Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

April 29, 1991

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Quad Cities Nuclear Power Station Units 1 and 2
Response to Safety Evaluation Report for
Generic Letter 88-01
NRC Docket Nos. 50-254 and 50-265

References: (a) L. Olshan (NRC) letter to T. Kovach (CECo), dated August 21, 1990.

(b) M. Richter (CECo) letter to T. Murley (NRC), dated October 19, 1990.

Dr. Murley:

Reference (a) transmitted the Nuclear Regulatory Commission's (NRC) safety evaluation of Generic Letter 88-01 (Generic Letter), NRC Position of Intergranular Stress Corrosion Cracking (IGSCC) in BWR Austenitic Stainless Steel Piping, for Quad Cities Station Units 1 and 2. Additionally, Reference (a) requested Commonwealth Edison Company (CECo) to modify the Inservice Inspection (ISI) Program for Units 1 and 2 to address the Reactor Water Cleanup (RWCU) System piping outboard of the isolation valves. Reference (b) informed your staff that CECo was evaluating the impact of incorporating the RWCU System piping outboard of the isolation valves into the ISI Program. This letter presents the results of that evaluation, and the current plans for the RWCU piping for Units 1 and 2.

For the evaluation, a study was performed (specific to Dresden Station) to determine the optimum IGSCC mitigation technique/alternative (based on cost and dose considerations) for the RWCU piping outboard of the isolation valves which is within the scope of the Generic Letter. Although the current study was "Dresden-specific", the results also pertain to Quad Cities Station based on the similarity of the RWCU outboard piping applicable to the Generic Letter.

As shown on Figure 1, the sections of RWCU piping within the scope of the Generic Letter extend from outboard isolation valve 1201-5 up to and including the regenerative heat exchangers, the interconnecting piping between the regenerative heat exchangers, and the interconnecting piping between the regenerative and non-regenerative heat exchangers. Additionally, the return piping from the regenerative heat exchangers up to valve 1201-81 is included in the scope of the applicable piping. There are approximately 160 welds in this piping for each unit.

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Some of the IGSCC mitigation alternatives which were evaluated included:

- performance of IGSCC inspections in accordance with the Generic Letter; with expansion assumptions and anticipated weld repairs (utilizing the weld overlay technique) based on previous inspection results of RWCU inboard piping.

- performance of weld overlays on all welds over a two outage period, with no IGSCC inspections performed prior to application of the weld overlays.

- replacement of IGSCC susceptible piping, with no IGSCC inspections performed prior to pipe replacement.

The results of the study ("Dresden-specific" study) concluded that pipe replacement was the optimum mitigation alternative (based on cost and dose considerations) for the RWCU piping. Based on those results, CECo is pursuing the replacement of the subject RWCU piping (shown on Figure 1). Additionally, CECo is investigating potential upgrades to the equipment (heat exchangers and valves) associated with the subject piping. At this time, the required company assessments are being performed in order to budget the necessary funds for the pipe replacement project. It is expected that final budget approval for this project will be obtained by October 1991. In the event that the required funding cannot be obtained, your staff will be notified and an inspection program will be proposed.

It should be noted that the subject RWCU piping is not scheduled for IGSCC inspections prior to replacement. The dose penalty factors, estimated total exposure, and man-hour estimates which were utilized in the evaluation of the pipe replacement alternative were predicated on this assumption (no IGSCC inspections prior to pipe replacement). Although no IGSCC inspections are planned prior to pipe replacement, existing instrumentation (area temperature monitors) is available to provide notification in the event of RWCU System leakage.

Based on preliminary engineering, the RWCU piping replacement for each unit is being scheduled over a two refueling outage period. At this time, pipe replacement between the refueling outages is not anticipated (due to dose considerations); however, it is expected that in excess of thirty percent (30%) of the piping will be replaced during the first/initial refueling outage. The current schedule for pipe replacement, which takes into account the expected lead time required for engineering and material procurement, is presented below for each unit. It should be noted that the expected dates for these refueling outages may be subject to change.

Unit 1 - January 1994 refueling outage (Q1R13)
Fall 1995 refueling outage (Q1R14)

Unit 2 - Spring 1993 refueling outage (Q2R12)
Fall 1994 refueling outage (Q2R13)

Please contact this office should further information be required.

