

METROPOLITAN EDISON COMPANY

Subsidiary of General Public Utilities Corporation

*T. Murphy*

Subject Expected Radiation Levels in Standby Pressure  
Control Tanks (SPC-Ts)

Location TMI

*any comments  
JBL*

To J.R. Floyd  
G.A. Kunder

Date June 25, 1979

*File Press/Volume  
Control Systems*

Review attached and lets discuss desirability of moving control station, shielding, etc. on Monday.

*J.B. Logan*

J.B. Logan  
Unit 2 Superintendent

JBL/jmr  
Attachment

cc: J.G. Herbein  
J. Collins (NRC) - *Trailer #7*  
D.F. Limroth

TO: Joe Logan ✓  
From: W. Zurliene

June 22, 1979

Subject: Expected radiation levels on STANDBY Pressure Control Tanks (SPC-T's).

Using  $Cs^{137}$  as the major contributing isotope to any radiation levels from the standby pressure control tanks, Rad Engineering has calculated the following relationships that can be used to determine radiation levels at various distances from the tanks.

DIST from TANK	mr/hr/μCi/ml
1'	6.5
3'	4.5
10'	1.1

Example: If SPC-T-1 were to be filled with RCS liquids and using the 6/13/79 sample results, the resultant radiation level would be approximately 715 mr/hr at one foot, 495 mr/hr at 3' etc.

It is recognized the system is designed to prevent or limit any back flow of coolant into the tanks. Some migration of activity is to be expected into these tanks from minor surges.

and correction flow. The resulting coolant will be greatly diluted and corresponding radiation levels much lower.

Example: 10 gal of coolant enters SPC-T-1.

Resulting activity of tank will be  $\frac{1}{90} \times 110$  or 1.2  $\mu\text{Ci/gal}$   $\text{Cs}^{137}$  which would produce a radiation level of approximately 5.4  $\text{mr/hr}$  at 1 foot and 1.8  $\text{mr/hr}$  at 3 feet.

Radiation levels on SPC-T-2 and 3 should be much lower because the tanks are in series and further downstream from any possible contaminating RCS liquid.

If any further information is desired feel free to request.

W. L. Guillevine  
RAD Engineering

cc. B. Rusche  
E. Murri  
D. Hetrick