

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-397/80-15

Docket No. 50-397 License No. CPPR-93 Safeguards Group _____

Licensee: Washington Public Power Supply System

P. O. Box 968

Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 2 (WNP-2)

Inspection at: WNP-2 site, Benton County, Washington

Inspection Conducted: August 1-31, 1980

Inspectors: R.C. Haynes 9/26/80
for A. D. Toth, Senior Resident Inspector Date Signed

Date Signed

Date Signed

9/26/80

Approved By: R.C. Haynes 9/26/80
R. C. Haynes, Chief, Reactor Projects
Section, Reactor Construction and
Engineering Support Branch Date Signed

Summary:

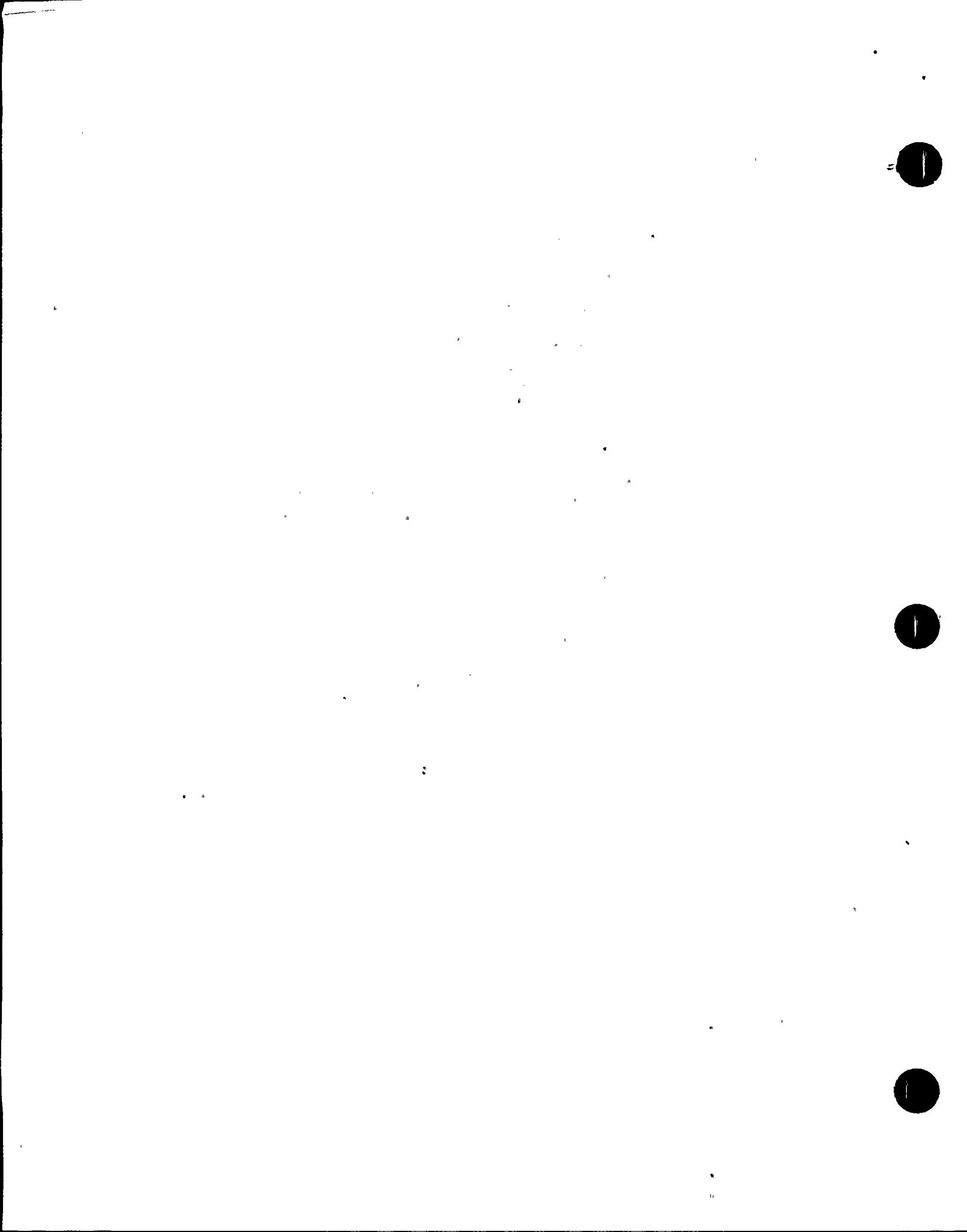
Inspection on August 1-31, 1980 (Report No. 50-397/80-15)