Respectfully,

M.H. Richter
Nuclear Licensing Administrator

Figure 1: Simplified Diagram of Reactor Water Cleanup System

cc: A.B. Davis - Regional Administrator, Region III
L.N. Olshan - NRR Project Manager
T.E. Taylor - Senior Resident Inspector, Quad Cities

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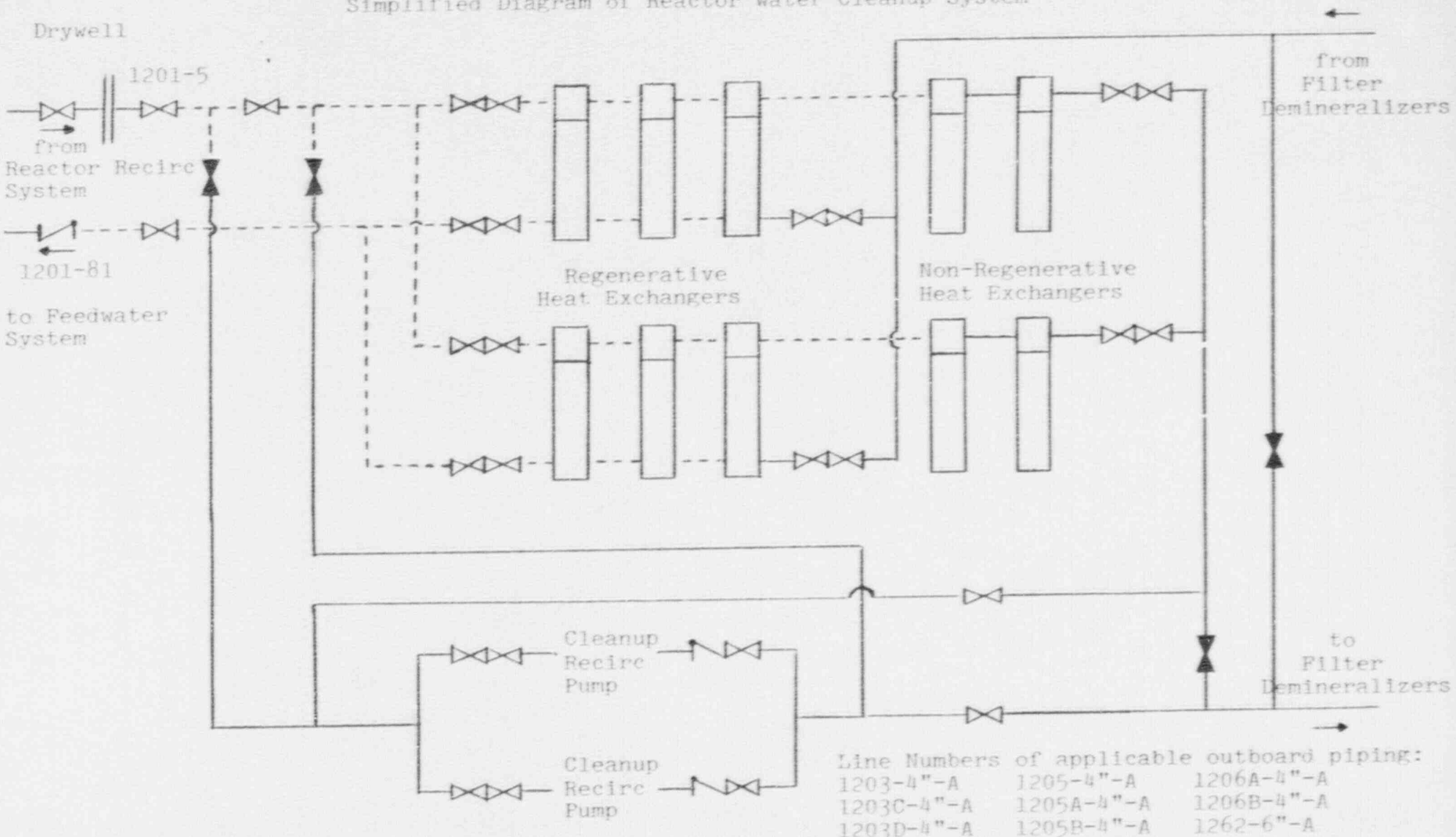
FIGURE 1

Simplified Diagram of Reactor Water Cleanup System



Line Numbers of applicable outboard piping:

1203-4"-A	1205-4"-A	1206A-4"-A
1203C-4"-A	1205A-4"-A	1206B-4"-A
1203D-4"-A	1205B-4"-A	1262-6"-A
12121-4"-A	12123-4"-A	

- - - : Outboard piping within the scope of Generic Letter 88-01.

NOTE : Diagram is applicable to Units 1 and 2.