TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

830 Power Building

SEP 5 - 1978

Director of Nuclear Reactor Regulations
Attention: Mr. S. A. Varga, Chief
Light Water Reactors Branch No. 4
Division of Project Management
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Varga:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

In response to an informal request for information from Mr. Phillip Stoddart of the Radiological Assessment Branch, NRC, enclosed is a copy of a revised response to round one question 321.1 on Watts Bar Nuclear Plant. Our previous response was inaccurate because of the inadvertent omission of ground water dilution. As discussed with Mr. Stoddart during a telephone conversation on August 31, 1978, this information will be included in Amendment 35 of the FSAR which is presently scheduled for submittal October 16, 1978.

Very truly yours,

J. E. Gilleland

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Assistant Manager of Power

Enclosure

Nuclide	Concentration (μCi/ml)	Factor Greater Than 10CFR20 MPC's
Mn-54	4.0(-7)	<1
Co-58	3.1(-8)	<1
SR-89	2.9(-10)	<1
SR-90	3.5(-7)	1.2
Y-90	3.5(-7)	<1
Y-91	1.3(-9)	<1
ZR-95	4.1(-10)	<1
Nb-95	8.9(-10)	<1
Cs-134	3.3(-4)	37
Cs-137	3.2(-3)	160
Ce-144	1.2(-7)	<1
PR-144	1.2(-7)	<1

All other radionuclides were less than 1.0(-10) μCi/ml.

Assumptions used:

a. Average travel time in groundwater = 812 days.

b. Assume a strip 100 feet wide from the plant to Yellow Creek.

c. Groundwater available for dilution = 2.8(+10) ml (Section 2.4.12.3, WBNP-FSAR).

d. Time necessary for entire slug to enter the creek after 812 days travel time = 1 day.

e. Decontamination factor of soil = 1.0.

f. Dilution in creek = 0.1 percent of creek.

g. Radionuclide source terms are listed under Tritiated Drain Collection Tank - Table 11.2-9, WBNP FSAR.

h. 100 percent of the tank capacity is released.