



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

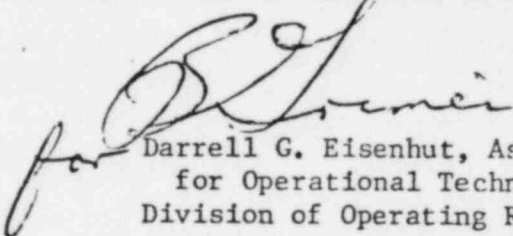
JUL 06 1976

Karl R. Goller, Assistant Director for Operating Reactors, DOR

BRUNSWICK UNIT 2 - COOLANT ACTIVITY LIMITS

It has been brought to our attention that the present technical specifications for the Brunswick Unit 2 plant allow the equilibrium coolant activity to be as high as 6.2  $\mu\text{Ci}/\text{gram}$  I-131 Equivalent and 62.  $\mu\text{Ci}/\text{gram}$  during 48-hour spike periods. We estimate that these limits may result in offsite doses in excess of 10 CFR Part 100 guidelines following a postulated main steam line failure outside containment (see Enclosure 1).

We recommend that the Brunswick Unit 2 coolant activity limits be changed to conform with the Standard Technical Specifications (0.2 and 4.0  $\mu\text{Ci}/\text{gram}$  of I-131 Equivalent, respectively) at the same time that Unit 1 reverts to the Standard Technical Specifications or at the next Unit 2 refueling outage, whichever comes first. These limits would result in appropriately low doses (5 rem and 100 rem) for a postulated steam line failure accident but should not represent a hardship to the facility since it has so far operated below these limits (see Enclosure 2).

  
Darrell G. Eisenhut, Assistant Director  
for Operational Technology  
Division of Operating Reactors

Enclosures: As stated

cc: V. Stello  
B. Grimes  
D. Bunch  
A. Schwencer  
C. Trammell  
E. Adensam  
W. Pasedag  
H. Fontecilla

ENCLOSURE 1

BRUNSWICK UNIT 2 - STEAM LINE FAILURE ACCIDENT

Assumptions:

1. 140,000 lb of reactor coolant instantaneously released to the environment. (SRP 15.6.4)
2.  $X/Q = 7.4 \times 10^{-4} \text{ sec/m}^3$  at 914 meters for an elevated release with fumigation (Regulatory Guide 1.5) and corrected for a wind speed of 0.5 m/sec.

Thyroid Doses:

1. With Coolant Concentration  
= 6.2  $\mu\text{Ci/gram I-131 Equivalent}$  - 150 rem
2. With Coolant Concentration  
= 62.  $\mu\text{Ci/gram I-131 Equivalent}$  - 1500 rem

ENCLOSURE 2

INFORMATION OBTAINED BY TELEPHONE CONVERSATION  
BETWEEN C. TRAMMELL, CRPM, AND BRUNSWICK UNIT 2  
PERSONNEL ON JULY 2, 1976

Average operating I-131 Coolant Activity -  $10^{-4}$   $\mu\text{Ci/cc}$

June 22 Primary Coolant Activity measurement:

I-131  $2.17 \times 10^{-6}$   $\mu\text{Ci/cc}$

I-133  $1.79 \times 10^{-4}$   $\mu\text{Ci/cc}$

June 24 Primary Coolant Activity measurement:

I-131  $3.54 \times 10^{-6}$   $\mu\text{Ci/cc}$

I-133  $5. \times 10^{-5}$   $\mu\text{Ci/cc}$