Areas Inspected: Routine, unannounced inspection of licensee and contractor activities to re-evaluate and improve detailed work methods.

The inspection involved 93 inspector-hours on-site by the NRC resident inspector.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

a. Washington Public Power Supply System (WPPSS)

*W. C. Bibb, Project Manager
*R. G. Matlock, Managing Director's Office
*L. J. Garvin, Manager Quality Assurance Engineering
*G. I. Wells, Deputy Project Manager, Construction
*R. M. Foley, Engineering Director, 215 Contract
*R. M. Tanner, Quality Control Director, 215 Contract
*C. R. Edwards, Principal Quality Assurance Engineer
*B. A. Holmberg, Change Manager
*J. P. Thorpe, Quality Assurance Engineer
*S. N. Holm, Deputy Project Manager, Engineering
*J. D. Martin, Plant Manager

b. Burns and Roe, Inc. (B&R)

*M. J. Parise, Special Projects Manager
*G. T. Harper, Site Engineering Manager
*H. R. Tuthill, Assistant Quality Assurance Manager
*R. D. Carmichael, Lead Surveillance Engineer

WSH/BOECOM/GERI (WBG)

P. Garcia, Project Manager
T. Page, QA Manager
R. Clouse, Construction Manager

Bonneville Power Administration (BPA)

J. R. Lewis, Project Engineer

*Denotes personnel present at the August 28, 1980 management meeting. Several personnel at all levels of management and staff of the WBG and B&R organizations were also interviewed regarding activities in progress.

2. General

During this period, the inspection examined licensee and contractor activities concerning efforts to re-evaluate and improve detailed work methods. The inspector attended briefing sessions conducted by the WPPSS Task II coordinator, attended briefing and working sessions within the mechanical contractor (WBG) facilities, attended weekly discussion sessions with the site QA manager, interviewed various management and staff personnel of WPPSS and the mechanical contractor (WBG), examined internal memoranda of WPPSS and the mechanical contractor, examined letters issued by WPPSS to site contractors, examined various working schedules and documents

issued during various meetings, and visited various work areas on-site to ascertain the nature of work in progress.

