

1998  
Crank

change to 2000 leak of VB 2  
OUT OF SCOPE

Release

**10CFR50.75(g) for Circulating Water Vacuum Breaker Valve  
(OCW060) Leak  
Revision 0**

**I. Summary**

Problem identification form #A1998-04324 detail's the 1998 station response to the OCW060 vacuum breaker leak. No evidence could be found that any follow-up radiological sampling had been performed or reporting requirements met. In April, 2001, soil sampling in the vicinity of the OCW060 vacuum breaker was performed to assess the radiological consequences of the leak. Contamination was found in two locations adjacent to the vacuum breaker valve pit. Co-60 and Sb-125 were identified in the samples.

**II. Event Description and Location**

During the root cause investigation for the circulating water vacuum breaker valve OCW136 leak, it was determined that in 1998, a leak from vacuum breaker OCW060 had occurred with inadequate station response. It is known that the vacuum breaker leak did indeed fill Smiley Road ditch. Based on that information, it is estimated that the leak occurred for a period of at least 7 days. Smiley Ditch is located approximately 1/4- 1/2 mile northwest of the vacuum breaker vault. The vault is located approximately 100 meters east of the OCW136 vault (refer to the 50.75(g) for the OCW136 for site photos), and is on site property but outside of the protected area.

**III. Radiological Information**

Attachment I includes results of the soil sampling performed in the vicinity of the OCW060 vacuum breaker vault. The sampling grids were 10 meters x 10 meters, sampling depth was 6 inches. Although Cs-137 was identified in numerous isotopics, it was disregarded for purposes of the assessment. Even though Cs-137 was an isotope in the radiological source term for this leak, the levels are consistent with those found during the evaluation of the 2001, OCW136 leak, which did not contain Cs-137 in the radiological source term.

**IV. Dose Analysis**

Pending.

**V. References**

1. Condition Report A2000-04389
2. Action Request 38237, Root Cause for the OCW136 vacuum breaker leak

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# Sampling Grid

	91	58	59	60	61	62	63	64
	90	57	32	33	34	35	36	17
	89	56	31	14	15	16	5	18
	88	55	30	13	4	1	6	19
	87	54	29	12	3	2	7	20
	86	53	28	11	10	9	8	21
	85	52	27	26	25	24	23	22
Grid Sampled: Clean								
Grid Sampled: Contaminated								
Contam. Levels:								
Grid 1: Co-60 2.49E-07 uCi/g			Grid 4:	Co-60 1.12E-06 uCi/g				
Sb-125 2.60E-07 uCi/g				Sb-125 2.66E-07 uCi/g				

*Close to  
V D-3*

Vacuum breaker leak of 1998 Soil Sample Locations (Sampled 4-26-01)

Sample ID	GPS Location ID	Latitude	Longitude	Elevation
Grid 1	1	N 41° 14.683'	W088° 12.640'	605'
Grid 2	2	N 41° 14.677'	W088° 12.632'	593'
Grid 3	3	N 41° 14.679'	W088° 12.643'	578'
Grid 4	4	N 41° 14.687'	W088° 12.643'	570'
Grid 5	5	N 41° 14.691'	W088° 12.630'	582'
Grid 6	6	N 41° 14.684'	W088° 12.630'	588'
Grid 7	7	N 41° 14.674'	W088° 12.628'	596'
Grid 8	8	N 41° 14.674'	W088° 12.630'	589'
Grid 9	9	N 41° 14.672'	W088° 12.638'	596'
Grid 10	10	N 41° 14.672'	W088° 12.646'	620'
Grid 11	11	N 41° 14.669'	W088° 12.656'	603'
Grid 12	12	N 41° 14.678'	W088° 12.647'	606'
Grid 13	13	N 41° 14.686'	W088° 12.649'	602'
Grid 14	14	N 41° 14.683'	W088° 12.661'	600'
Grid 15	15	N 41° 14.691'	W088° 12.6353'	555'
Grid 16	16	N 41° 14.684'	W088° 12.626'	580'
Grid 19	17	N 41° 14.691'	W088° 12.638'	574'
Grid 20	18	N 41° 14.682'	W088° 12.625'	574'
Grid 21	19	N 41° 14.672'	W088° 12.623'	587'
Grid 25	20	N 41° 14.665'	W088° 12.646'	596'
Grid 26	21	N 41° 14.670'	W088° 12.652'	593'
Grid 27	22	N 41° 14.668'	W088° 12.662'	604'
Grid 28	23	N 41° 14.668'	W088° 12.662'	601'
Grid 29	24	N 41° 14.680'	W088° 12.664'	594'