Tritium Laboratory
May 25, 2007

UNIVERSITY OF Miami
THE ROSENSTIEL SCHOOL

SWAB REPORT #460

SWAB DATE: 15 May 2007

USCG HEALY
Radioisotope Van

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Distribution:
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COMMENTS TO SWAB REPORTS 10 October 2001

Technical data below applies unless otherwise indicated.

Typical instrument background for tritium and C14: 7 and 15 cpm, respectively.
All data are means of at least three runs and are expressed in dpm/m^2 extracted; machine and wash solution blanks have been substracted.
Typical error: .10% or .50 dpm/m^2, whichever is larger, for both tritium and C14.

Criteria for SWAB Results

Category	Recommendations Tritium (dpm/m^2)	C14 (dpm/m^2)	
A	< 500	< 500	No action
B *	500-10,000	500-10,000	Needs cleaning before natural tracer work. No health hazard. Does not apply to Radiation Vans
C **	10,000-100,000	10,000-50,000	Must be cleaned before any use. Includes Radiation Vans
D ***	>100,000	>50,000	May be a health hazard. Notify local Radiation Safety Official

Note: C14 and S35 have peak energies of 156 and 167 KeV, respectively; thus S35 will be registered as C14 by our counting techniques.

Recommended Cleaning Procedure
Wearing ordinary household rubber gloves:

Tritium: Wash and scrub with radioactive cleanup detergent such as COUNT-OFF (50 ml or 1/4 cup COUNT-OFF to 1 gallon of water), using sponges to distribute solution and reabsorb it.

C14: Wash with 1% sulfuric or 2% hydrochloric (muriatic) acid with good ventilation (will dissolve carbonates, releasing $^{14}CO_2$). Follow up with wash as if for tritium.

Disposal of Cleaning Materials (gloves, sponges, etc.)

Categories A and B: Dispose as ordinary garbage.
C and D: Dispose in radiation waste system.

Note: In case Category C or D is encountered, we try to notify the institution promptly by telephone.

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LOCATION : Dutch Harbor, Alaska
TECHNICIAN: Cecilia Roig
VESSEL/LAB: USCG Healy

DATE : May 15, 2007
STATUS: See **Comments**

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED 3H dpm/m2	14C dpm/m2
1	Machine Blank	-	-
2	Initial bucket blank	0	0
	Main Lab (See Figure 1)		
3	Deck stbd. of drinking fountain	0	0
4	Deck in front of aft sink	0	0
5	Deck in front of door to water closet	0	0
6	Staging area - deck in front of fume hood	0	0
7	Inside fume hood	0	0
8	Deck inside aft staging area	16	0
9	Deck inside entrance to Walk-In Science Ref.	0	0
10	Stainless steel benchtop opposite entrance in Inside Walk-In Science Ref.	0	0
11	Deck in front of Arctic gear locker	0	0
12	Deck center of Arctic gear locker	0	0
13	Deck outside Haz Mat locker	0	0
14	Deck in port passageway fwd. of Main Lab	0	0
15	Deck in front of fwd. sink	0	0
16	Deck at bottom of stair to 01 Deck	1	0
17	Top of So-Low freezer	0	0
18	Ice inside So-Low freezer	19	0
19	Deck between two center benches	5	0
20	Deck stbd. of benches	0	0
21	Deck of lower level Staging Area	0	0
22	Deck at top of stairs	0	0
23	Deck of Dry Assembly Area	0	0
	Wet Lab (See Figure 1)		
24	Inside fume hood	0	0
25	Deck center of lab	0	0
26	Deck between Wet Lab and Bio Lab	2	0
27	Deck inside door to passageway	0	0
28	Aft sink area	0	0
	Bio/Chem Lab (See Figure 1)		
29	Stainless steel benchtop inside Climate Control Chamber #2	0	0
30	Benchtop left of sink inside Climate Control Chamber #1	0	0
31	Deck between Climate Control chambers	25	0
32	Deck in front of sink	0	0
33	Deck in center of lab	0	0
34	Deck below fume hood	0	0
35	Interim bucket blank	0	0

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SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED 3H dpm/m2	14C dpm/m2
Radioisotope Van (See Figure 2)			
36	Inside fume hood	221	0
37	Top of LSC	103	0
38	Deck inside aft door	343	0
39	Deck inside fwd. door	73	0
40	Inside refrigerator bottom	641*	0
41	Inside freezer	57	0
42	Deck center of van	215	0
43	Sink area	379	0
44	Final bucket blank	0	0

Comments

The ship is clean of any radioisotope spills. Only a small amount of tritium detected inside van's refrigerator, no action is need at this time.

