

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

REGION III

Report No. 50-546/80-16; 50-547/80-16

Docket No. 50-546; 50-547

License No. CPPR-170; CPPR-171

Licensee: Public Service of Indiana  
1000 East Main Street  
Plainfield, IN 46168

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

Inspection At: Marble Hill Site, Jefferson County, IN

Inspection Conducted: April 22-25, April 29 - May 2, May 6-9,  
May 14-16, 1980

Inspectors: *FCH*  
F. C. Hawkins  
(April 29 - May 2, May 6-9, May 14-16, 1980)

5/30/80

*JRH*  
J. R. Harris (April 22-25, 1980)

5/30/80

Approved By: *DW Hayes*  
D. W. Hayes, Chief  
Engineering Support Section 1

6/2/80

Inspection Summary

Inspection on April 22-25, April 29-May 2, May 6-9, and May 14-16, 1980  
(Report No. 50-546/80-16; 50-547/80-16)

Areas Inspected: Follow-up on previous inspection findings; review of implementing procedure revisions, observation of work, and review of quality records for Construction Verification Procedure SPP-2; review of implementing procedure and review of quality records for Construction Verification Procedure SPP-6; review of Construction Verification Procedure SPP-10. This inspection involved a total of 118 inspector-hours on site by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### Persons Contacted

#### Public Service of Indiana (PSI)

S. W. Shields, Senior Vice President - Nuclear Division  
\*G. N. Brown, Project Director  
\*L. O. Ramsett, Quality Assurance Manager  
\*J. M. Norris, Quality Assurance Manager  
\*E. P. Shows, Consultant  
\*R. J. Kime, Assistant Construction Manager  
\*T. R. Burns, Project Engineering Manager  
S. J. Brewer, Nuclear Safety and Licensing Manager  
\*C. E. Chmielewski, Quality Systems Superintendent  
\*C. G. Beckham, Quality Engineering Manager  
J. M. Roberts, Superintendent - Inspection  
\*N. I. Reichel, Area Manager - Reactor Building  
R. R. Latronica, Area Manager - Auxiliary Building  
\*C. S. Togni, Chief Civil Engineer  
\*D. B. Ingmire, Construction Verification Program Coordinator  
\*G. T. Warner, Quality Engineering Superintendent - Civil (N-MH)  
B. R. Morrison, Quality Engineering Superintendent - Civil (UST)  
D. Blackwell, Area Engineer  
R. M. Cramer, Area Engineer  
R. C. Hardison, Area Engineer  
R. Royer, Area Engineer  
S. Bednar, Quality Assurance Engineer  
M. Bright, Quality Assurance Engineer  
T. Corbin, Quality Assurance Engineer  
D. T. Hazel, Quality Assurance Engineer  
J. Lella, Quality Assurance Engineer  
D. L. Shuter, Quality Assurance Engineer  
K. Sullivan, Quality Assurance Engineer  
J. White, Quality Assurance Engineer

#### G. K. Newberg Construction Company (N-MH)

N. Henry, Quality Assurance Manager  
D. Maxwell, Quality Control Manager

#### Whalen - Chilstrom Joint Venture (W/C)

W. Brockman, Ironworker Foreman  
D. Sayre, Ironworker Foreman

#### United States Testing Company (UST)

D. Lanham, Site Project Manager  
K. Rademacher, Assistant Site Project Manager

### Other Personnel

\*J. J. Harrison, RIII NRC Resident Inspector  
\*K. E. Seeber, Sargent & Lundy Site Structural Engineer  
D. Carrierra, Sargent & Lundy Concrete Technologist  
A. Weiss, Sargent & Lundy Concrete Technologist

\*Denotes those attending the exit interviews.

### Licensee Actions on Previous Inspection Findings

(Closed) Unresolved Item (546/79-16-05; 547/79-16-05) Reference IE Report 79-18, Paragraph 1.e. The No. 8 (U.S. Standard Sieve) and 3/4" (Gilson) gradation sieves were found to exceed the allowable screen opening sizes specified in ASTM E11. An acceptable engineering disposition of the No. 8 sieve (ID 202.0) and the 3/4" sieve (ID 244.0) identified in ICAR 1036-58 was reviewed.

This item is closed.

(Closed) Unresolved Item (546/79-16-11; 547/79-16-11) Reference IE Report 79-18, Paragraph 1.k. The Forney DR QC 200 compression machine was found to be out of tolerance specified in ASTM E4. The compression machine was recalibrated on July 31, 1979 and again on April 21, 1980. The certificates of calibration, calibration test data, and proving ring certificates for both calibrations were reviewed by the RIII inspector.

This item is closed.

(Closed) Unresolved Item (546/79-16-18; 547/79-16-18) Reference IE Report 79-18, Paragraph 1.r. The Forney LT-1000 tensile machine was found to be out of the tolerance specified in ASTM E4. The tensile machine was recalibrated on July 31, 1979 and again on April 21, 1980. The certificates of calibration, calibration test data, and proving ring certificates for both calibrations were reviewed by the RIII inspector.

This item is closed.

