JUN 30 1971

Honorable Charles Thone
House of Representatives

Dear Mr. Thone:

This is in reply to your letter of April 28, 1971, regarding the concerns expressed by Mrs. Jeff Broady of Brownville, Nebraska, about the Cooper Nuclear Station. I am enclosing a staff report responding to Mrs. Broady's letter.

I am also enclosing for Mrs. Broady's information our June 7 press announcement on the proposed establishment of numerical guidance to keep radioactivity in light-water-cooled nuclear power reactor effluents as low as practicable.

If we can be of further assistance to you or Mrs. Broady, please let me know.

Sincerely,

(signed) Harold L. Price

Harold L. Price
Director of Regulation

Enclosures:
1. Staff Report
2. Press Announcement, dtd 6/7/71

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STAFF REPORT ON INQUIRY BY MRS. JEFF BROADY

Mrs. Broady's principal concern appears to be what she terms a discrepancy between estimates of exposure set forth in a Public Health Service report on the Cooper nuclear station and estimates made by the Atomic Energy Commission. We assume that Mrs. Broady is referring to Figure 4, page 22, of the April 8, 1968, U.S. Public Health Service report which is a graph showing a plot of the theoretical release rate of iodine-131 versus distance from the reactor where cattle might graze near the Cooper nuclear station that theoretically would result in an exposure of 0.5 rem per year to the thyroid of a one-year-old child who ingests milk produced by cattle that graze on iodine contaminated pastures. This curve does not represent the levels of radioactivity that will actually be released in the operation of the Cooper nuclear station. The design characteristics of the Cooper nuclear station indicate that actual release rates of iodine from this plant would be less than a few percent of that indicated by the theoretical curves in the PHS report.

Mrs. Broady also refers to a study by the U.S. Public Health Service conducted in 1968 at the Dresden nuclear power station in Illinois that indicates that traces of radionuclides were detected in cattle thyroids and corn kernels around the Dresden station. These levels were barely detectable above background radiation. In evaluating the significance of their findings at the Dresden station, the Public Health Service states on page 87 of the report BHR/DER 70-1 reporting the Dresden study that "On the basis of these measurements, exposure to the surrounding population through consumption of food and water from radionuclides released at Dresden was not measurable. External exposure from radioactive gases discharged from the Dresden stack was detectable, but it was only a small fraction of the natural radiation background over an extended period of time, and well within Federal Radiation Council guidance".

Requirements which would be incorporated in any operating license for the Cooper nuclear station would require that the levels of radioactivity in effluents be maintained as low as practicable. Operating experience with power reactors of similar design indicate that levels of radioactivity offsite from the Cooper station will not be significantly altered. Therefore, there is no reason to expect that cattle near the Cooper station will be any different than those many miles away.

By AEC requirement, Nebraska Public Power District must have a complete program of environmental monitoring to confirm the results of the primary control, which is effluent monitoring. The methods of monitoring are principally those which are continuous and integrating. A number of directions are covered, so that vagaries of wind direction are taken into account. Specific nuclide analyses are also required. Further, the