

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

REGION III

Report No. 50-315/79-27; 50-316/79-27

Docket No. 50-315; 50-316

License No. DPR-58; DPR-74

Licensee: American Electric Power Service
Corporation
Indiana and Michigan Power Company
2 Broadway
New York, NY 10004

Dates of Investigation: October 31-November 1, 1979

Investigation At: D. C. Cook Nuclear Power Plant, Units 1 and 2,
Bridgman, Michigan

Investigators:

James B. McCarten
J. B. McCarten

12/21/79
(Date)

D. H. Danielson
for K. D. Ward

12/26/79
(Date)

Reviewed by:

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12/26/79
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Investigation Summary

Investigation on October 31-November 1, 1979 (Report No. 50-315/79-27;
50-316/79-27)

Areas Investigated: Investigation was conducted into allegations of improper welding tests and record falsification at the licensee's D. C. Cook facility. Investigation examined the licensee's welding certification test procedures and a review of records. Investigation involved 32 hours on site by one inspector and one investigator.

Results: Of the areas investigated, no items of noncompliance were identified.

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REASON FOR INVESTIGATION

Investigation was conducted following receipt of allegations that welding test methods and procedures were being improperly conducted at the licensee's D. C. Cook facility.

SUMMARY OF FACTS

Investigation was conducted following receipt of information from an anonymous source who stated that welders, during the week of October 8-12, 1979 had substituted and altered the names on previously acceptable welding test coupons, and submitted these coupons as theirs for certification to perform welding at the licensee's facility. The alleged stated experienced welders had welded test coupons for less experienced welders, and also welders had not followed the required test procedure and methods, when welding test coupons.

A review of welding qualification records for the questioned period indicated that five welders employed by the licensee's prime contractor Power Systems Incorporated (PSI) were certified in the same welding procedure during the week of October 8-12, 1979.

A review of test procedures and disposal methods for previously acceptable coupons indicated that welders were not observed throughout the testing procedure by supervisory personnel, and previously acceptable welding test coupons were left in a trash can outside, which provided an opportunity to substitute a coupon if a welder elected to do so.

The licensee's Quality Control staff provided radiographs of all previously acceptable welding coupons of the same procedure performed during the questioned period. A comparison of radiographs of the questioned welding test coupons with the previously submitted coupons showed that none of the questioned coupons were similar to the previously acceptable test coupons.

Interview of PSI supervisory personnel and welders who were certified during the questioned period led to denials that coupons had been substituted or welders had performed tests for other welders. These individuals also denied that welding coupons were not properly welded according to the required test procedures and methods. No items of noncompliance were identified during this investigation.

DETAILS

1. Persons Contacted

Indiana and Michigan Power Company

*E. Morse, Quality Control Supervisor
*D. Shaller, Plant Manager

Superior Industrial X-Ray, Inc.

R. Rickman

Power Systems Inc., Schaumburg, Illinois

*J. Pedone, General Superintendent, PSI
*M. Shore, Superintendent, PSI
E. Cudjoe, Welder, PSI
D. Hand, Welder, PSI
L. Merrow, Welder, PSI
J. Bassinger, Welder, PSI

*Denotes those present at exit meeting.

2. Contact with Alleger

On October 19, 1979, an alleger contacted Region III. The alleger stated that during the week of October 8-12, 1979, he had observed that welding tests were being improperly conducted. The alleger stated that previously certified and more experienced welders were welding test coupons for examinees, or that examinees were not welding the test coupons at the required positions (45° angle). In addition, the alleger stated that Dennis Hand had taken a previously acceptable welding coupon from a nearby metal waste bin, had removed another individual's name from the coupon, substituted his name on the coupon, and submitted it as his own test coupon for approval.

3. Interview of Licensee's Quality Control Personnel

On October 31, 1979, Earl Morse, the licensee's Quality Control supervisor was interviewed and stated that all nuclear certified welders at the licensee's facility are required to have current welding procedure certifications on file prior to performing any welding at the licensee's facility. Morse advised that welders without current certification are required to weld a test coupon which is then submitted to Superior Industrial X-ray (SIX) for radiographic examination. Morse stated that the radiographs of the acceptable welding coupons are then submitted for review by SIX to his office. The radiographs are then reviewed by one



of four level two radiographers assigned to that office, and if found acceptable, the test results are forwarded to PSI, with the radiographs being retained on file in the Quality Control Office.

Morse also related that continuous surveillance of welding performance is maintained by the licensee's Quality Control staff; welds, if found unacceptable are reviewed and if the circumstances warrent, the welder may be dismissed from the site for poor performance. Morse stated that during the course of the recent repair outage he had observed no increased level of unacceptance.

4. Interview of Superior Industrial X-ray (SIX) Personnel

On October 31, 1979, Roger Rickman, was interviewed and stated SIX is responsible for the radiographic examinations of all welding test coupons submitted by welders at the licensee's facility. Rickman stated welding test coupons are welded in shop areas of the turbine building, and then are left on the steps of the SIX trailer located in the same building. The coupons are marked in yellow paint with the welders name and welding procedure, are subsequently radiographed by SIX personnel, and returned to the outside of the trailer. Rickman related that the radiographic inspection report for the welding test coupon is forwarded to the licensee's Quality Control Branch for review, and if found acceptable, the licensee's Quality Control Branch forwards a favorable report to PSI.

