V. C. SUMMER NUCLEAR STATION

NRC ADMINISTRATIVE TOPICS QUESTIONS

CALCULATE EXPOSURE STAY TIMES

Revision 0

A/7

QUESTION 1

The plant has experienced a Loss of Coolant Accident with indications of failed fuel. The OEC Coordinator is directed to start the BRAVO hydrogen recombiner. Three operators are available to perform this operation. Operator 1 has an accumulated total dose for the year of 400 mrem, operator 2 has an accumulated total dose for the year of 800 mrem, and operator 3 has an accumulated total dose for the year of 275 mrem. Transit time to the hydrogen recombiner is 12 minutes. General area dose rates along the transit route are 200 mr/hr with dose rates at the recombiner control panel indicating 450 mr/hr. Calculate the available stay time for each of the three operators at the recombiner control panel based on VCS administrative exposure control limits.

RETURN THIS SHEET TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK

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ANSWER 1

Administrative annual dose = 1000 mrem

Transit Dose .... 12/60=0.2hrs x 2 trips x 200mr/hr = 80 mr

Operator 1 stay time = 1000-400=600-80=520/450=1.16 hrs (1hr & 9/10 min)

Operator 2 stay time = 1000-800=200-80=120/450=0.27 hrs (16/17 min)

Operator 3 stay time = 1000-275=725-80=645/450=1.43 hrs (1hr & 25/26 min)

QUESTION 2

Given the attached survey maps, identify any appropriate postings that should be applied to the areas shown.

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Given the attached survey maps, identify any appropriate postings that should be applied to the areas shown.

ANSWER 2

Entire area of room 12-26 should be posted as HIGH RADIATION AREA

Entire area of room 12-14 should be posted as RADIATION AREA

Area inside floor dam of evaporator in room 12-14 should be posted as a CONTAMINATED AREA
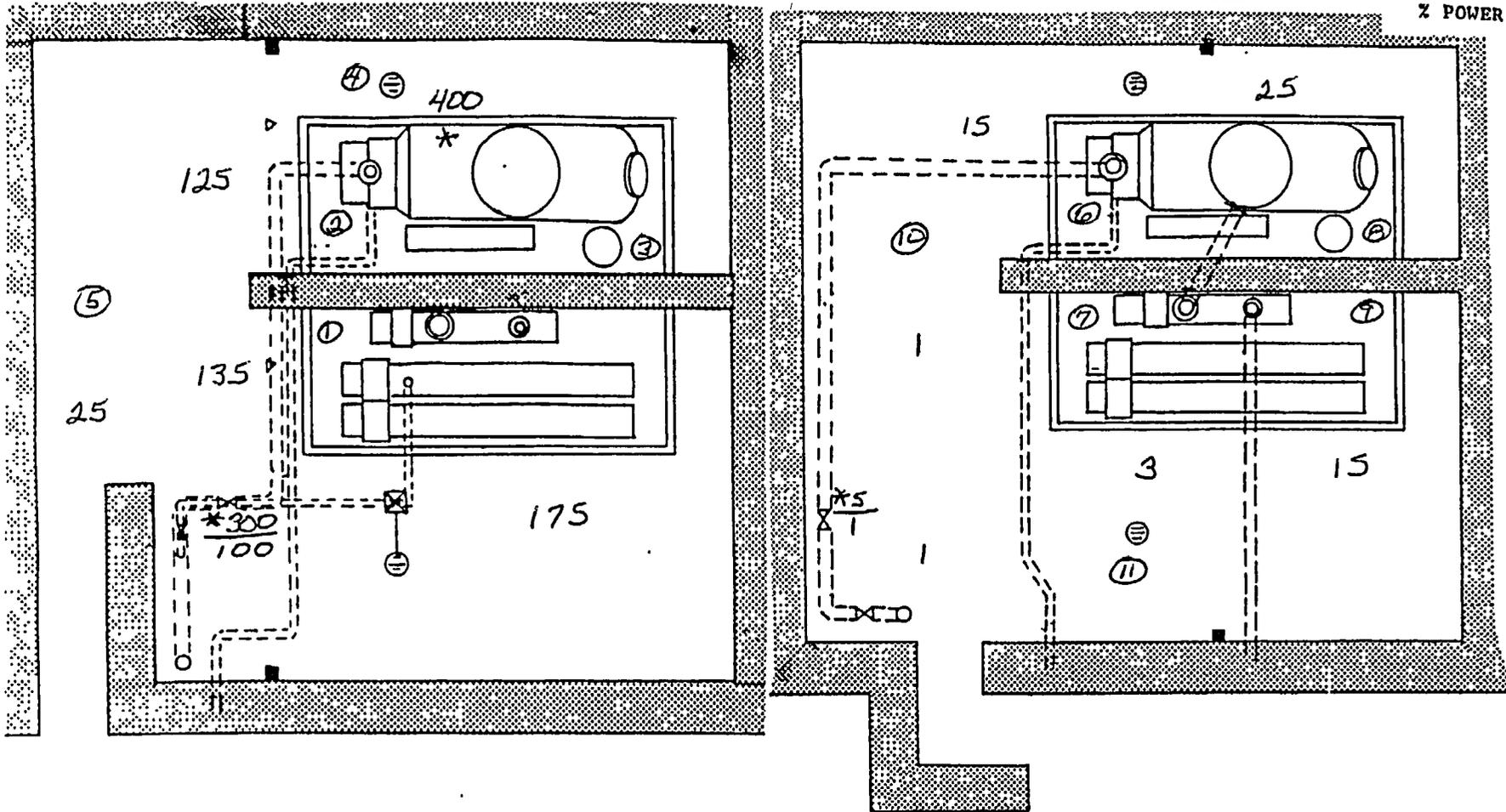
AB 12-26 MISCELLANEOUS WASTE EVAPORATOR

AB 12-14 RECYCLE EVAPORATOR

400

125

135

25

*300
100

175

25

15

1

1

*5
1

3

15

CONTAMINATION IN DPM/100 CM^2:									COUNTER:	SER.#	INST. TYPE:	SER.#
1	300	8	1000	15		22		29	COUNTER:	SER.#	INST. TYPE:	SER.#
2	200	9	900	16		23		30	COMMENTS:		SURVEYED BY:	
3	500	10	<100	17		24		31			TIME: DATE:	
4	<100	11	<100	18		25		32			REVIEWED BY:	
5	<100	12		19		26		33			TIME: DATE:	
6	1200	13		20		27		34				
7	1500	14		21		28		35				

* DENOTES CONTACT READINGS, ALL OTHERS IN mR/hr UNLESS OTHERWISE NOTED (Beta/Gamma)