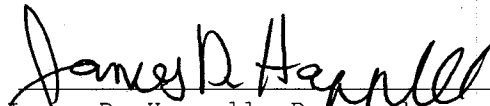




Tritium Laboratory  
January 17, 2003

SWAB REPORT #330  
SWAB DATE: 8 January 2003  
*USCG Healy*, Radioisotope Van

  
James D. Happell, Research  
Associate Professor

Distribution:  
SWAB COMMITTEE  
Dave Forcucci

Rosenstiel School of Marine and Atmospheric Science  
Tritium Laboratory  
4600 Rickenbacker Causeway  
Miami, FL 33149-1098  
Phone: (305) 361-4100  
Fax: (305) 361-4112  
email: tritium@rsmas.miami.edu

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<sup>2</sup> extracted; machine and wash solution blanks have been subtracted.

Typical error: ±10% or ±50 dpm/m<sup>2</sup>, whichever is larger, for both tritium and C14.

Criteria for SWAB Results

Category	Tritium (dpm/m <sup>2</sup> )	C14 (dpm/m <sup>2</sup> )	Recommendations
A	< 500	< 500	No action.
B *	500-10,000	500-10,000	Needs cleaning before <u>natural tracer</u> 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 <sup>14</sup>CO<sub>2</sub>). 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.

REPORT FOR SWAB # 330

LOCATION : Seattle, WA  
 TECHNICIAN: Cecilia Roig  
 VESSEL/LAB: USCG Healy, Radioisotope Van

DATE : 8 January 2003  
 STATUS: All areas onboard ship tested free of radioisotope contamination. Rad Van has moderate to high tritium contamination. See COMMENTS.

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		<sup>3</sup> H dpm/m <sup>2</sup>	<sup>14</sup> C dpm/m <sup>2</sup>
1	Machine Blank	-	-
2	Initial bucket blank	0	0
<u>Main Lab (See Figure 1)</u>			
3	Deck in front of drinking fountain	0	0
4	Deck in front of Head	0	0
5	Inside fume hood	0	0
6	Deck in front of fume hood	0	0
7	Deck in front of science refrigerator	0	0
8	Deck in front of Arctic gear Storage	0	0
9	Deck in front of fwd sink	0	0
10	Deck between two center benches	0	0
11	Deck in front of aft sink	0	0
12	Deck in front of door to CTD staging area	20	0
13	Benchtop on steel cabinets	0	0
14	Benchtop port of aft sink	49	0
15	Deck at bottom of stairs to 01 Deck	0	0
<u>Miscellaneous Areas (See Figure 1)</u>			
16	Deck of lower level stbd staging area	0	0
17	Deck inside Dry Assembly Area	0	0
18	Deck inside Science Refrigerator	0	0
19	Deck inside Aft Staging Area	0	0
20	Deck in port passageway fwd of Main Lab	0	0
<u>Galley/Mess (No Figure)</u>			
21	Deck in front of port door	0	0
22	Deck in front of port tables	0	0
23	Deck in front of drink area	0	0
<u>Wet Lab(See Figure 1)</u>			
24	Inside fume hood	0	0
25	Deck in front of fwd sink	0	0
<u>Bio/Chem Lab (See Figure 1)</u>			
26	Inside fume hood	0	0
27	Deck in front of sink	0	0
28	Deck in front of door to Climate Control Chambers	0	0
29	Bench next to sink in CCC#1	0	0
30	Bench next to sink in CCC#2	0	0