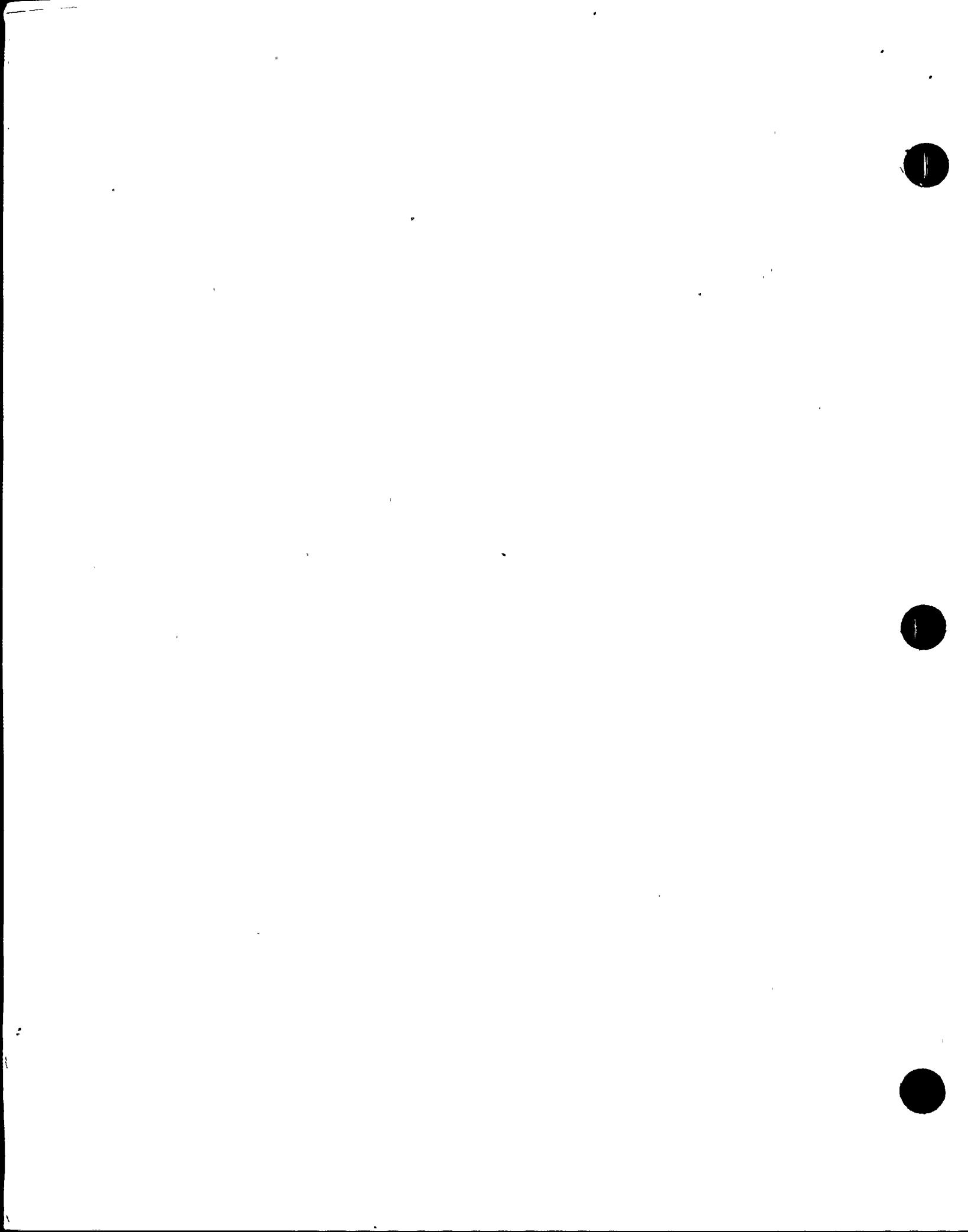
3. Project Status

A labor dispute has effectively stopped all construction work at the site, with minor exceptions, since June 2, 1980. As a result of previous NRC inspection findings and correspondence, the licensee has embarked on a program to review certain completed safety related work and to re-evaluate and upgrade, as indicated, the control of safety related work by contractors. On June 19, 1980, the licensee imposed a work restart constraint on the site mechanical contractor pending the licensee's evaluation of work methods, controls and standards of performance. On July 17, 1980 WPPSS issued stop work instructions to all other site contractors relative to Quality Class I work. On July 18, 1980 the NRC-RV Director notified the licensee that restart of certain safety related activities by the mechanical contractor, WBG, was subject to prior review by the NRC of the results and corrective actions resulting from the licensee's pre-evaluation of WBG's methods, controls and standards of performance.

On August 22, 1980 WPPSS extended the mechanical contractor's stop work order to include Quality Class II and G activities, with specific exceptions. Ongoing/continuing activities were generally restricted to preventive maintenance of equipment and materials, determining status of documentation/hardware, and participation in task forces to assess and plan resolution of quality problems. The mechanical contractor implemented staff reductions on July 17, 1980 and August 23, 1980 involving 140 personnel, including quality control, quality assurance, audit, field engineering, and documentation personnel.

