



**Nebraska Public Power District**  
*Nebraska's Energy Leader*

NLS2001083  
September 18, 2001

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

Gentlemen:

Subject: Response to Draft Question Regarding Dose Calculation Methodology  
Amendment  
Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46

- References:
1. E-mail to Edward McCutchen (Nebraska Public Power District) from Mohan Thadani (Nuclear Regulatory Commission) dated July 18, 2001, Clarification Re: Dose Calculation Methodology Amendment
  2. Letter to NRC Document Control Desk from Mr. J. H. Swailes (Nebraska Public Power District), dated March 20, 2000, Design Basis Accident Radiological Assessment Calculational Methodology - Response to Request for Additional Information

In reference 1, the Nuclear Regulatory Commission (NRC) provided a question regarding the meteorological data used with the Nebraska Public Power District (the District) dose calculation license amendment request. A teleconference was held on September 6, 2001 between District personnel and the NRC where this question was addressed. The purpose of this letter is to respond to this question on the Cooper Nuclear Station (CNS) docket.

The draft question contained two parts. Part 1 stated the following:

Is the 1994 - 1998 meteorological data used in the ARCON96 calculations for the current fuel handling accident radiological assessment from electronic files dated June 5 and 8, 1999? We are trying to check the data files we have here (dated June 5 and 8, 1999) and want to be sure we are looking at the correct ones. If those are the correct ones, please check the data format. It appears that data that should be in a 1x, A5, 3x, I3, 2I, 2x, I3, I4, 1x, I2, 2x, I3, I4 format ("I" is the letter, not a numeral one) is missing the last 2x, so it may be that the last I3 and I4 fields could be misread since they would not be in the correct "columns."

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Response to Part 1:

The 1994 - 1998 meteorological data files used as input files to the ARCON96 calculations for the current fuel handling accident radiological assessment are the electronic files dated June 5 and 8, 1999. The District has investigated the described anomaly. It appears there was a formatting error made in these files. Revised ARCON96 runs have been performed with the data correctly input. As a result, the X/Qs used as input to the Control Room dose calculation for the Fuel Handling Accident were rendered non-conservative. The District is revising this calculation and has resubmitted it for NRC review.

Part 2 stated the following:

Further, in response to Question 17 of a March 20, 2000 submittal, some delta-T data recovery rates were given for a couple of the years. In looking over the data in the files that we have, it appears that more data are flagged as invalid than what was indicated in the Question 17 submittal. In addition, it appears that some of the upper level wind data were also flagged as invalid at the same time as the delta-T data. While it is certainly possible that both sets of data are invalid, we just want to be sure that they really are invalid. If what we have isn't right, we would like to discuss with you and get the right data to help us understand the inconsistencies.

Response to Part 2

The District has reviewed the delta-Ts flagged as invalid in the meteorological data files provided the NRC for 1995 and 1996, and found them to be consistent with the delta-T data recovery rates provided the NRC in Question 17 of reference 2. It should be noted that the data recovery rates provided in reference 2 were for the delta-T data only. Other parameters, such as wind data are evaluated separately for validity.

In determining the validity of the meteorological data, the monthly data files are analyzed by computer. The computer outputs, along with meteorological knowledge, help determine the validity of the data. Out of range values are then evaluated by individuals with meteorological knowledge to see if they are invalid. Examples of values which would be judged to be invalid are:

1. A dew point temperature which exceeds the ambient temperature by greater than 1.8 degrees Celsius, provided the ambient temperature instrumentation is functioning properly.
2. Negative values of wind speed, wind direction, sigma theta, and precipitation.
3. Wind directions greater than 360 degrees.
4. Values when maintenance, calibration, or system problems cause inconsistencies.

The work is then checked by an independent reviewer. Accordingly, the District has a high level of confidence that the invalid data has been designated correctly. It is very possible that delta-T and wind speed data can be invalid at the same time. Such a condition could be the result of maintenance activities affecting the instruments measuring both these parameters or the result of a data transmission problem between the meteorological tower and the meteorological data file recorders.

Should you have any questions concerning this matter, please contact Mr. David Kunsemiller at (402) 825-5236.

Sincerely,

  
John H. Swailes  
Vice President of Nuclear Energy

/wrv

cc: Regional Administrator  
USNRC - Region IV

Senior Project Manager  
USNRC - NRR Project Directorate IV-1

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