

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

REGION III

Report Nos. 50-546/80-24; 50-547/80-24

Docket Nos. 50-546; 50-547

License Nos. CPPR-170; CPPR-171

Licensee: Public Service of Indiana
Post Office Box 190
New Washington, IN 47162

Facility Name: Marble Hill Nuclear Generating Station, Units 1 and 2

Inspection Site: Marble Hill Site, Jefferson County, IN

Inspection Conducted: June 24-27, 1980

Inspectors: *E. R. Schweibinz*
E. R. Schweibinz (June 24-26, 1980)

8-1-80

J. J. Harrison
J. J. Harrison

8-4-80

F. C. Hawkins
F. C. Hawkins

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J. E. Konklin
J. E. Konklin (June 24-26, 1980)

8/4/80

D. W. Hayes
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C. C. Williams
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Accompanying Personnel: G. Fiorelli (June 27, 1980)

J. G. Keppler (June 27, 1980)

Approved By: G. Fiorelli, Chief
Reactor Construction and
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8009180221

Inspection Summary

Inspection on June 24-27, 1980 (Report Nos. 50-546/80-24; 50-547/80-24)

Areas Inspected: Project Quality Assurance manual implementation; QA/QC Inspection Personnel Qualifications; Project Management Procedures to support receipt inspection; relationship between Project Quality Assurance Manual (PQAM) and the ASME Quality Assurance Manual (AQAM); and a management meeting. This inspection involved a total of 182 inspector-hours on site by eight inspectors.

Results: No items of noncompliance or deviations were identified.

DETAILS

Persons Contacted

Public Service of Indiana (PSI) and Management Analysis Company (MAC)

- +H. A. Barker, Chairman and Chief Executive Officer
- +D. V. Menscer, President and Chief Operating Officer
- +*S. W. Shields, Senior Vice President - Nuclear Division
- *G. N. Brown, Project Director (MAC)
- *L. O. Ramsett, Quality Assurance Manager
- *C. G. Beckham, Manager, Quality Engineering
- D. B. Ingmire, Construction Verification Coordinator (MAC)
- *C. E. Chmielewski, Quality Systems Superintendent
- *J. M. Roberts, Superintendent - Inspection
- *T. R. Burns, Project Engineering Manager
- *R. J. Kime, Assistant Construction Manager
- *J. M. Norris, QA Consultant (MAC)
- *R. P. Keele, Superintendent - Quality Administration

Authorized Nuclear Inspector (ANI)

- *W. C. Rice, Hartford Steam Boiler (ANI-PSI)

Nutech

R. D. Pestorius, Project Manager

The inspectors also contacted and interviewed other licensee and contractor personnel.

*Denotes those attending the exit meeting on June 27, 1980.

+Denotes those attending the management meeting on June 27, 1980.

Licensee Corrective Actions and Restart Program for Marble Hill

Background

On August 15, 1979, NRC issued an Order Confirming Suspension of Construction of the Marble Hill plant because of numerous noncompliances to construction, construction management, and quality assurance requirements. Since that time, the licensee has been in the process of taking corrective actions. On May 15, 1980, NRC issued a program for the step by step recission of the "suspension" order titled, "Graduated Recission of Order Dated August 15, 1979". The extent of the recission of the "August 15, 1979 . . . suspension order" depends on the adequacy of the licensee's corrective actions at each step of the May 15, 1980 "restart program" as determined by NRC.

1. Revision of QA Program Description

(Closed - initiated by NRR request) A consolidated QA program (QAP) description was submitted to NRR on April 28, 1980 and supplemented by PSI letter dated May 6, 1980. Based upon review of the consolidated QA program description and its supplements, NRR and IE have concluded that the revised QAP description is acceptable for use in construction of the Marble Hill plants. This conclusion was transmitted to PSI by NRR letter dated May 23, 1980. These actions adequately resolve item A. 1.(a) of the May 15, 1980 Graduated decision of the August 15, 1979 order.

