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T. C. NICHOLS, JR.
VICE PRESIDENT AND GROUP EXECUTIVE
NUCLEAR OPERATIONS

June 25, 1981

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Offsite Dose Calculation Manual

Dear Mr. Denton:

In our letter dated June 4, 1981, the NRC staff was provided the Offsite Dose Calculation Manual (ODCM) for the Virgil C. Summer Nuclear Station. Page 2.0-10 contained an error which is corrected by the attached page 2.0-10 of this letter. The attached page should be inserted in place of the page presently in the ODCM. Since you were provided ten copies of the ODCM, we are providing you with ten copies of page 2.0-10.

If you have any questions, please let us know.

Very truly yours,

T. C. Nichols, Jr.

T. C. Nichols, Jr.

RBC:TCN:lkb

cc: H. R. Denton w/attach. (10)
V. C. Summer w/o attach.
H. N. Cyrus w/o attach.
T. C. Nichols, Jr. w/o attach.
D. A. Nauman w/o attach.
W. A. Williams, Jr. w/attach.
R. B. Clary w/o attach.
O. S. Bradham w/attach. (2)
A. R. Koon w/attach.
M. N. Browne w/o attach.
B. A. Bursey w/attach.
Dr. J. Ruoff w/attach.
J. L. Skolds w/o attach.
J. B. Knotts, Jr. w/attach.
J. Cox w/attach.
W. R. Baehr w/attach.
G. E. Higginbotham w/attach.
J. H. Barker w/o attach.
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P_i = dose parameter for radionuclide i, (mrem/yr pe $\mu Ci/m^3$) for inhalation and (m^2-mrem/yr per μCi/sec) for other pathways. from Table 2.2-1

$\overline{Q}_i'$ = average release rate of radionuclide i (required by Technical Specification 3.11.2.1.b) in the current year (μCi/sec).

2.2.2 Unrestricted Area Dose to Individual

2.2.2.a For the purpose of sections 3.11.2.2 and 3.11.2.4 of the Technical Specifications, the air dose in unrestricted areas shall be determined as follows:

D_γ = air dose due to gamma emissions from noble gas radionuclide i (mrad)

$$= 3.17 \times 10^{-8} \sum_i M_i \overline{X/Q}' \tilde{Q}_i \qquad (26)$$

where,

3.17×10^{-8} = the fraction of one year per one second

$\overline{X/Q}'$ = relative concentration for unrestricted areas for long term releases

= 5.3×10^{-6} sec/m^3 in the SE sector*

$\tilde{Q}_i$ = cumulative release of noble gas radionuclide i over the period of interest (μCi).

D_β = air dose due to beta emissions from noble gas radionuclide i (mrad).

* Values based on Reference 4, Table 2.3-119; Reference 5, Table 6.1-10.