The temperature of the heated areas as measured by approved methods shall not exceed . . . 1200F"

Contrary to the above requirements, no documented instructions, procedures, or drawings were provided to control the application of localized heat during the straightening of each segment of sacrificial shield wall ring beam No. 3 and segment 2A of ring beam No. 2, and other shield wall components as documented on Manufacturing Order Nos. 00094, 000913, 000916, 1193, 1666, and others during 1976. Control of the maximum temperatures in the heated areas was not assured nor is there documentation of the methods used to measure the temperature or the actual temperatures reached during this activity. Temperature control during the heat straightening process is important in assuring retention of the as built physical properties of the material.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted with mitigating circumstances. (See our letter in response to Appendix B, "Notice of Proposed Imposition of Civil Penalties" to your June 17, 1980 letter.)

REASONS FOR NONCOMPLIANCE

The Supply System and its Architect-Engineer Burns and Roe took the position that heat straightening was not a special process and therefore never required that a procedure be written or submitted for approval. (See our letter in response to Appendix B, "Notice of Proposed Imposition of Civil Penalties" to your June 17, 1980 letter.)

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The technical evaluation report to be submitted separately addresses this item. It states in part, that heat straightening of the sacrificial shield wall plates did not degrade the material properties.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

- I. D. 10 CFR 50, Appendix B, Criterion XVII, states that "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records shall also include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location and assigned responsibility.

Paragraph D.3.4.17 of the QA Program states in part, that "Sufficient records will be prepared as work is performed to furnish documentary evidence of the quality of items and of activities affecting quality . . . The records include, as a minimum, the results of reviews, inspections, tests, audits, monitoring of work performance . . . Inspection and test records will, as a minimum identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Required records will be identifiable and retrievable . . ."

Contrary to the above requirements:

1. On January 24, 1980, quality records were not retrievable which identify the individuals who performed many of the visual inspections on the shield wall, as indicated by the following examples:
 - a. Shield wall manufacturing orders for pieces a15, 15c, d15, gR14, t113, 14V and b17 (no serial numbers had been recorded on these manufacturing orders) documented inspections performed by inspector No. 7 between January 16, 1976 and March 1, 1976. The contractor has no records available to provide the identity of this individual.
 - b. Shield wall Manufacturing Orders 000515, 000631, 1606, 1249, 1263, and 1569 document inspections by inspector No. 4 in May and June 1976. The contractor has no records available to provide the identity of this individual.
 - c. Shield wall Manufacturing Orders 2000, 2002, 2020, 1866 and 1945 document inspections by inspector No. 6 in August 1976. The contractor has no records available to provide the identity of this individual.

The lack of the above records does not permit verification that the inspections were performed by qualified personnel.

This is an Infraction. (Civil Penalty \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

Inadequate implementation of a QA program by the sub-contractor and inadequacy of vendor surveillance by Bovee & Crail/GERI caused this infraction. The sub-contractor failed to establish and maintain a log of quality control inspector's stamps to provide traceability and identification of inspectors.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Since records do not exist to identify these inspectors, the Supply System has reinspected portions of the shield wall that are accessible. The results and evaluation of the results are to be submitted in a separate report to the NRC. This report is titled Sacrificial Shield Wall Technical Evaluation Report.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

- I. D. 2. On January 23, 1980, information contained in quality records was inconsistent and did not accurately reflect activities performed on the shield wall as indicated by the following examples:
- a. Shield wall ultrasonic test report for piece No. 113/78 is not dated and results of testing are not indicated.
 - b. Shield wall Manufacturing Order No. 000917 indicates that welds 1-4 on drawing 75 were performed using welding procedure No. 0001-13-06 (the electroslag welding process); the weld map for these welds indicates the welds were made using procedure No. 0001-01-10 (the shielded metal arc welding process).
 - c. Two shield wall weld maps Nos. W256 exist. One map indicates welding electrode serial Nos. A383ER/029092 were used to make welds 4, 5, and 6; the second map indicates electrodes Nos. A383ER/036084 were used to make the same welds.

The above noted omissions and inconsistencies resulted in records which do not provide assurance that these activities were satisfactorily performed.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

- a. Admitted.
- b. Admitted with mitigating circumstances.
- c. Admitted.