The licensee initiated three principal task forces to implement actions described in the WPPSS reply to the NRC 10 CFR 50.54 (f) letter of June 17, 1980. Task force #1 is responsible for action on previously identified deficiencies and to develop project work methods to assure timely closeout of future items. Mr. B. A. Holmberg is the assigned task leader. This task is active. Task force #2 is responsible for assuring that contractors are properly prepared to restart work (Phase I goal) and to reinspect documentation and physical work to ascertain the quality of completed work (phase II goal). Mr. T. A. Gross is the assigned task leader. This task is active.

Task force #3 is responsible for conveying lessons learned to the other WPPSS projects. Mr. M. E. Witherspoon is the assigned task leader. This task does not appear to be active at this time.



The mechanical contractor has also organized quality assurance and work method evaluation efforts into a task force approach. Six principal tasks have been defined: procedures upgrading, quality assurance program review, open items review, new training program, key personnel assessment, and work methods improvement.

Engineering, construction, quality assurance, scheduling and other contractor personnel have been assigned to the tasks of reviewing existing unresolved deficiencies and taking action where possible, improving procedures, developing improved training, and preparing for an orderly and controlled resumption of work. Burns and Roe and WPPSS personnel have been assigned to assist the contractor, including two WPPSS training specialists.

4. Project Personnel

The supply system has assigned an on-site representative of the Managing Director's office, Mr. R. G. Matlock.

The licensee has introduced four WPPSS personnel into the organization of the mechanical contractor as project directors to assist in developing corrective actions. These directors are:

C. W. Cardwell	Project
R. M. Foley	Engineering
A. M. Sastry	Quality Assurance
R. M. Tanner	Quality Control

The mechanical contractor has assigned the following personnel into Quality Assurance Department positions:

T. Page	Quality Assurance Manager
M. Mead	Quality Control Supervisor

The mechanical contractor has assigned P. J. Garcia as the site project manager.

5. Management Briefing

On August 9, 1980 the resident inspector attended a day-long project status briefing meeting between the WPPSS WNP-2 project staff and the recently appointed Managing Director of WPPSS, R. L. Ferguson. Historical aspects of the project were discussed, in addition to current status and future plans. The staff presented the quality problems existing at the site, the related corrective action commitments to the NRC, and the corrective action implementation plans and status. The manpower and resource schedules demonstrated a commitment to resolution of quality deficiencies. The presentations appeared to meet program needs to appropriately inform senior management of the status of the project quality assurance program. The Managing Director expressed his intentions to become personally involved in this project.

6. WPPSS Task Force I Activities

By the end of August this group involved WPPSS personnel at various management levels to develop action plans and conduct or participate in reviews. A coordinator was assigned, this task given priority by project management declarations, and the master schedule and reporting systems were defined. The scope of the activities appears commensurate with the program described in Attachment #3 of the July 17, 1980 WPPSS reply to the NRC 10 CFR 50.54 (f) letter.

7. WPPSS Task Force II Activities

By the end of August this group had been staffed to 26 persons (mostly job-shop experienced quality control engineers meeting ANSI-N45.2.6 level II qualifications); office space had been established; a procedure manual partly assembled; various checklists prepared and applied for procedure and personnel reviews (mostly WBG oriented); and 347 WBG QC inspection reports (IR's) were reviewed for proper disposition. This group has identified scheduling for restart of 43 principal activities of various contractors and its activities are aimed at assuring that personnel/procedures/methods are adequate for restart of each work activity. This is termed the Phase I effort of the reverification of Completed Safety Related Work (RCSW) Task Force. This effort is planned to include reinspection of work performed within 90 days prior to the June 1980 work stoppage. The Phase I Task Force II effort appears to be progressing through its planning stages commensurate with the program described in Attachment #1 of the licensee's July 17, 1980 reply to the NRC.

