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

REGION III

Report Nos. 50-546/80-29; 50-547/80-29

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 At: Marble Hill Site, Jefferson County, IN

Inspection Conducted: July 29 - August 1, 1980

Inspector: J. F. Schapker 8/15/80

Approved By: D. H. Danielson, Chief 8/18/80
Engineering Support Section 2

Inspection Summary

Inspection on July 29 - August 1, 1980 (Report Nos. 50-546/80-29; 50-547/80-29)
Areas Inspected: Reviewed Cherne nondestructive examination laboratory equipment, nondestructive examination (NDE) procedures, personnel certifications, and radiographs of field welds. This inspection involved 30 onsite inspector hours by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

DETAILS

Persons Contacted

Public Service of Indiana

*L. O. Ramsett, Quality Assurance Manager
*V. P. McMahon, Acting Project Director
*C. G. Beckham, Manager, Quality Engineering
*R. P. Kule, Superintendent, Quality Administration
*T. R. Burns, Project Engineering Manager
*R. J. Kime, Manager, Construction
*J. M. Roberts, Superintendent of Inspection
G. T. Davis, Welding/NDE QAE
*D. B. Ingmire, Construction Coordinator

Cherne Contracting Corporation (CCC)

*A. Z. Dolgaard, Quality Control Manager
*C. O. Jergens, Quality Control Engineer

The inspector also contacted and interviewed other licensee and contractor employees.

*Denotes those present at the exit interview.

Functional or Program Areas Inspected

1. Review of Nondestructive Examination Procedures

The inspector reviewed the following NDE procedures utilized by Cherne Contracting Corporation (CCC), the cognizant NDE contractor for ASME Section III, 1977 Edition with Winter 1977 Addenda.

a. Procedure No. 14.1.12.76, Revision 8, "Certification of Nondestructive Examination Personnel," specifies minimum education, training, and experience to certify NDE personnel in their respective categories. It meets the requirements specified in American Society for Nondestructive Testing (ASNT) recommended Practice No. SNT-TC-1A (1975 Edition).

b. Procedure No. 14.6.1.77, Revision 4, "Radiographic Examination of Welds."

c. Procedure No. 14.4.1.77, Revision 6, "Magnetic Particle Examination Yoke Method."

d. Procedure No. 14.2.12.76, Revision 5, "Liquid Penetrant Examination."

As a result of the review of the above procedures, the inspector informed PSI and CCC representatives that the following should be clarified:

e. Procedure No. 14.6.1.77, paragraph 7.6.6.2 does not stipulate that the separate block, (for penetrameter placement when configuration of size prevents placing of the same on the object), be made of radiographically similar material, the same thickness as the part being radiographed, and is placed as close as possible to the material being inspected.

f. Procedure No. 14.6.1.77, paragraph 5.5 and 7.6 references "ASME Section V, SE-142, as shown in Figure 2", for design requirements of penetrameters. The Figure 2 actually refers to Figure 2 of the Cherne procedure and not ASME Section V, and should be clarified accordingly.

The PSI and CCC representatives stated the above details will be incorporated in a revision to the procedure. This matter is considered unresolved (546/80-29-01; 547/80-29-01).

No items of noncompliance or deviations were identified.

2. Review of Nondestructive Examination Personnel Certifcations

The inspector reviewed certifications of the following Cherne Contracting Corporation (CCC) personnel:

Name	Method	Level
C. Jergens	RT-UT-PT-MT-VT	III
S. Schmalz	RT-PT-MT-VT	II
B. Enfield	RT-PT-MT-VT	II
S. Gruenhagen	*RT-PT-MT-VT	II
S. Cantrell	PT-MT	II
M. Anderson	RT-UT-PT-MT	III

*with restrictions

As a result of this review, the inspector noted that C. Jergens and M. Anderson's eye examinations had lapsed. C. Jergen's eye examination was performed during the inspector's visit. M. Anderson was not on site as he is assigned to the corporate office of CCC. Subsequently, the Cherne Contracting Corporation representative agreed to perform the expired eye examination and update the records accordingly. Pending review of M. Anderson's updated eye examination record, this matter is considered unresolved (546/80-29-02; 547/80-29-02).