REASONS FOR NONCOMPLIANCE

- a. We are unable to determine why the UT report for piece No. 113/78 is not dated nor results entered. Vendor surveillances failed to discover the missing date, also.
- b. The entry of weld procedure 0001-13-06 on manufacturing order No. 000917 was apparently entered in error, by Leckenby, and subsequently overlooked by Bovee & Crail/GERI.
- c. Apparently the electrode identification number A383ER/036084 was entered in error on an internal work copy of weld map W256.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Records associated with the sacrificial shield were reviewed and reinspection of accessible portions of the shield wall was performed. The results of the reviews and reinspections including the evaluation of the results are included in the technical evaluation report that is being submitted separately.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

For other work associated with WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request will address this item. This letter will be submitted on July 17, 1980. In addition, our response to the NRC Region V annual appraisal will address corrective actions taken and planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

The date of full compliance cannot be determined until the NRC review of the "Sacrificial Shield Wall Technical Evaluation Report" (to be submitted separately) is completed. We will inform you of our scheduled completion date following NRC approval of the Technical Evaluation Report.

II. Items of Noncompliance Relating to Pipe Whip Restraints

- A. 10 CFR 50, Criterion IX states: Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

10 CFR 50, Criterion XI states: A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program shall include, as appropriate, proof tests prior to installation, pre-operational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation, of structures, systems, and components. Test procedures shall include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. Test results shall be documented and evaluated to assure that test requirements have been satisfied.

Paragraph D.2.5.9 of the QA Program states: Measures shall be established and documented by the contractor to assure that special processes, including welding, heat treating, cleaning, and non-destructive examination, are accomplished under controlled conditions in accordance with applicable codes, standards, specifications, criteria and other special requirements, using qualified personnel and procedures. Documentation shall be maintained for currently qualified personnel, processes, or equipment in accordance with the requirements of pertinent codes or standards, or where item quality requirements exceed the requirements of established codes or standards, the necessary qualifications of personnel, procedures, or equipment shall be defined.

Paragraph D.2.5.11 of the QA Program states: A test program shall be established to assure that all testing required to demonstrate that the item will perform satisfactorily in service is identified and documented, and that the testing is performed in accordance with written test procedures which incorporate or reference the requirements and acceptance limits contained in applicable design documents. The test program shall cover all required tests, including as appropriate, prototype qualification tests, proof tests prior to installation, preoperational tests, and operational tests to verify continued satisfactory performance during operation. Test requirements and acceptance criteria shall be provided by the organization responsible for the design of the item under test, unless otherwise designated.

Test procedures shall include provisions for assuring that prerequisites for the given test have been met, that adequate instrumentation is available and used, and that necessary monitoring is performed. Prerequisites include such items as calibrated instrumentation, appropriate equipment, trained personnel, condition of test equipment and the item to be tested, suitable environmental conditions, and provisions for data acquisition. Test results shall be documented and evaluated to assure that test requirements have been satisfied.

- II. A. 1. The fabrication of safety-related pipe whip restraints is prescribed in part by WPPSS Contract Specification No. 2808-90. Division 5, Section 5A, "Technical Specifications for Pipe Whip Restraints", Paragraph 3.8.2, of the contract specification states, in part, that ". . . Contractor shall submit to owner . . . all quality assurance procedures required . . . Contractor shall not proceed with the affected work until its . . . procedures have been approved by the owner."

Contrary to the above requirements, ultrasonic testing was performed in pipe whip restraints Nos. PWS 30-5, PWS 27-17, and PWS 6-1 in September and October 1976 before owner-approved procedures were provided. Contractor procedures for this work (QCP 8.0, Revision 0, "Nondestructive Testing Procedure for Ultrasonic Inspection;" QCP 8.2, Revision 0, "Qualification and Certification Procedure for Nondestructive Test Personnel;" and QCP 8.4, Revision 0, "Nondestructive Test Qualification Criteria") were approved by the owner (owner's agent) on November 8, 1976. This nonconforming condition was not identified nor were the weld joints retested after an approved procedure was provided.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Our investigation of the details cited in this apparent item of noncompliance disclosed that all three procedures had been "approved as noted" in September, 1976, therefore, we deny this item in part.

REASONS FOR NONCOMPLIANCE

As stated, in our response to Appendix B of your June 17, 1980, letter on the Notice of Proposed Imposition of Civil Penalties, Leckenby's procedure QCP 8.0, Rev. 0, had been approved in June, 1976 for contract 215 and "approved as noted" for contract 90 on 9/15/76. The other procedures (QCP 8.2 and 8.4) were "approved as noted" on 9/15/76 (8.2) and 9/29/76 (8.4). Work is allowed to be performed with procedures that have been "approved as noted".

