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RELATED CORRESPONDENCE

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET
P.O. BOX 8699
PHILADELPHIA, PA. 19101
(215) 841-4502

JOHN S. KEMPER
VICE-PRESIDENT
ENGINEERING AND RESEARCH

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Limerick Generating Station, Units 1 & 2
Information for Materials Engineering Branch (MTEB)
Regarding SER Confirmatory Issue #12 - Preservice
Inspection (PSI) Program

References:
1) Letter, J. S. Kemper (PECo) to A. Schwencer (NRC), dated 7/17/84
2) Letter, J. S. Kemper (PECo) to A. Schwencer (NRC), dated 8/7/84
3) Letter, T. T. Martin (NRC) to J. S. Kemper (PECo), dated 8/3/84

Attachment:
1) Disposition of Welds Included in Relief Request Nos. 19 and 20

File: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

The welds included in Relief Requests Nos. 19 and 20, most recently set forth in Reference 2, have undergone subsequent examination and evaluation and have been dispositioned such that relief from Code requirements is no longer required. Therefore, we are withdrawing Relief Request Nos. 19 and 20. Additional information to support the final disposition of the subject welds is provided in Attachment 1.

Sincerely,

John S. Kemper

RRH/pd08298404
Attachment
See Attached Service List

cc: Judge Lawrence Brenner (w/enclosure)
Judge Peter A. Morris (w/enclosure)
Judge Richard F. Cole (w/enclosure)
Troy B. Conner, Jr., Esq. (w/enclosure)
Ann P. Hodgdon, Esq. (w/enclosure)
Mr. Frank R. Romano (w/enclosure)
Mr. Robert L. Anthony (w/enclosure)
Maureen Mulligan (w/enclosure)
Charles W. Elliot, Esq. (w/enclosure)
Zori G. Ferkin, Esq. (w/enclosure)
Mr. Thomas Gerusky (w/enclosure)
Director, Penna. Emergency Management Agency (w/enclosure)
Angus R. Love, Esq. (w/enclosure)
David Wersan, Esq. (w/enclosure)
Robert J. Sugarman, Esq. (w/enclosure)
Martha W. Bush, Esq. (w/enclosure)
Spence W. Perry, Esq. (w/enclosure)
Jay M. Gutierrez, Esq. (w/enclosure)
Atomic Safety & Licensing Appeal Board (w/enclosure)
Atomic Safety & Licensing Board Panel (w/enclosure)
Docket & Service Section (w/enclosure)
Mr. James Wiggins (w/enclosure)
Mr. Timothy R. S. Campbell (w/enclosure)

ATTACHMENT 1

Disposition of Welds Included in Relief Request Nos. 19 and 20

Relief Request No. 19 includes eight (8) Class 1 welds and Relief Request No. 20 includes four (4) Class 2 welds. These welds were examined by radiography and hydrostatically tested as required by the construction code (ASME Section III, 1974 Edition including addenda through Summer 1975) and were found to be acceptable.

Subsequent examinations were conducted using ultrasonic techniques to establish a preservice inspection (PSI) record of the welds as required by ASME Section XI. Although not required by Section XI zero degree ultrasonic scans were performed to identify any conditions which may interfere with results obtained from the Code required angle beam scan. These zero degree scans were performed at sensitivities far in excess of Code requirements. Most of the indications reported in the Relief Requests were noted using the zero degree scan. The indications were originally evaluated using only the conservative ultrasonic test results and using the acceptance criteria of ASME Section XI (1974 Edition including addenda through Summer 1975) and all were found to be rejectable. At that time an evaluation using the acceptance criteria of ASME Section XI (1980 Edition including addenda through Winter 1981) was performed and all indications were found to be acceptable. This later edition of Section XI was used because it is the anticipated applicable code for the Inservice Inspection (ISI) Program for Limerick Unit 1.

The above ultrasonic examinations were performed prior to Code stamping of the systems in which the welds are located and PECo was advised, after filing Relief Request Nos. 19 and 20, that the ASME Section III acceptance criteria must be used for evaluation of the indications.

The subject welds were re-examined and evaluated by the PSI contractor and an independent consultant. The examinations consisted of ultrasonic scans using zero degree and/or angle beam techniques, supplemental radiography and magnetic particle testing where appropriate. Weld process data and weld end prep details were also considered. In addition the independent consultant performed ultrasonic examinations at the sensitivity required by ASME Section XI. In all cases the re-evaluation by the PSI contractor and evaluation by the independent consultant concluded that the welds are acceptable and meet the acceptance criteria of ASME Section III. Indications on six welds which originally were evaluated as lack of fusion have been classified as a grain boundary indication which is detected as an ultrasonic indication using a more sensitive exam than required by the Code. In some cases the sensitivity of the exams which detected the indications were as much as 1000% more sensitive than required. None of the radiographs or Section XI required ultrasonic exams detected any evidence of lack of fusion in these welds.

One weld has been reworked to remove minor indications slightly below the surface of the weld. These indications were removed by grinding without infringing on the ASME Section III required minimum pipe wall thickness.

The twelve (12) welds of concern have been dispositioned as follows:

- RRA-027LD min., RRA-027LD max., RRA-028 LU min., RRA-028 LU max.

  Original evaluation was reject due to lack of fusion. Subsequent exams and evaluation show this to be a grain boundary indication which is not a defect and is acceptable to ASME Section III and Section XI.

- RRA-037 LD max., RRA-038 LU max.

  Original evaluation was reject due to lack of fusion. Subsequent exams and evaluation show this to be a grain boundary indication which is not a defect and is acceptable to ASME Section III and Section XI.

- RHB-005

  Original evaluation was reject due to an indication evaluated as a slag inclusion. Subsequent exam and evaluation place this indication in the base metal and is acceptable to the base material requirements of ASME Section III.

- FWB-028

  Original evaluation was reject due to lack of fusion. Subsequent exams and evaluation show this to be small scattered laminar inclusions in the base metal which are acceptable to the base material requirements of ASME Section III.

- RHB-194

  Original evaluation was reject due to non-metallic inclusion. Subsequent exam and evaluation shows this to be located in the base metal and is acceptable to the base material requirements of ASME Section III.

- HP-117

  Original evaluation was reject due to side-wall lack of fusion. Subsequent exam, which included angle radiography, and evaluation shows this to be a laminar indication located in the base metal, abutting the weld. The indication is acceptable to the base material and weld requirements of ASME Section III and Section XI.

- RDA-019

  Original evaluation was reject due to lack of fusion. Subsequent exams show that the indication is laminar, located in the weld prep extending into the base metal and is not a lack of fusion. The indication is acceptable to the base material and weld requirements ASME Section III and Section XI.

- RDB-011

  Original evaluation was reject due to small cracklike indications (slightly subsurface) in the base metal. The indications were not evident on a liquid penetrant surface examination. Subsequent exams and evaluation confirm the presence of these indications which are acceptable to ASME Section III base material requirements. However, the suspect area has been reworked to remove these indications and preclude any interference with examinations conducted during the ISI program. Reexamination of the base metal after rework shows that it is acceptable to ASME Section III and Section XI.

In conclusion, the twelve welds are acceptable to both the construction code (Section III) and code governing PSI (Section XI). Relief from the Code requirements for these welds is not required.

RRH/pd08298409