



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENVIRONMENTAL IMPACT APPRAISAL

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 22 TO FACILITY LICENSE NO. DPR-50

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER & LIGHT COMPANY

AND

PENNSYLVANIA ELECTRIC COMPANY

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-289

Introduction

By letter dated June 3, 1976, Metropolitan Edison Company (Met Ed) requested a change to the Technical Specifications appended to License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1. The amendment would redefine the reporting requirement limits for certain higher than background radiation levels.

Discussion

By letter dated June 3, 1976, Met Ed requested that the entire Section 5.6.2 (Non-Routine Reports) of Appendix B to License DPR-50 be replaced to reflect updating this section in line with Regulatory Guide 4.8. Except for Section 5.6.2.2 (Radiological Environmental Monitoring) these changes were editorial rather than substantive. After several discussions with Met Ed, we have accepted the revised Section 5.6.2.2 except for subsection 5.6.2.2(b) related to milk pathway measurements. Upon agreement by Met Ed, the language and requirements in this subsection have not been changed. The only substantive change relates to the use of preoperational and operational background radioactivity rather than that collected during the operational period only as the basis for determining an anomalous radioactivity measurement.

Appraisal

The proposal to change the basis for defining anomalous measurements as 10 times the mean of the preoperational and operational data collected

at a control station rather than 10 times the mean of the operational data only, does not reduce the effectiveness of this reporting requirement.

The preoperational/operational data is representative of the background level of radioactivity and provides a better mean value for determining levels of radioactivity in environmental media from plant releases. For cases when preoperational/operational control station data is not available, the applicable control station data will be used to determine anomalous measurements. The proposed deletion of a reporting requirement associated with a measured level of radioactivity in an environmental medium greater than 4 times the control station value is acceptable because it reflects a greater accuracy for defining anomalous measurements on a factor of 10. In many instances the variation in background levels could result in measurements that exceed 4 times the control value. Met Ed has proposed a specification for confirming levels of radioactivity when an investigation level is exceeded. An investigation level is exceeded when there is a 99.9% probability of the measurement not belonging to the background or control station level data distribution (i.e., greater than the mean value plus 3.1 times the standard deviation). The mean value is determined from data collected at the applicable control station and preoperational data. An investigation level set at the mean plus 3.1 standard deviations assures that measurements that are likely to be attributable to plant effluents are investigated but that measurements which are within the normal fluctuation of the natural background are not unnecessarily investigated. This confirmatory specification provides for better analysis of plant related level of radioactivity in environmental media without causing unnecessary reports to be submitted. All measurements will continue to be summarized in annual environmental reports.

Met Ed proposed to delete the reporting requirement when individual milk samples show I-131 concentrations of 10 picocuries per liter or greater. Individual milk samples that show high concentrations of I-131 would not have to be reported if the average concentration over a quarter time period was below 4.8 picocuries per liter. We conclude that this deletion is unacceptable because of the importance of the milk pathway for gaseous releases of I-131.

Conclusion and Basis for Negative Declaration

On the basis of the foregoing analysis, it is concluded that there will be no environmental impact attributable to the proposed action. Having made this conclusion the Commission has further concluded that no environmental impact statement for the proposed action need be prepared and that a negative declaration to this effect is appropriate.

Dated: November 8, 1976