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. A. 2. The testing of safety-related pipe whip restraints is prescribed in part by Contractor Procedure No. QCP 8.0, Revision 0, "Nondestructive Testing Procedure for Ultrasonic Inspection". Paragraph 4.4 of this procedure states, in part, that ". . . Before the angle beam examination, the area of the base material through which sound will travel in angle beam examination shall be completely scanned with a straight beam search unit to detect any reflectors which might affect the interpretation of angle beam result . . ."

Contrary to the above requirements, the ultrasonic test records for safety-related pipe whip restraints Nos. PWS 315-5, 315-6, 315-7, and 315-8, dated June 21, 1978, indicate that only angle beam examination was performed.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

The UT forms for test results do not include a column for recording performance of straight beam search. While this examination was conducted and documented on some work, it was not documented for the restraints cited. Audits and vendor surveillance also failed to disclose this omission.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The pipe whip restraints were reinspected, rejected and are being repaired. The records of the reinspection and repair are available for NRC review.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. A. 3. The fabrication and testing of safety-related pipe whip restraints is prescribed in part by WPPSS Contract Specification No. 2808-90 which requires that nondestructive testing personnel be qualified in accordance with the requirements of the American Society for Nondestructive Testing Recommended Practice No. SNT-TC-1A (Third Edition).

SNT-TC-1A specifies that individuals who read and interpret indications (test results) shall be certified NDT Level II or III and that the certification is not transferable between employers. For certification as a NDT Level II, an individual must be administered a general written examination (covering basic test principles); a specific written examination (covering equipment, operating procedures, and techniques); and a practical examination (to demonstrate operation of equipment and analysis of resultant information).

Contrary to the above requirements:

- a. An individual who was never qualified by the contractor, performed the required nondestructive magnetic particle testing on pipe whip restraints Nos. PWS 27-1, 27-5, 28-1, 28-2, 31-4, 32-3, and 33-4. Quality records for these tests are dated August 17, 1976, August 17, 1976, August 17, 1976, August 17, 1976, August 19, 1976, August 19, 1976, and August 25, 1976, respectively.
- b. An individual who had not taken a "specific" written examination for magnetic particle testing as required by SNT-TC-1A, performed the required magnetic particle testing on pipe whip restraints PWS 36-8 on August 4, 1976, PWS 36-12 and PWS 36-13 on August 11, 1976, and others.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

Inadequate contractor implementation of contract requirements, approved program and procedures, and inadequate Burns and Roe vendor surveillance of contractor qualification program caused this infraction.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. A. 4. WPPSS Contract Specification No. 2808-90 for safety-related pipe whip restraints specifies that work shall be done in accordance with the AWS Structural Welding Code D.1.1-1974. Paragraph 3.7.3 of this code states, in part, that "... Members distorted by welding shall be straightened by mechanical means or by carefully supervised application of a limited amount of localized heat. The temperature of the heated areas as measured by approved methods shall not exceed ... 1200F ..."

Contrary to the above requirements, no documented instructions, procedures, or drawings were provided to control the application of localized heat during the straightening of pipe whip restraints subassemblies as documented on Manufacturing Order Nos. 0710, 0726, 0730, 0735 and 0736 during August and September 1976. Control of the maximum temperatures of the heated areas was not assured nor is there documentation of the methods used to measure the temperatures or the actual temperatures reached during the activity. Temperature control during the heat straightening process is important in assuring the as-built physical properties of the material.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

The Supply System and our Architect-Engineer, Burns and Roe, did not consider this a special process and as such never specified that a procedure be developed and submitted for approval. Therefore, no procedure existed to control this work.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE WAS ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. B. 10 CFR 50, Appendix B, Criterion XVII, states that "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests audits, monitoring of work performance, and materials analyses. The records shall also include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data recorded, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, locations, and assigned responsibility".

Paragraph D.3.4.17 of the QA Program states, in part, that "Sufficient records will be prepared as work is performed to furnish documentary evidence of the quality of items and of activities affecting quality . . . The records include, as a minimum, the results of reviews, inspections, tests, audits, monitoring of work performance . . . Inspection and test records will, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Required records will be identifiable and retrievable . . ."