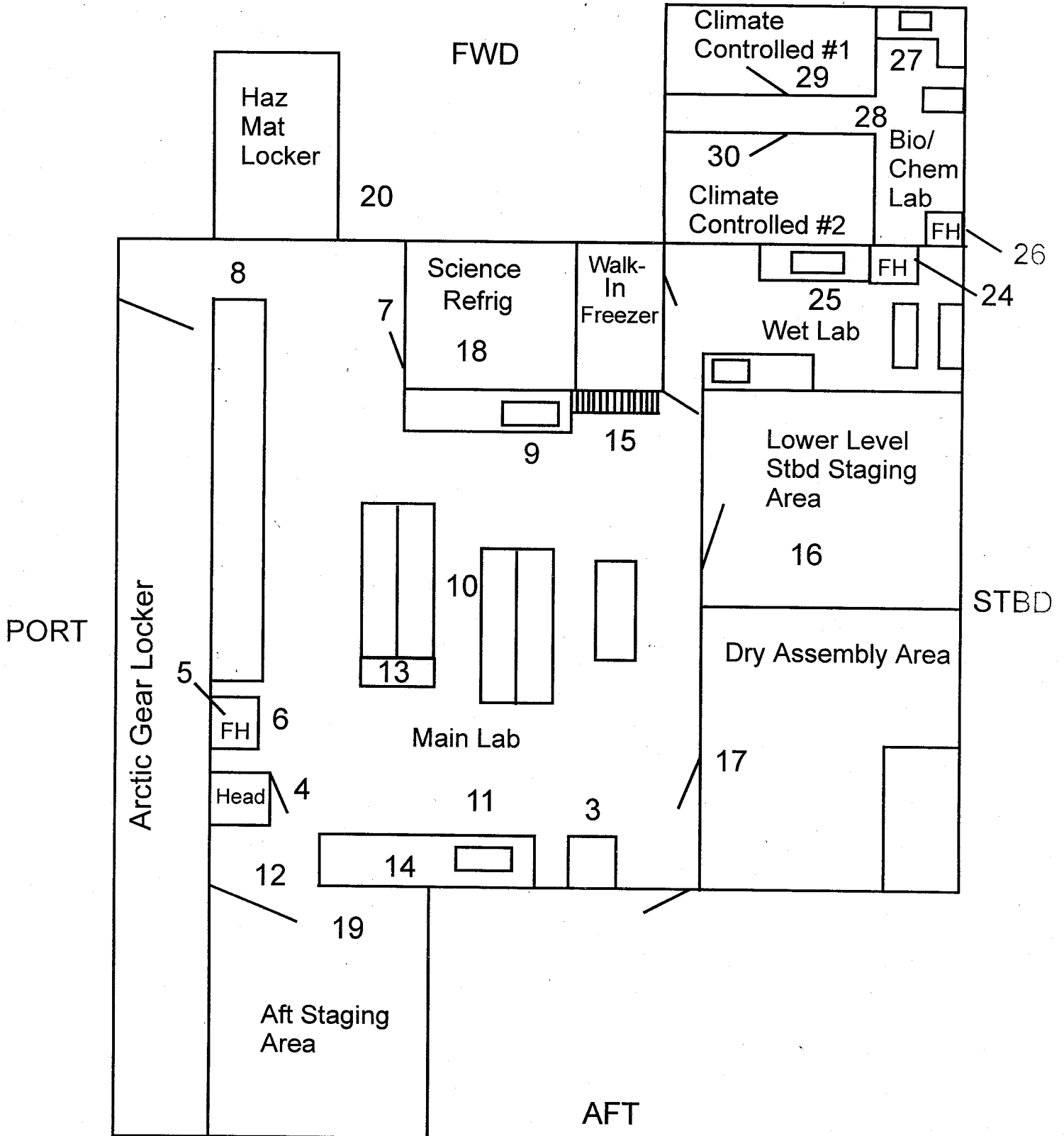
SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		<sup>3</sup> H dpm/m <sup>2</sup>	<sup>14</sup> C dpm/m <sup>2</sup>
<u>01 Deck (See Figure 2)</u>			
31	Deck inside Photo lab	0	0
32	Deck inside Computer lab	0	0
33	Deck inside Science Aft Conn Area	0	0
34	Forecastle: Outside deck in front of port (no fig)	0	0
35	Forecastle: Inside deck of stbd entrance	0	0
<u>Radioisotope Van (See Figure 3)</u>			
36	Benchtop by fume hood and sink	21,281**	25
37	Deck adjacent to benchtop	2,510*	0
38	Benchtop opposite of fume hood	315	0
39	Benchtop adjacent to fume hood	199,548***	163
40	Deck inside door of van	4,244*	7
41	Final bucket blank	0	0

**COMMENTS**

The radioisotope van has some high tritium contamination inside the fume hood and adjacent benchtop. These areas need to be decontaminated before ANY use. The entire van should be cleaned.