Phase II activities will include more detailed work reverifications upon completion of the Phase I activities. The inspector noted that contractors have been requested to identify any areas where continued work may prevent future reinspection activities. The Phase II approach appears commensurate with WPPSS's reply to the NRC. The schedule for the Phase II activities has been extended beyond the previously forecasted dates because of the allocation of resources to an expanded Phase I scope.

8. WPPSS Task Force III Activities

The inspector observed no indication that Task Force III is currently active. This effort depends on the results obtained by the other task forces.

9. Mechanical Contractor (WBG) Activities

By the end of August, the mechanical contractor established several task forces to review procedures, perform QA program review and trend analysis, identify open items, improve the training programs,

certify personnel, and establish performance monitors. These activities were focused toward start of work on the repair of the sacrificial shield wall. Also, special task forces have been assigned for large-bore hangers, small bore hangers, and structural steel rework.

All work procedures have been placed in question, and working to existing procedures has been discontinued. As a result, quality control, quality assurance and field engineering lay-offs were effected. Remaining staff has been working on task force efforts and associated efforts such as: a) review of inspection reports and hold tags, b) procurement of welding equipment, c) review of work packages, and d) removal of loose materials from the reactor plant areas. The WPPSS/WBG activities appear commensurate with the licensee's reply to the NRC.

10. Status of WPPSS/B&R Audits of WBG

The inspector reviewed the status of 27 open audit findings with the responsible lead auditor. The open findings are a result of 1979 audits. Of the 27 findings, a B&R audit in July 1980 showed that only about 9 could be closed out as adequately resolved. The audit results were documented and follow-up actions, including re-audits, were performed. The inspector ascertained that action to resolve the audit findings was included in the WPPSS Task I activities and applicable WBG Task III activities.

11. Small Bore Piping Design

The inspector examined documentation which demonstrated the licensee's actions to assure the readiness of Gilbert/Commonwealth Associates to commence work on design of small bore piping. A March 28, 1980 trip report describes the WPPSS evaluation committee bid evaluation pre-award survey, and a July 14, 1980 audit report describes the readiness audit of June 20-24, 1980. The audit report indicates that procedures, personnel indoctrination and training, interface control, reporting of defects, and other design related criteria were considered. Audit findings were resolved or referred to the program manager for response.

12. Sacrificial Shield Wall Repair Records

The inspector examined records of some repairs which had been made in 1977 at beam attachment areas at elevation 541 feet, azimuths 233° and 306°. An employee on-site directed the inspector's attention to these areas as locations where required repairs may not have been completed. The inspector interviewed personnel and examined on-site records of NIX testing and Burns and Roe (SSW task force office). Initial reviews identified NIX reports of non-destructive testing which appeared to support a conclusion of

