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VICE PRESIDENT AND GROUP EXECUTIVE
NUCLEAR OPERATIONS

December 23, 1981

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

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Technical Specification
Radiation Monitoring

Dear Mr. Denton:

This letter presents a revision of the SCE&G position, presented
in a letter dated December 17, 1981, on a requested change to the
Technical Specifications for Virgil C. Summer Nuclear Station. The
specification of interest is 3.11.2.1 relating to gaseous effluents.
In particular it relates to an entry in Table 4.11-2 referenced by
surveillance requirement 4.11.2.1.2. Discussions with the reviewer
have resulted in some minor changes for the sake of clarity. The
changed version is reproduced in total for your consideration.

The last entry in this table specifies an LLD of
$1 \times 10^{-6} \mu$ ci/ml for the continuous noble gas monitors which
observe releases from the main plant vent and the reactor building
purge. We are suggesting a change to $2 \times 10^{-6} \mu$ ci/ml (for
Kr-85) as described in our FSAR (Pgs. 11.4-8 to 11.4-10). The
specific guidance for this surveillance requirement is found in
Regulatory Guide 1.21 Appendix A, section A.1.C., which states that
the sensitivity of gross radioactivity measurements should be
sufficient to permit measurement of a small fraction of the activity
which would result in an annual air dose of 10 millirads due to gamma
radiation or 20 millirads due to beta radiation at or beyond the site
boundary.

The following site specific information can be used to show
compliance with this guide.

Total Postulated noble gas released from the plant = 3100 ci/yr
(Final Environmental Statement (FES) Table 4.5)

Postulated Noble gas gamma air dose = 0.23 mrad/yr
(FES Table 4.9)

Postulated Noble gas beta air dose = 0.57 mrad/yr
(FES Table 4.9)

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So, the postulated release at the Virgil C. Summer Nuclear
Station to give a 10 mrad/yr gamma air dose is

1.34×10^5 ci/yr.

The typical main plant vent flow is 175,388 CFM (FSAR Fig. 9.4-9)
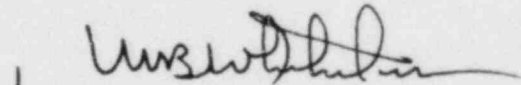
A proposed increase of 30% to this rate will not change the
conclusions reached below.

The average concentration in a release that would lead to an 10
mrad gamma air dose is given by the ratio of yearly release and
yearly total flow. The average concentration =
$52 \times 10^{-6} \mu$ ci/ml. A similar calculation for beta air dose
gives $42 \times 10^{-6} \mu$ci/ml.

Our installed instrumentation is sensitive to $2 \times 10^{-6} \mu$ci/ml
which is approximately 1/20th of these concentrations. It could thus
detect 1/20th of the maximum allowed dose if the release persisted
for an entire year or 1/7300th if it lasted for one day. Since most
releases will probably come from the reactor purge which has a
maximum flow of only 20,000 CFM. The detection fraction will
actually be even smaller than indicated by the above calculations.
Clearly, a LLD of $2 \times 10^{-6} \mu$ci/ml (for Kr-85) will allow us to
detect small fractions (less than 10% - 25%) of the regulatory limit
found in Regulatory Guide 1.21. We can see no justification to cause
us to replace our existing monitors with those that conform to the
non site specific Standard Radiological Effluent Technical
Specifications nominal value of $1 \times 10^{-6} \mu$ci/ml. This
conclusion is exact agreement with the position taken by the NRC
staff on pages 11-20 and 11-23 of the Safety Evaluation Report.

SCE&G considers this adequate justification for our present
design and requests your immediate attention be given to this matter.

Sincerely,

for T. C. Nichols, Jr.

JB:TCN:tdh

Mr. Harold R. Denton
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