Rickman also related that the test coupons are not destroyed, but are placed outside the trailer and then disposed of by the welder in the salvage metal waste bin located outside the turbine building.

5. Review of Qualified Welders Log

A review of the SIX qualified welders log, Appendix A, indicated that during the questioned period, October 8-12, 1979, six welders were tested; five of the six welders were employees of PSI and were required to perform the same welding procedure. All five of the test coupons submitted by these five welders were found to be acceptable. One of the five welders was Dennis Hand who the alleger had stated had substituted his coupon for another acceptable coupon. A review of the welders log indicated that between June 10, 1979 and October 2, 1979, eighteen welders had performed this welding procedure, and all were found to be acceptable.

6. Review of Radiographs

On October 31, 1979, Morse provided radiographs of the test coupons of all five of the PSI welders tested in the procedure during the week of October 8-12, 1979 along with radiographs of all previously submitted welding coupons listed in Appendix A for the same procedure. A review of the questioned radiographs with the previously submitted coupons indicated that none were similar in configuration of cover passes and acceptable indications such as perosity and slag.

7. Interview of Power Services Incorporated Personnel

On November 1, 1979, John Pedone, General Superintendent, Power Systems Incorporated (PSI) was interviewed regarding welder qualification procedures at PSI. Pedone stated that the qualification procedure consists of a test administered to the examinee in which he is required to perform a weld according to the required welding procedure. Pedone also stated that the welding tests are administered by Michael Shore who provides the examinee with a work area in the licensee's turbine building and who intermittently observes the examinee's performance during the test. Pedone stated that the length of time, 6-12 hours to perform the test procedure, precludes direct supervision of the examinee during the test. Pedone also related that no excessive welding failure rates have been detected by the licensee's Quality Control personnel.

On November 1, 1979, Michael Shore was interviewed and stated that as a Superintendent for PSI he was assigned the responsibility for overall supervision of the welder qualification program. Shore stated that all welders without current certification are tested at work centers in the licensee's turbine building. Examinees are required to perform a weld on a test coupon according to a procedure and according to a SIX-G test method in which the weld is performed at a 45° angle, which therefore qualifies the welder in both a vertical or horizontal position. Shore related that examinees are provided 6 to 16 hours to perform the test coupon, and upon completion of the coupon, the coupon is submitted to SIX for radiographic examination. The results of this exam are then forwarded to the licensee's Quality Control Branch for review before a final determination is made as to whether the welder is certified.

Shore also stated that as of this date only one PSI welder had failed the exam and he was later certified in another welding procedure. Shore noted this certification was an exception to PSI policy which states that if a welder fails a test he is not permitted to work at the site.

On November 1, 1979, Errol Cudjoe, PSI welder, was interviewed and stated that on October 8-11, 1979, he welded a test coupon utilizing the 1-4 procedure 6-G test method, and submitted the coupon for radiographic examination to qualify as a welder at the licensee's facility. Cudjoe stated that he alone performed work on his test coupon under the supervision of his foreman who intermittently checked on his progress throughout the test. Cudjoe also stated he is an experienced nuclear welder who has been welding at various nuclear plants for the past twelve years.

On November 1, 1979, Dennis Hand, PSI welder, was interviewed and stated that on October 10, 1979, he welded a test coupon utilizing the 1-4 procedure, 6-G test method and submitted the coupon for radiographic examination to qualify as a welder at the licensee's facility. Hand stated that he did not substitute another individual's coupon and present it for examination as alleged in paragraph 2. Hand also stated that his foreman observed him welding the coupon and ensured that he performed the weld according to the required procedure.



On November 1, 1979, Larry Merrow, PSI welder, was interviewed and stated that October 9-10, 1979, he welded a test coupon utilizing the 1-4 procedure 6-G test method, and submitted the coupon for radiographic examination to qualify as a welder at the licensee's facility. Merrow stated that he alone performed work on his test coupon under the supervision of his foreman who intermittently checked on his progress throughout the test procedure. Merrow also stated that he has accumulated six years of experience in welding at various nuclear plants.

On November 1, 1979, John Bassinger, PSI welder, was interviewed and stated that on October 16, 1979, he welded a test coupon utilizing the 1-6 procedure 6-G test method and submitted the coupon for radiographic examination to qualify as a welder at the licensee's facility. Bassinger stated that he alone performed work on his test coupon under the supervision of his foreman who intermittently checked on his progress throughout the procedure. Bassinger also stated that he has acquired four years of experience in welding at nuclear power plants.

8. Management Discussion

On November 1, 1979, a management discussion was held with licensee management and Morse, Pedone, Shore. At this time they were advised of the results of this investigation in that no items of noncompliance were identified during the course of this investigation. Licensee management indicated that in the future welding test coupons would be altered in such a manner as to prevent the substitution of a welders name as alleged in the allegation.