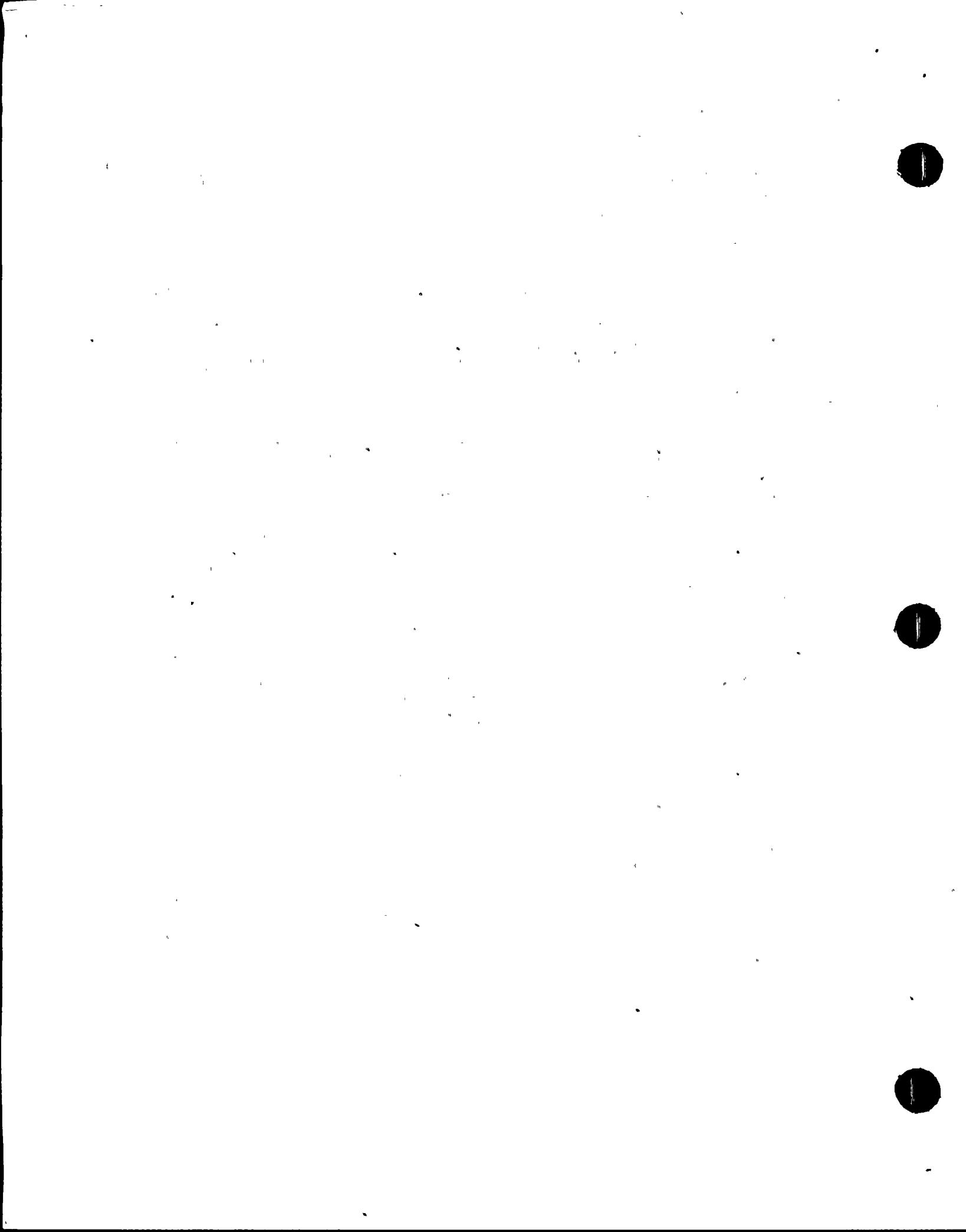
incomplete repairs (Report L7B dated March 12, 1977, for azimuth 233°, report L-5 dated March 11, 1977, for azimuth 306°). However, further review by the SSW task force leader identified Leckenby field inspection reports which demonstrated that the defects in question had in fact been identified and repairs completed and verified by NDE. Report #104 dated March 18, 1977 addressed the one-inch long defect noted in the center of weld area #55 at azimuth 233°; Report Nos. 83, 84, 105 and 127, along with Leckenby letters dated May 24, 1977 and July 26, 1977 and NIX UT report dated July 11, 1977 addressed the seven-inch long defect noted at azimuth 306°; also a Leckenby report dated January 26, 1977 for weld #53, and NIX UT report dated March 12, 1977 indicate that an attachment weld defect was repaired at azimuth 217°. The inspector had no further questions on this item.