2. Development of Quality Assurance Manual (PQAM)

(Closed) Followup Item (546/80-17-01; 547/80-17-01) As previously documented in NRC Report Nos. 50-546/80-17 and 50-546/80-22, NRC RIII has conducted a detailed examination and evaluation of the Marble Hill Project Quality Assurance Manual. This review included verification of the inclusion and adequacy of all requirements of 10 CFR Part 50, Appendix B, the related commitments established by the consolidated QA program description as approved by NRR by letter dated May 23, 1980.

On June 4, 1980, NRC RIII Management representatives finished a final review of the Marble Hill Project Quality Assurance Manual and concluded that all applicable requirements have been adequately addressed. This constitutes acceptable resolution of item A.1.(b) of the "Restart Program . . .".

3. Development of ASME Quality Assurance Manual

(Open) noncompliance (546/79-11-02; 547/79-11-02)

The licensee has developed a Quality assurance program responsive to the requirements of the ASME Code. In December 1979, an ASME Survey Team reviewed this program and found it acceptable to support an interim letter of approval of the quality system described. This is outlined in ASME PSI letter dated January 7, 1980. NRC participated in this review. This QA program has been subsequently modified as appropriate, and approved by a "third party" inspection agency and concurred with by NRC RIII.

In reference to the ASME interim letter, this QA program is for "N" Certification for "Construction of Class 1, 2, and 3, piping at the Marble Hill Generating Station, Units 1 and 2; New Washington, Indiana for which overall responsibility is retained and for which fabrication and installation of Class 1, 2, and 3 piping systems is subcontracted to appropriate certificate of authorization holders".

NRC RIII also examined the licensee's program and processes for assuring a complimentary interface between the PQAM and the AQAM. This evaluation was found to be exhaustively comprehensive and the results are acceptable.

This entire effort is considered acceptable and constitutes resolution of item A.1.(c) by the "Restart program . . ." and item 4.b of Appendix A to IE Report No. 50-546/79-11 (Item 4.b remains open). Note: The implementation survey by ASME is scheduled for November 1980. "N" certification is pending a successful implementation survey as determined by ASME.

No items of noncompliance or deviations were identified.

4. Increase Project Staff Experience Levels

(Closed) Noncompliance (546/79-11-01; 547/79-11-01)

- a. Subsequent to the NRC August 15, 1980 Order and the NRC identification of insufficient staff and experience levels, the licensee has successfully implemented a comprehensive program of reorganizing and manning the key site based organizations for the construction of the Marble Hill plant.

The purpose of this effort was to provide additional management controls and to provide additional experience.

Key to this effort was the relocation of all principal PSI management organizations, construction, project controls, engineering, procurement, and quality assurance at the site. This effort was effectively completed in January 1980.

NRC RIII has examined this reorganization as described in the licensee's reports, "Description of Licensee Activities Addressing Order Confirming Suspension of Construction", dated February 28, 1980, the "Consolidated Description Quality Assurance Program" dated April 28, 1980. As described in PSI/Stello letter dated February 28, 1980. NRC has confirmed through ongoing examinations that the corrective actions outlined in PSI letter of March 6, 1980 (in response to NRC Item of non-compliance involving quality assurance (No. 546/79-11-01 547/79-11-01)) have been fully implemented. This matter is considered resolved. This constitutes acceptable resolution of item A.1.(d) of the "Restart Program... ."

PSI site based semi-professional and professional staff responsible for construction of the Marble Hill site has increased from 78 persons in June, 1979 to 251 persons in June, 1980.