Contrary to the above requirements:

- II. B. 1. On January 24, 1980, quality records were not retrievable which identify the individuals who performed many of the visual inspections on pipe whip restraints as indicated by the following examples:
- a. Pipe whip restraint Manufacturing Order No. 0457 for PWS 53-15 documents inspections performed by inspector No. 6 on August 13, 1976. The contractor has no records available to provide the identity of this individual.
 - b. Manufacturing Orders 0213 and 0686 for restraints PWS 53-1 and 54-14 document inspections performed by an inspector No. 9 on July 21-22, 1976. The contractor has no records available to provide the identity of this individual.

The lack of the above records does not enable verification that the inspections were performed by qualified personnel.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASON FOR NONCOMPLIANCE

Inadequate implementation of a QA program by the Contractor and inadequacy of the vendor surveillance program caused this infraction. The contractor failed to establish and maintain a log of quality control inspectors' stamps to provide traceability and identification of inspectors.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. B. 2. On January 23, 1980, information contained in quality records was inconsistent and did not accurately reflect activities performed on safety-related pipe whip restraints as indicated for the following examples:
- a. Magnetic particle test reports for PWS 36-23, 52-8, 36-1, 35-5B, 34-5B, and 32-7 contain data and inspection results written by one inspector and bear the photocopied signature of a different inspector (the two individuals reported that they did not collaborate on the inspections involved).
 - b. Ultrasonic test reports for restraints Nos. PWS 1-1 and 2-1 reported that the ultrasonic testing was performed on October 5, 1976 after post weld heat treatment (PWHT); the manufacturing orders for the same restraints recorded PWHT as occurring on October 6, 1976.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Denied in part.

REASONS FOR NONCOMPLIANCE

- a. The NRC investigation report No. 50-397/80-04 states that there were several apparent reasons for photocopied signatures. These included speeding up paperwork and certain inspectors not being qualified.
- b. The dates on the manufacturing order are in error. We discussed our partial denial of this noncompliance in our answer to Appendix B of your June 17, 1980, letter on the Notice of Proposed Imposition of Civil Penalties.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. B. 3. Manufacturing Order No. 0750 for restrain No. PWS 53-14 documents that inspector No. 5 performed magnetic particle testing on the restraint on September 24, 1976, whereas the test report for that restraint bears the photocopied signature of a different inspector.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

The NRC investigation report No. 50-397/80-04 states that there were several apparent reasons for the photocopied signatures. These included speeding up paper work and certain inspectors not being qualified.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

- II. B. 4. Magnetic particle inspection report for restraint PWS 36-9 reports that the testing was performed on welds 6 and 7 on August 4, 1976; however, the record bears the photocopied signature of an inspector who was not hired until August 16, 1976.

This is an Infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

The NRC investigation report No. 50-397/80-04 states that there were several apparent reasons for the photocopied signatures.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The Supply System initiated a reinspection program that included visual and NDE on all pipe whip restraints. The reinspection resulted in rejection of all restraints. The restraints are in the process of being removed from the structure, reinspected and repaired as needed. Following repair, the restraints will be reinspected before installation. The records of the repair and reinspection will be available for review by the NRC.

A detailed corrective action program was submitted by WPPSS letter from DL Renberger to RH Engleken of December 10, 1979, and responded to by NRC letter from RH Engleken to NO Strand dated 2/11/80, subject: "WNP-2 Pipe Whip Restraints and Sacrificial Shield Wall".

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since this contract with Leckenby has been closed, no action to correct Leckenby's Quality Assurance program is planned. For other work on WNP-2, our letter in response to your June 17, 1980, 10CFR50.54(f) request for information will address this item. In addition, our response to the NRC Region V annual appraisal (planned to be submitted in early August) will address corrective actions taken or planned to be taken to correct the underlying cause of the noncompliance.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Before our current labor problems, the repair/reinspection of the restraints were scheduled for completion by December, 1980. Revision of the completion date will be addressed as soon as the labor problems have been resolved.

III. Items of Noncompliance Relating to Recent Construction Activities

- A. 10 CFR 50, Appendix B, Criterion V, states that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Paragraph D.2.5.5 of the QA Program states, in part, that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. . ."

1. The control of welding filler material, an activity affecting quality, is prescribed for the prime site piping contractor (Contract Specification No. 2808-215) in his Work Procedure No. 1, Revision 20, "Issuing and Control of Weld Filler Material." Paragraph 5.8 of this procedure states, in part, that ". . . Portable rod ovens shall be connected to a reliable electric source during the shift. The pink copy of the Form NF-69 must remain with the rod until the rod is consumed or restocked . . ."

