

25 Apr 75

W. C. Burke, Section Leader, Applications Section, Effluent Treatment Systems Branch, TR

HYDROLOGIC ENGINEERING INPUT - POSTULATED ACCIDENTAL LIQUID RADWASTE SPILL

PLANT NAME: WPPSS 3 & 5  
LICENSING STAGE: CP  
DOCKET NUMBERS: 50-508, 50-509  
REQUESTED COMPLETION DATE: May 9, 1975

Travel times and dilution factors have been estimated by T. Johnson for your use in evaluating radionuclide concentrations resulting from a postulated accidental liquid radwaste spill at the subject plant.

The present design proposed at WPPSS 3 & 5 calls for a groundwater drainage system to permanently lower the groundwater table at safety-related buildings. A passive system of vertical and horizontal drains is used for this purpose. In postulating the accidental spill, it was assumed that the spill would leak through cracks in the floor, and the contents of the ruptured tank would enter the groundwater drainage system of the rate at which the system can accept it. The system discharges into Workman Creek, which flows into the Chehalis River northeast of the plant. This creek is not used as a source of potable water. The nearest water user (irrigation) is along Workman Creek near its confluence with the Chehalis. The following conservative dilution factors and travel time apply to that location.

Dilution Factor, F = 2  
Travel Time, t = 1 hr.

*L. G. Hulman*

L. G. Hulman, Section Leader  
Hydrologic Engineering Section  
Site Analysis Branch  
Division of Technical Review

cc: H. R. Denton  
W. P. Gammill  
J. Panzarella  
T. Johnson  
V. Benaroya  
P. O'Reilly  
P. Stoddart

Distribution:  
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NRR:RDG  
NRR:SAB

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A PDR

*Memo 4*

OFFICE → 7289	TRRSAB <i>NO</i>	TR:SAB <i>NO</i>	TB:SAB <i>NO</i>		
SURNAME →	TJohnson/joc	LGHulman	WPGammill		
DATE →	4/24/75	4/25/75	4/25/75		