NONROUTINE RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

Nine Mile Point Nuclear Station Unit 1
Docket No. 50-220
January 10, 1985

INTRODUCTION

This Nonroutine Radiological Environmental Operating Report is submitted in accordance with Section 4.6.2.b of the Nine Mile Point Nuclear Station Unit 1 Technical Specifications, Appendix B (Environmental Technical Specifications). Section 4.6.2.b indicates that "if a confirmed measured level of radioactivity in any environmental medium exceeds ten times the control value, a written report shall be submitted."

DESCRIPTION

Samples of shoreline sediment were collected and analyzed in accordance with Appendix B specification 3.2.a and Table 3.2-1. The samples in question were collected on October 23, 1984. The indicator sample showed a concentration of Cs-137 in excess of ten times the applicable control sample value for the same radionuclide. The control sample value was an LLD value.

CAUSE

The presence of Cs-137 in shoreline sediment is, for the most part, a result of past liquid effluent discharges at the site. All liquid effluent discharges at the site were well within Technical Specification limits during 1984 and previous to 1984.

CORRECTIVE ACTION(S)

No corrective action is anticipated for the following reasons:

1. Site liquid effluent discharges are and have been well within Technical Specification limits.

2. The shoreline area, where the sediment samples were obtained, is controlled by Niagara Mohawk security personnel in the sense that members of the public found on the shoreline area are escorted off. Therefore, the dose consequences, as delineated below, are minimal.

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IMPACT

The impact on members of the public, with respect to a Cs-137 concentration greater than ten times the control result in shoreline sediment, is minimal. For purposes of conservative illustration, however, the dose consequences could be evaluated by assuming that the shoreline area at Nine Mile Point is a beach area for public recreation. Using standard Regulatory Guide 1.109 methodology, the maximum exposed individual (teenager) would receive a whole body dose of 0.005 mrem per year and a skin dose of 0.006 mrem per year. Standard Regulatory Guide 1.109 methodology assumes an exposure time of 67 hours per year, a sediment mass of 40 Kg/m^2 dry (to a depth of 2.5 cm), a shore width factor of 0.3, a Cs-137 concentration of 1.54 ± 0.15 pCi/g - dry weight, and no radiological decay.

The illustrative whole body and skin doses calculated above can be compared to the same doses received from Cs-137 in soil samples. Soil samples were collected at indicator locations and at a control location during 1983 as required by the Technical Specifications. The soil sample from the control location contained a Cs-137 concentration of 1.46 ± 0.15 pCi/g - dry. The detected Cs-137 in this sample is a result of past weapons testing. The associated whole body and skin doses received from Cs-137 in soil at this location, using the same assumptions above and Regulatory Guide 1.109 methodology, are 0.017 and 0.019 mrem per year, respectively. A shoreline width factor in this calculation is not applicable. These doses are greater than three times the whole body and skin doses received from Cs-137 in the shoreline sediment at the NMP-1 location.

A summary of this reportable occurrence will also appear in the 1984 Annual Environmental Operating Report.

NMP-10304

NIAGARA MOHAWK POWER CORPORATION

NIAGARA MOHAWK

300 ERIE BOULEVARD, WEST
SYRACUSE, N. Y. 13202

January 10, 1985

Dr. Thomas E. Murley
Regional Administrator
United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Re: Docket No. 50-220

Dear Dr. Murley,

In accordance with Nine Mile Point Nuclear Station Unit 1 Technical Specifications, we hereby submit the following 10 day Nonroutine Radiological Environmental Operating Report. This report is submitted in accordance with the required content of section 4.6.2 of the Appendix B Technical Specifications.

Very truly yours,

Thomas E. Lempges

Thomas E. Lempges
Vice President
Nuclear Generation

TEL/HJF/lo
cc: Director, Office of NRR (1 copy)
T.J. Perkins
T.W. Roman
E.W. Leach
H.J. Flanagan
Enclosure

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