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50-263

OCT 11 1973

D. Skovholt, Assistant Director for Operating Reactors, L

OFF-GAS SYSTEM ACCIDENT ASSESSMENT REVISION FOR MONTICELLO TAR-590
(MEMO #2)

The off-gas assessment accident performed by the Accident Analysis Branch (AAB) for the Monticello Plant dated September 11, 1973, has been revised to account for changes in two parameters used in the calculation. The condenser leak rate has been revised from 28 SCFM to 20 SCFM and the delay time to tank has been revised from 30 minutes (.5 hours) to 330 minutes (5.5 hours). These changes were transmitted to the AAB by Operating Reactors (OR) and are reflected in Table 1. All other assumptions remain unchanged. Table 2 provides the revised calculated doses.

Operating Reactors has indicated that the hold-up tanks at Monticello are designed to seismic category standards. If the tanks contain suitable isolation characteristics such that a failure of the off-gas system will not result in total loss of the contents of the hold-up tanks then the off-gas release rate should be set as a function of the dose contributions from the steam jet air ejector (SJAE) and the delay line. If isolation of the hold-up tanks cannot be shown, then the off-gas release rate should be set as a function of the dose contribution from the SJAE, the delay line and the hold-up tanks. The release rate for isolated and non-isolated hold-up tanks is listed in Table 2. The allowable release rates may be adjusted if safety grade automatic isolation of the SJAE is provided.

This work was performed by Joel E. Kohler of the Accident Analysis Branch.

Original signed by
H. R. Denton

Harold R. Denton, Assistant Director
for Site Safety
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Enclosure:
Table 1
Table 2

cc:	w/o encl.		w/encl.		
OFFICE ▶	A. Giambusso	L:AAB	S. Banauer	D. Ziemann	R:AAB
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DATE ▶		9/25/73			

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TABLE 1
OFF-GAS ACCIDENT REVISED ASSUMPTIONS

		<u>Revised</u>
Power Level (MWt)	1630	
Number of Units Using Common Delay Line	1	
Condenser Leak Rate (SCFM)	28	20
Number of Hold-Up Tanks	5	
Hold-Up Time per Tank (hrs.)	12	
Delay Time to Tank (min.)	30 (.5 hrs.)	330 (5.5 hrs.)
Noble Gas Release Rate (after 30 minute delay) (uCi/sec)	350,000	
Iodine Release Rate (uCi/sec)	.5	
Safety Guide 3 Meteorology (sec/m ³)	2.0×10^{-3}	
Minimum Site Boundary (meters)	500	
Accident Duration (hrs.)	2	
Isolation Time for Steam Jet Air Ejector (hrs.)	1	

TABLE 2TWO HOUR SITE BOUNDARY DOSE (50 meters)

	<u>Whole Body Dose</u>	<u>Revised Whole Body Dose</u>
Steam Jet Air Ejector	3.10	3.10
Delay Line	.569	2.33
Tank 1	1.92	.819
Tank 2	.418	.302
Tank 3	.214	.176
Tank 4	.142	.126
Tank 5	.111	.102
<u>TOTAL</u>	<u>6.47</u>	<u>6.96</u>
Release Rate (seismic 1, isolating hold-up tanks)		320,000 uCi/sec
Release Rate (seismic 1, non-isolating hold-up tanks)		250,000 uCi/sec