3. Observation of Cherne's NDE Laboratory Activities

The inspector made a tour of the Cherne Contracting Corporation facilities escorted by CCC's Level III QC Engineer and PSI's Level III welding/NDE QA Engineer. The following are the inspector's findings:

a. Radiography (RT)

The NRC license expires April 30, 1984, and covers IR 192 up to 100 curies.

CCC does not have a CO 60 source or x-ray machine on site.

The lab has one IR 192 source stored in camera pig inside a locked lead lined box in the laboratory trailer which is also kept locked; only authorized personnel have access.

Film are processed automatically with a Hope automatic processor.

The lab used Kodak industrial radiographic film only, Type 1 (M).

Film is stored in lab storage cabinet in dark room. No outdated film was observed.

Exposed film is stored in fireproof cabinet in an air conditioned lab trailer; no permanent storage facilities on site have been constructed as of this date.

Film cassettes were in acceptable condition, letter "B" attached for backscatter exposure detection.

Lead screens observed in cassettes were in acceptable condition. Flourescent screens are not used nor are there any on site.

Lead numbers and flashers are used for identification of radiographs.

Only ASME Section V, SE142, Figure 1 (ASTM) type penetrameters are used. Certifications were available and penetrameters were in good condition.

Densitometers are Tech Ops digital display type. Density strip step wedge with traceability to NBS was available and utilized for calibration of densitometers.

Hi intensity viewers are used and in good condition.

Decay curve for gamma ray source is posted in the lab.

Survey meters are calibrated every 90 days.

Pocket dosimeters are utilized and recorded weekly by the radiographers.

Film badges are processed and recorded bi-weekly.

The following radiographs for containment spray piping was reviewed by the inspector:

System	Weld#	Thickness	Diameter	Date RT
78401CSB00208	8	.280"	6"	6/26/79
" 202	2	.280"	6"	6/26/79
" 303	3	.280"	6"	6/26/79
" 306	6(R2)	.280"	6"	7/13/79
" 311	11(R1)	.280"	6"	7/13/79
" 516	16	.280"	6"	7/13/79
78401CSb01004	4	.322"	8"	6/28/79
" 005	5	.322"	8"	6/28/79

The above radiographs were verified to be in accordance with the applicable ASME Code and Cherne procedure requirements.

b. Ultrasonic Examination (UT)

CCC has a Nortec NDT 131D ultrasonic instrument on site in good condition, including various calibration blocks.

The lab used Hamakler couplant with appropriate certifications.

The lab has UT transducers in various sizes, MHZ and angles in good condition.

The UT procedure was not reviewed by the inspector as the procedure is in process of complete revision. No UT work is being performed at this date.

c. Liquid Penetrant Examination (PT)

CCC uses spot check solvent removable type liquid penetrant materials.

The inspector sampled the inventory from warehouse supply and field kits and verified certifications were available for the various lots of material.

d. Magnetic Particle Examination

CCC has three probe machines and three Y-6 magnaflux yokes in good condition with current calibration stickers attached. Magnaflux red and gray, fine, high permeability, low retentivity magnetic particles are used.

e. Visual Examination (VT)

CCC has three Level II's and one Level III inspector on site qualified to SNT-TC-1A requirements.

Inspectors are qualified for direct examination with the aid of mirrors, magnifying lenses, flashlights, and other auxiliary lighting.

f. Eddy Current (ET), Leak Testing

No ET or LT has been performed by CCC on site to date, nor anticipated in the near future.

No items of noncompliance or deviations were identified.

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 1 and 2.

Exit Interview

The inspector met with site representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection and outlined the scope of the inspection along with a summarization of the results.