13. Allegation of Missing Buried Piping

The inspector encountered comments that when certain buried piping was hydrotested it was found that parts of the pipe-line were not installed, contrary to existing records. The inspector interviewed QC and test personnel and identified a quality Class III line which had circumstances similar to this. The 4-inch floor drain sample line #4FD(7)-1 from the radwaste building had been buried in 1977 after hydrotesting an installed portion. Apparently the open trench for the uninstalled portion was also filled. In 1979 an extension of the hydrotest was planned and QC staff identified a lack of weld documentation during their pretest review. Nonconformance report and other control documents were prepared and the Engineer dispositioned the matter by allowing a pressure-drop test to ascertain integrity of the pipe and welds. During the test, excessive leakage and exploratory excavation showed that the section of piping (110 feet) had not been installed. It was then installed and the test completed. The situation affirmed that the originally identified absence of weld documents did in fact represent incomplete work, rather than misplaced records. Testing and installation of this non-safety-related piping did not involve NRC regulatory requirements. However, the matter demonstrated the value of prerequisite documentation reviews and has been discussed by personnel at the site. The implication of existence of falsified weld records was not substantiated and appears to have been a result of exaggeration or misunderstandings. Documents reviewed by the inspector, relative to the above, included:

Drawings: M531, M507, FD-979-1, TP-WC-1, FD-432-1.7, FD-432-8.15
RFI-215-4977 and RFI-215-4916
Inspection Report 215-IR-3290
NCR-215-4652 and NCR-215-4916
Notification of Test 56.1 #PT-26
Hydrotest Test Report 56-1 #PT-26
Test Package Conditions 56.1 #PT-26

No items of noncompliance or deviations were identified.



14. Reactor Pressure Vessel Reflective Insulation

The inspector interviewed site contractor personnel from Branch-Insulation and examined insulation material in storage relative to defective spot welds. The insulation is classified as Quality Class I and corrective action plans are under development, including seismic loading engineering evaluations.

15. Bolting Materials

The inspector briefly discussed bolting materials with WBG warehouse personnel to determine if material has been procured from the Southern Bolt and Fastener Company. The purpose of this check was to determine if any tensile strength data or problems were available at this site. This supplier has not provided material to WBG.

16. Plant Tour

On August 27, 1980 the inspector made a tour of the reactor building and reactor containment with Mr. C. E. Eschels of the Washington State Energy and Utilities Commission. QC personnel of the mechanical contractor (WBG) and the ventilation system contractor (TWC) were contacted. During the tour, Mr. Eschels expressed concerns about two items which he had previously documented to WPPSS in his letter of February 5, 1980. WPPSS reply letter of February 13, 1980 indicated that the two items would be reviewed by the B&R engineers. The two items were among several discussed in that correspondence. The WPPSS site QA manager committed to inform the NRC inspector about the actions taken to resolve these items.
(80-15-01)

Pipe supports MS-180, BS-215 and RFW-12 were observed, and mention was made of a 10,000 pound limit which may be violated by these large supports. Subsequent review of specification #215, page 15Q-10, showed a 10,000 pound operating load limit for any one pipe support in order to minimize the result of failure of any one support. It was not clear that the observed supports complied with this criteria. Discussions with the B&R hanger engineer indicated that this matter is under review as part of the ongoing effort to correct the #215 specification. The results of that review will be examined at a future date.
(80-15-02).

At the 518' elevation, azimuth 135°, the plate supports welded to containment spray piping appeared to contain defective welds. This matter was conveyed to the WPPSS site QA manager for incorporation into the planned work reverification effort.

17. Management Meetings

The inspector met with the WPPSS site QA manager on August 15 to discuss status of his inspection efforts and to receive a status report of principal WPPSS activities. The inspector expressed interest in reviewing WPPSS evaluations of B&R and contractor engineering personnel qualifications. This information was not yet available.

The inspector met with WPPSS and B&R site management personnel denoted (*) in paragraph 1, in conjunction with NRC regional inspectors' inspection exit meeting on August 28, 1980. The inspector described the scope and results of his inspections as described in this report.

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