Moreover, NRC RIII has confirmed through examination that personnel qualification and experience has increased significantly in all key areas. That is, quality assurance/control, construction management, and project engineering. The details of a part of this effort are documented in NRC Report No. 50-546/80-17 and as follows in the paragraphs below.

b. Personnel Experience and Qualification Verification by NRC RIII

Previous RIII Report (50-546/80-17; 50-547/80-17) discussed an RIII evaluation of the qualifications for management and supervisory level personnel involved in the Marble Hill project. During this followup inspection, NRC inspectors evaluated the education, experience, and training of 35 additional personnel specifically associated with receipt inspection and receipt documentation review activities for Marble Hill.

The 35 individuals evaluated during this inspection include 11 persons certified as Level I inspectors, 19 persons certified as Level II, and five persons certified as Level III. Sixteen of the individuals are certified as documentation reviewers; eight of those 16 are employed by Sargent and Lundy.

RIII inspectors conducted interviews with five of the 35 receipt inspectors and documentation reviewers, to evaluate their education, experience, training, and knowledge of the work to be performed. The RIII inspectors also reviewed Revision 3 of PMP 3.01, "Qualification and Certification of QA Personnel", to ensure compatibility between PMP 3.01 and the Qualifications of the Marble Hill receipt inspection personnel.

Revision 3 of PMP 3.01 does not apply specifically to personnel involved only in receipt documentation review activities. During this inspection, the licensee agreed to include such specific document reviewer qualification requirements in PMP 3.01. Subsequent to the inspection, the licensee issued Revision 4 of PMP 3.01, which included appropriate qualification requirements for document reviewers.

RIII inspectors had concerns regarding the qualifications/certifications for three of the 35 receipt inspectors and document reviewers evaluated. The licensee provided additional justification for two of the three persons in question, and changed the certification for the third person from Level II to Level I. Based on the additional justification and the certification change, the RIII inspectors had no further questions.

No items of noncompliance or deviations were identified.

5. Receipt Inspection

(Closed - follow-up item B.1-B.4 "Restart Program")

The objective of this part of the inspection was to establish if PSI has developed a quality program, the necessary project management procedures to implement the program and qualified its staff for receipt inspection of PSI procured materials and equipment.

The requirements for this receipt activity are contained in Appendix B to 10 CFR Part 50, the Marble Hill PSAR, the PSI Project Quality Assurance Manual, commitments documented in the booklet titled, "Description of Licensee Activities Addressing Order Confirming Suspension of Construction" (Brown Book) and applicable codes and standards.

a. Project Management Procedures

The following Project Management Procedures (PMP) are applicable in whole or part to the control of receipt inspection activities. These procedures were reviewed and discussed with licensee representatives and were found to be consistent with NRC requirements and licensee commitments.

<u>PMP No.</u>	<u>Title</u>	<u>Revision</u>
1.00	Organization and Responsibilities (General Management)	1
1.01	Preparation and Control of Project Management Procedures	1
1.04	Training	1
1.07	Control of Nonconformance	3
3.00	Organization and Responsibilities (Project Quality Assurance)	1
3.01	Qualification and Certification of Quality Assurance Personnel	3
3.02	Supplier and Contractor Qualification	3
3.03	Control of Quality Assurance Correspondence	1

3.05	Planning and Preparation of Quality Assurance Checklists	3
3.06	Source Surveillance Procedure	2
3.07	Receiving Inspection	4
3.08	Site Construction Inspection and Surveillance	0
3.10	Stop Work	1
3.12	Quality Verification Records	4
3.13	Audits	2
3.14	Control of Measuring and Test Equipment	2
3.18	File Control and Maintenance of PDPs and CDPs	0
3.21	Reporting of Defects and Noncompliances to the NRC	1
3.24	Administration and Control of Quality Assurance Checklists	0
3.26*	Preparation and Control of Quality Assurance Instructions	
5.00	Organization and Responsibilities (Project Engineering)	0
5.02	Document Control	3
5.16	Special Process Procedures	0
6.02	Receiving of PSI Purchased Material	2
6.03	Storage, Handling and Maintenance of Plant Equipment and Materials	0
	Interim Change Number 1	
	Interim Change Number 2	
	Interim Change Number 3	