Contrary to the above requirements:

- a. On February 25, 1980 in reactor building room 3C at elevation 548, the subject contractor had a portable rod oven containing Type E7018 low hydrogen weld rod which was open and not connected to a power source. The weld rod was at ambient temperature, and the welder was not in the area.
- b. On January 16, 1980, two unused coated electrodes and one partial-length coated electrode were lying loose, unattended and not contained in a portable oven at elevation 540 in the reactor containment building. Welding in this area was under the control of the subject contractor. The filler material withdrawal form, NF-69, was not in the vicinity of the electrodes.
- c. On January 17, 1980, six unused Type 7018 coated electrodes were similarly lying loose at elevation 560 in the reactor containment building. The filler metal withdrawal form, NF-69, was not in the vicinity of the electrodes.

This is an Infraction. (Civil Penalty \$3000.00.)

III.A.1.a.
ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

Neglect on the part of the welder associated with this specific case. We believe this can be considered an isolated case.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The specific welder was reprimanded for violation of existing weld rod control procedures. The rod in the oven was destroyed. The contractor (2808-215) issued a memo, 3/4/80, instructing all construction and quality personnel to assure that weld procedures are being adhered to.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

The WNP-2 Project organization issued a directive (WNP2MCL-F-80-36, dated 3/20/80) to all site contractors performing welding to conduct training sessions in the proper control of welding activities. Subsequent surveillances by the Project QA organization have not identified any recurrences of this infraction.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Full compliance as described in "Corrective Steps Taken" was achieved on 2/26/80. Continued compliance with the site weld rod control programs are being monitored via surveillances by the Project QA organization.

III.A.1.b. and c.
ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

We are unable to determine the actual cause for the loose weld electrodes; however, the situation appears to have resulted from the welder removing rod from the oven for use at a remote location and failing to return the unused electrode to the oven as required by procedure. There are eight (8) contractors performing welding at the WNP-2 site and it was not possible to determine which contractor this specific rod belonged to; however, the 2808-215 contractor has the major welding work in this area.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Rod was confiscated and discarded.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

The WNP-2 site organization issued a directive (WNP2MCL-F-80-0075, dated 5/16/80) to all site contractors requiring that contractors and subcontractors color-code their welding rod according to an established pattern to permit identification of rod to a specific contractor. Additionally, corrective actions described under Item III.A.1.a also pertains to this item.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

Full compliance was achieved following the 5/16/80 project directive and continuing compliance is being monitored by the Project QA organization.

- III. A. 2. The fabrication and inspection of safety-related pipe hangers is prescribed in part by the prime site piping contractor's instructions delineated in Quality Control Procedure Number 24, Revision 8 (entitled "Hanger Inspection-Traceable Systems," QCP-24) and Project Directive No. 75, Revision 4, (entitled "Hanger Engineering Standards," PD-75). Paragraph 10.2(A) of QCP-24 states, in part, "Visually inspect all welds . . . Weld size less than shown on as-built hanger is unacceptable" Paragraph 7.5 of PD-75 states, in part, that "The configuration of supports shall be in accordance with the as-built hanger detail . . . Paragraph 10.1.2 reiterates that "Unacceptable conditions are weld size less than shown on as-built"

Contrary to the above requirements, on February 26, 1980, safety related pipe hanger No. HPCS-48 had received quality control inspection by the subject contractor and was considered acceptable, yet the hanger had one fillet weld that was 1/16 inch undersize, and a rigid strut and its mounting bracket were oriented 90 degrees from the configuration shown on the as-built drawing.

This is an infraction (Civil Penalty - \$3000.00).

ADMISSION OR DENIAL

Admitted

REASONS FOR NONCOMPLIANCE

QCP-24, Revision 8, Paragraph 10.2(a) does state that all welds are to be visually inspected. There is a note below this statement that states, "At least two (2) welds shall be measured for actual size using a ruler or fillet gauge." It is assumed that the weld in question was not one of the welds chosen to be measured nor was the undersize weld detected visually. The design configuration of the strut mounting bracket was incorrect. As designed, it would bind as the pipe moved. The fitter marked-up a drawing to correctly show the as-built configuration.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Weld Size

On February 29, 1980, the Field Engineer corrected the as-built to reflect the as-built weld size of 3/16". Calculations were performed which show that a fillet weld size of 3/16" is adequate for designed strength.