Figure 1.
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USCG *Healy*

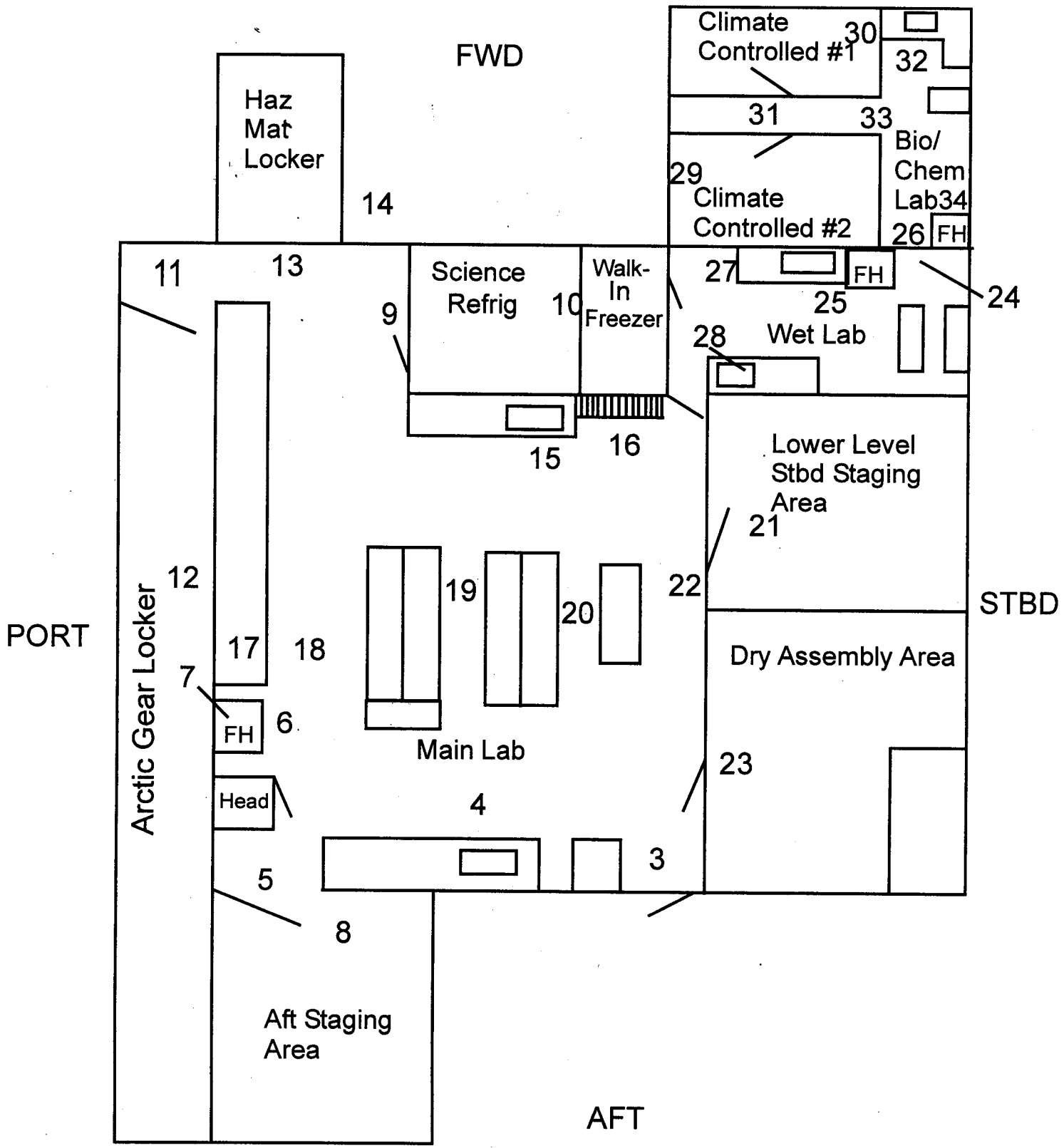

Figure #2
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RADIOISOTOPE VAN