* PMP No. 3.26 was being reviewed for approval at the time of the inspection June 24-27, 1980. This procedure provides for the development of QA instructions. These instructions can apply to receipt inspection in such areas as assuring that site receipt inspection includes any required PSI surveillance inspections that may be waived at the vendor's shop. The draft procedure was reviewed by the NRC inspector and discussed with the licensee's representative. The procedure was considered adequate for the development and control of QA instructions applicable to receipt inspection.

b. Receipt Inspection and Documentation Checklists

Twenty-two receipt inspections and three documentation checklists have been developed as of June 26, 1980, and are identified below. The checklists are representative of the estimated 150 that will be required to complete receipt inspection. The schedule for development of the remaining checklists is to be consistent with the licensee's step wise resumption of receipt inspection activities. A detailed review of the 25 completed checklists indicated that they met requirements. A few minor discrepancies were identified during the review and were discussed with the licensee. These are not considered significant and include such items as inconsistent format, revision number in some cases not included in specification references, type of purge gas not identified, etc. The licensee is in process of taking the necessary corrective action.

<u>Checklist No.</u>	<u>Revision</u>	<u>Discipline</u>
PRI-001	0	Mechanical (M)
PRI-002	0	M
PRI-003	0	Civil (C)
PRI-006	1	Electrical (E)
PRI-007		E
PRI-008	0	General (G)
PRI-010	0	E
PRI-011	0	E
PRI-012	0	E
PRI-013	0	E
PRI-014	0	E
PRI-015	0	E
PRI-016	0	E
PRI-017	0	E
PRI-018	0	E
PRI-019	0	E
PRI-020	0	E
PRI-021	0	E
PRI-022	0	E
PRI-023	0	E
PRI-024	0	E
PRI-025	0	E
PDR-009	0	C
PDR-010	0	G
PDR-011	0	M

c. Other Considerations Applicable To Receipt Inspection

Since August 7, 1979 and in response to NRC confirmatory order dated August 15, 1979, receipt inspections were stopped. However, the licensee was permitted to take possession of and store materials and components shipped to the site. Consequently, there is a large backlog of material, etc. presently stored at the site.

In order to properly accommodate the transition from the "storage" mode to the "receipt inspection" mode, the licensee has developed an appropriately comprehensive set of procedures and instructions. Principal among these is one titled, "Intergrated Plan for Laydown Area Upgrade Material Storage and Sequential Receipt Inspection" (Special Process Procedure No. 17, Revision D).

Based on a detailed examination of the above referenced procedure (SPP-17), discussions with the licensee's representatives, and demonstrations through the "flow charts for procurement and receipt activities" as prescribed by Section 7 and 7.3 of the Project Quality Assurance Manual, RIII inspectors conclude that all appropriate requirements and considerations have been adequately addressed.

d. Personnel Qualification for Receipt Inspection

As it is outlined in paragraphs 4.A and B. above, NRC inspectors have confirmed through examination, discussion, and independent verification that PSI personnel are adequately qualified in accordance with the governing requirements to perform all required duties in support of the project quality assurance program and receipt inspection activities.

e. Conclusions

Based on the review of applicable project management procedures, other documentation, discussions with licensee cognizant personnel, observation of stored equipment, and review of staffing and qualification of receipt inspection personnel, it is concluded that adequate provisions are in place for the control of PSI receipt inspection activities.

Items B.1, 2, and 3 of the Restart Program have been satisfied and the "Order Confirming Suspension of Safety-Related Construction" can be partially lifted, specifically for receipt inspection.

6. Management Meeting

A management meeting was held at the site on June 27, 1980, to discuss restart plans and schedule with PSI Corporate Management

(denoted in the Persons Contacted paragraph) and to confirm that top management was totally committed to support quality construction.

Exit Meeting

The inspectors met with site staff representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on June 27, 1980. The inspectors summarized the scope and findings of the inspection.