Design Configuration

The rigid sway strut, as designed, would bind up as the pipe moved, therefore, the design was in error. The drawing has been changed to reflect the as-built configuration.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

Since the 12/26/79 inspection/as-built date, the WNP-2 Project has instituted a new Field Project Engineering Directive (PED) System which permits Field Engineering approval of certain design aspects. The correct use of this system precludes this specific type of deficiency.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

This case was corrected on February 29, 1980.

- III. A. 3. The requirements for designating inspection requirements and documenting inspections for safety-related pipe supports are prescribed in part by the prime site piping contractor's instructions delineated in Project Directive No. 75, Revision 4 (entitled "Hanger Engineering Standards," PD-75) and Quality Control Procedure Number 24, Revision 8 (entitled "Hanger Inspection-Traceable Systems," QCP-24). Paragraph 5.3 of PD-75 states, in part, that "Engineering shall indicate the NDE . . . and visual inspection required for traceable systems."

Table 1, page 5A, of the same document specifies magnetic particle (MT) or liquid penetrant (PT) examination of ASME, Section III, Class II, attachment welds to pressure parts. Paragraph 10.2(a) of QCP-24 states, in part, "Visually inspect all welds" Further, paragraph 10.3 of QCP-24 states, in part, that "If the welds are acceptable . . . initial, stamp and date the applicable box on the NF-6A. Assure that all NDE requirements and any A.I. 'Hold' point have been satisfied"

Contrary to the above requirements, on February 26, 1980, for pipe support No. LPCS-12, engineering had not indicated the NDE and visual inspection requirements for lug weld number 6 on pipe support LPCS-12 nor had a quality control inspector initialed, stamped, or dated the applicable inspection box on the NF-6A form for this weld (other quality records, however, indicated that some NDE had been performed on the weld).

This is a Deficiency (Civil Penalty - \$1000.00).

ADMISSION OR DENIAL

Admitted.

REASONS FOR NONCOMPLIANCE

The weld record form NF-6A for LPCS-12 had been developed by the contractor organization and the visual and NDE inspection requirements for lug weld 6 had been omitted.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

A revised weld record form was initiated which included the required visual and NDE inspections. These inspections have now been conducted and are acceptable.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER ITEMS OF NONCOMPLIANCE

A hold point for completion of inspections has been added to the weld record form, NF-6A. Training has been conducted for 2808-215 personnel on the use of applicable work procedures and QCP-24.

DATE FULL COMPLIANCE ACHIEVED OR SCHEDULED TO BE ACHIEVED

March 21, 1980.

- III. A. 4. The requirements for protecting safety-related instrument tubing are prescribed, in part, by the prime site electrical contractor's Procedure CP208 which states under General Maintenance Requirements that, "... covers, caps, plugs and other closures shall be maintained intact" This procedure goes on to state "... dust coverings, shrouds, local sealing, heating methods and mechanical cleaning shall be employed to keep the structure as clean and dry as possible. . ."

Contrary to the above requirements, on February 28, 1980, safety related instrument rack No. H220P005 had three sections of tubing which had been disconnected with the ends left open, exposing the internals of the system.

This is an Infraction. The failure to properly cover, cap, or plug safety-related instrument tubing was cited previously as an item of noncompliance in IE Inspection Report No. 50-397/79-16. (Civil Penalty - \$4000.00.)

ADMISSION OR DENIAL

3.A.4 Acknowledged.

REASON FOR NONCOMPLIANCE

Failure to follow procedures.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

For instrument lines associated with all instruments removed for calibration prior to 2/28/80, the Supply System has initiated a reinspection program. This program involves checking to assure that these lines are capped, taped or plugged in accordance with the applicable Startup Procedure (SLT-I-3).

We will continue to strive for our goal of 100% capped, taped or plugged instrument lines, but is important to note that all lines are purged (flushed) prior to instrument mounting.

CORRECTIVE STEPS TAKEN TO PRECLUDE RECURRENCE

All WNP-2 Test Engineers involved in calibration of plant instruments have been trained in the requirements of the Startup Procedure (SLT-I-3) and are required to assure that all lines are capped, plugged or taped when instruments are removed.

DATE FULL COMPLIANCE ACHIEVED

Training of the test Engineers is scheduled to be accomplished by July 14, 1980. A Quality Assurance audit of the reinspection program is scheduled to be completed by the end of August, 1980.