(Closed) Unresolved Item (546/80-08-01; 547/80-08-01) Procedures, specifications, and documentation for blasting operations were not clear on critical monitoring point, nonconformance disposition, method of correcting the next shot following a shot which exceeded acceptance criteria, and calibration of attenuation curves.

Discussions with responsible engineers and examination of revised procedures and documentation showed that the licensee has taken proper corrective action on the above items of concern. On April 25, 1980, RIII concurred with the licensee's intent to resume blasting operations.

This item is closed.

## Functional or Program Areas Inspected

### 1. Construction Verification Program (SPP-2)

#### a. Stop Work

During the routine review of completed SPP-2 daily inspection packages by licensee personnel, several discrepancies between the documented inspection results and actual field conditions were identified. As a result, the following actions were taken and results achieved:

- (1) Stop Work Order #4 was issued in accordance with PMP 3.10 on April 18, 1980 by the PSI Quality Assurance (QA) group. This stop work effectively halted all work activities relating to SPP-2.
- (2) Several areas in the Auxiliary Building which had been previously inspected in accordance with SPP-2 were randomly chosen for reinspection.
- (3) The reinspection revealed inconsistencies in the spacing measurements between parallel reinforcing bars and/or the numbers of additional reinforcing bars present in construction openings.
- (4) Based on these results, licensee personnel committed to reinspect all areas previously inspected to verify:
  - (a) the size and number of reinforcing bars present in each exposed section.
  - (b) that no gross spacing errors exist between parallel reinforcing bars as placed.
  - (c) the proper number of additional reinforcing bars are present around openings as specified in the S&L standard details.
  - (d) clear cover and concrete section thickness.

The inspector has no further questions on this matter at this time.

#### b. Review of Implementing Procedures

Revisions 6 and 7 to Construction Verification Procedure No. SPP-2, entitled Category I Reinforcing Steel, were reviewed and their use concurred with by RIII on May 7, 1980.

c. Observation of Work

In-process inspections of visible Category I reinforcing steel were observed in the following specific areas:

(1) May 8, 1980

Physical Survey Team (PST) 3 inspection of miscellaneous walls in the Unit 1 reactor building; S&L Drawing S-905 Revision N; Areas 1 and 4 (Az.246°-180°-145°); Elevation 377'.

(2) May 14, 1980

PST 3 inspection of the Unit 1 reactor building secondary shield wall; S&L Drawing S-917, Revision B; Areas 1 and 4 (Az.270°-180°-90°); Elevation 419'.

During observation of work in this area, the RIII inspector identified the use by PST inspection personnel, of incorrect clear cover calculations. To assure that the collected clear cover data was accurate, the licensee committed on May 15, 1980 to:

- (a) perform the calculations for clear cover in the engineering field office.
- (b) require the responsible PST team leader to check the clear cover calculations.
- (c) recheck all of the PST 3 clear cover calculations to verify their correctness as used in the field.

The inspector has no further questions on this matter at this time.

(3) May 15, 1980

PST 3 inspection of the Unit 1 reactor building secondary shield wall; S&L Drawing S-916 Revision E; Areas 2 and 3 (Az.330°-270°); Elevation 419'.

d. Review of Quality Records

- (1) The qualification and certification records for additional PSI and contractor personnel performing work in accordance with SPP-2, Revision 7 were reviewed. Each inspector met the qualification requirements as specified in SPP-2 and was certified under the guidelines established in PSI's Project Management Procedure No. PMP 3.01.



- (2) The SPP-2, Revision 7 training packages for PSI and contractor inspection personnel were reviewed. The training for Revision 7 included both a classroom training session and a practical field inspection demonstration.

## 2. Construction Verification Program (SPP-6)

### a. Review of Implementing Procedures

Revisions 1 and 2 to Construction Verification Procedure SPP-6, Mechanical (Cadweld) Splices, were reviewed and their use concurred with by RIII on May 9 and May 20, 1980, respectively. The review verified that the procedure included appropriate inspection personnel requirements, that it was technically adequate, and that proper quality documentation would be generated as a result of its implementation.

### b. Training

The RIII inspector attended the SPP-6 training session on May 14, 1980. The training consisted of classroom instruction and discussion, a slide presentation, and a field inspection demonstration. The attendance of personnel scheduled to perform work in accordance with SPP-6 was noted.

### c. Review of Quality Records

The qualification and certification records for PSI and contractor personnel scheduled to perform work in accordance with SPP-6 were reviewed. Each member of the PST met the qualification requirements as specified in SPP-6 and was certified under the guidelines established in PSI's Project Management Procedure No. PMP 3.01.

## 3. Construction Verification Program (SPP-10)

Review of Implementing Procedures - The RIII inspector reviewed Construction Verification Program Procedure No. SPP-10, Revision 0, Checking of Category I Backfill Data, to verify that it was technically adequate and that proper quality documentation would be generated as a result of its implementation. On April 25, 1980, RIII concurred with the use of Procedure No. SPP-10, Revision 0 as part of the Construction Verification Program.

## Exit Interview

The inspector met with staff representatives (denoted in the Persons Contacted paragraph) during and at the conclusion of the inspection. The inspector summarized the scope of the inspection.