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March 23, 1982

L. G. Hulman, Chief
Accident Evaluation Branch
Division of Systems Integration
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Hulman:

FIN NO. B2323
TMI ACTION PLAN: III.D.3.4
CONTROL ROOM HABITABILITY EVALUATION
DRESDEN STATION, UNITS 2 & 3
COMMONWEALTH EDISON
DOCKET NO. 50-237/249

Based upon PNL review of the information submitted by the licensee in response to NUREG-0660, NUREG-0737, and other NRC Guidance, the control room meets the requirements of SRP 2.2.1 - 2.2.2, 2.2.3, and 6.4; and therefore meets the requirements of General Design Criteria (GDC) 4, 5 and 19. The conclusions are based on the present plant system and presumes implementation of effective HVAC modifications addressed by the licensee and incorporation of the recommendations of this evaluation.

The licensee has determined that the whole body, thyroid and skin doses to the control room operators meet the guidelines of GDC 19. The licensee has identified credits for reduced iodine concentrations based on iodine plateout and delay within steam lines and the turbine-condenser complex. The licensee has identified modifications which are needed to insure the habitability of the control room. PNL concurs with the modifications and revisions identified by the licensee in Section 5.0 of the December 17, 1981 transmittal.

The licensee states that activation of the emergency ventilation and air filtration system, and closure of the normal outside air intake require operator initiation. It is recommended that an immediate, automatic system isolation be triggered by the radiation monitors located at the air intakes. Additionally, redundant dampers should be placed on any air intake or exhaust ductwork which has direct access to the atmosphere.

The licensee has identified two toxic chemicals for which automatic monitoring is required, namely ammonia and methylchloride. The licensee has also identified two toxic chemicals, chlorine and formaldehyde, for which olfactory detection will be used. Procedures should ensure that operators are properly trained and can respond effectively to the presence of hazardous chemicals in the control room atmosphere. Instruction should include a periodic refresher course. Training should also

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ensure that personnel can don breathing apparatus within two minutes. The licensee has committed to supplying the control room with an air-line system. This, along with the self-contained breathing apparatus (SCBA) already available should meet the single failure criteria of Regulatory Guide 1.78.

Therefore, based on the submittal, the implementation of the proposed modifications, and incorporation of the above recommendations, we conclude that the control room habitability system is adequate to provide safe, habitable conditions within the control room under both normal and accident conditions, including loss-of-coolant accidents, and that occupancy can be maintained under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Therefore, the applicant's proposed program meets the criteria identified in Item No. III.D.3.4, "Control Room Habitability" of NUREG-0737 and is, therefore, acceptable.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Dennis W. Murphy", is written over a horizontal line.

Dennis W. Murphy, Ph.D.
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Dosimetry Technology Section

DWM/jkr

cc: H.E.P. Krug, NRC
T.R. Quay, NRC