

# MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
OFFICE OF THE SECRETARY

TO : Daniel R. Muller  
Assistant Director for Environmental Projects  
Directorate of Licensing  
Atomic Energy Commission

DATE: August 13, 1973

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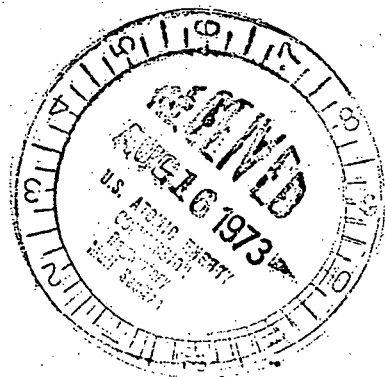
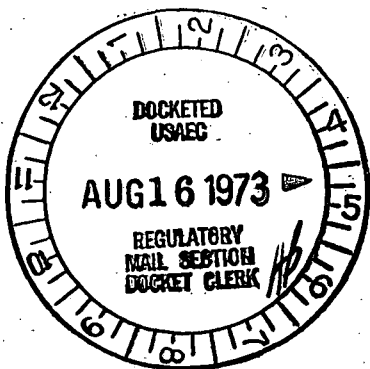
FROM : Paul Cromwell *P. Cromwell*  
Acting Director  
Office of Environmental Affairs

SUBJECT: Dresden Nuclear Power Station, Units 2 & 3 - Draft  
Environmental Impact Statement

Attached please find our comments on the above-captioned draft environmental impact statement.

Thank you.

Attachment

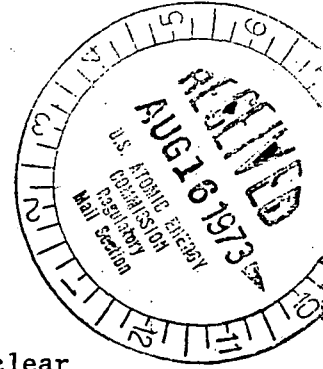


# MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
FOOD AND DRUG ADMINISTRATION

TO : Special Assistant to the  
Assistant Secretary for Health

DATE: JUL 31 1973



FROM : Assistant Director for Special Projects  
Bureau of Radiological Health

SUBJECT: Comments on Draft Environmental Impact Statement - Dresden Nuclear  
Power Station, Units 2 and 3.

The above draft document which was transmitted by the letter of June 26, 1973, from Mr. Daniel R. Muller, Assistant Director for Environmental Projects, Directorate of Licensing, USAEC, to the Department has been reviewed within the Bureau. The draft document states in part that Units 2 and 3 will be retrofitted with updated equipment to better process the radioactive gaseous and liquid effluents. Estimates of the radioactivity contained in the liquid effluent differ between those of the AEC staff and the applicant. The differences arise because the AEC staff based their estimates upon the waste treatment system installed (both present and augmented) and upon experiences obtained from other operating nuclear reactors. The estimates of the applicant were lower than those of the AEC staff because the applicant assumed lower concentrations of radioactivity in the wastes prior to treatment. The AEC staff has estimated that with the present treatment system the radioactivity contained in the liquid effluent discharged into the Illinois River would be sixty-six (66) Ci/yr/unit and five (5) Ci/yr/unit with the augmented system (tritium excluded). The tritium release would be twenty (20) Ci/yr/unit for both the present and augmented system. The applicant has estimated that with the present system the radioactivity contained in the liquid effluent and discharged into the Illinois River would be less than fifteen (15) Ci/yr/unit and less than 0.14 Ci/yr/unit with the augmented system (tritium excluded). The tritium released for the present system and augmented system was estimated to be less than thirty (30) Ci/yr/unit and less than fifteen (15) Ci/yr/unit respectively. Data on actual releases is said to be contained in Table 2.10; however there is no Table 2.10 in the draft document. AEC staff estimates of the radioactivity contained in the gaseous effluents from Units 2 and 3 by using the present system was  $2 \times 10^6$  Ci/yr/unit for noble gases and six (6) Ci/yr/unit for Iodine-131; by using the augmented system the estimates were  $4.8 \times 10^4$  Ci/yr/unit and 0.34 Ci/yr/unit respectively. These estimates agreed well with those of the applicant. The estimated maximum cumulative annual dose received by any member of the permanent population from the combined releases of Units 1, 2 and 3 (by assuming dilution flow) is less than 0.25 mrem and the corresponding population dose is less than one (1) man-rem/yr. The airborne annual population integrated dose commitment from Units 2 and 3 over a 50 mile radius

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will be 160 man-rem/yr. The annual dose to a child's thyroid via the air-cow-milk pathway is approximately 1.3 mrem/yr for Units 2 and 3 and 4.4 mrem/yr from Unit 1. The annual dose to the thyroid of a child from milk from a cow pastured at any location will be less than 1.8 mrem/yr from Units 2 and 3 and 7.7 mrem/yr from Unit 1. The above mentioned doses are within the proposed guidelines. The direct and indirect doses to man from waterborne radionuclide is less than 0.25 mrem/yr for Units 1 and 2 and the corresponding population dose is less than 0.5 man-rem/yr. The dose received by any member of the permanent population due to the combined releases from Units 1, 2 and 3 is less than 0.25 mrem or less than 1 man-rem/yr (by assuming dilution flow from all three (3) units). Section 3.4.3 (Dresden Cooling Lake) references a Figure 2.14, however there is no such figure in the draft document. Section 3.4.4 describes the spray modules and states in part that each module consists of four (4) spray nozzles. However Figure 3.10 shows a spray module being installed in the canal and the module consists of five (5) spray nozzles. This could affect the cooling efficiency of the spray modules.

On the basis of the information contained in these documents it appears that this plant can be operated without undue impact on the health of the offsite population as a result of any environmental changes including exposure to the population from radiation.



E. C. Anderson