# USCG Healy

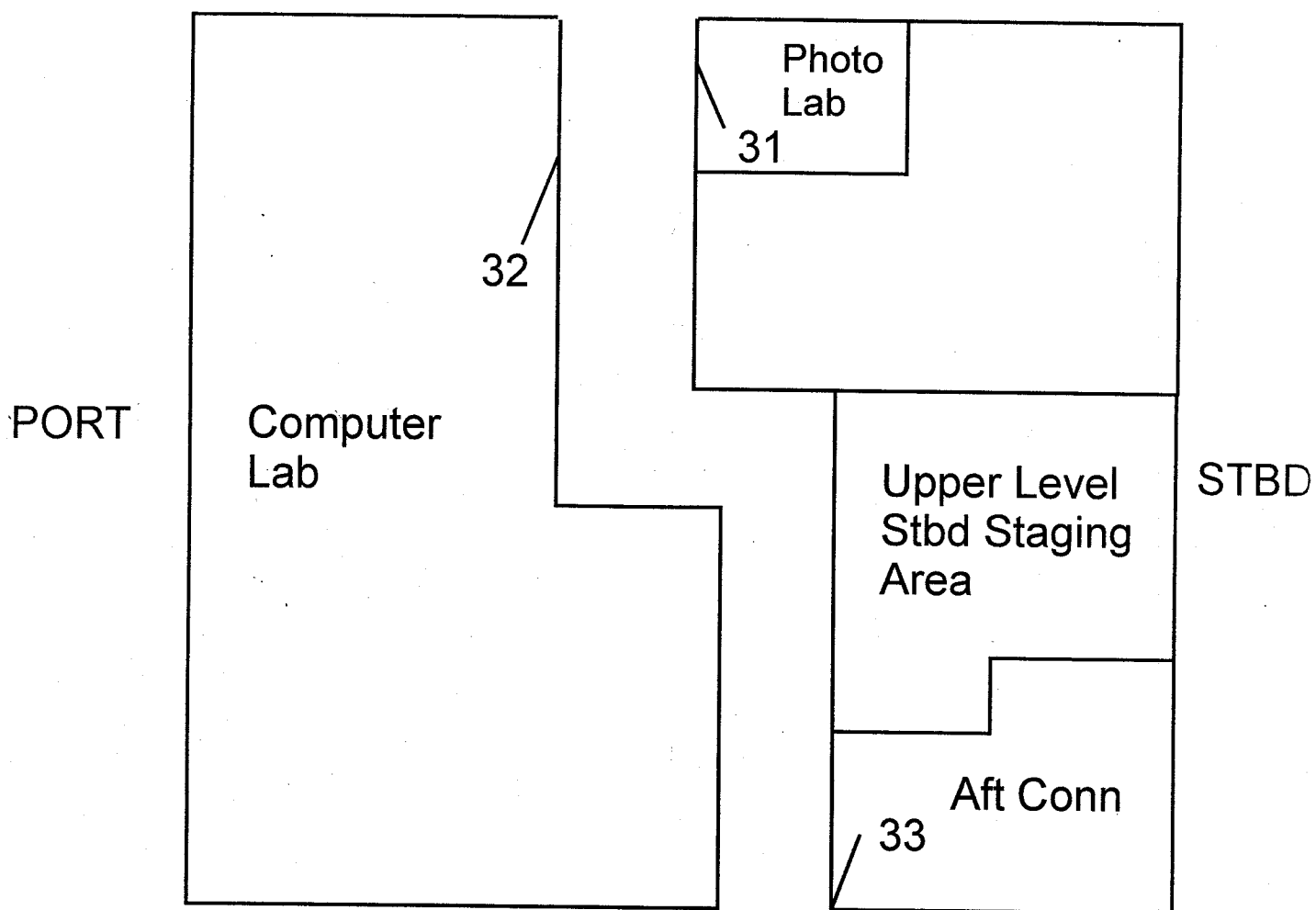
Figure 1.  
SWAB #330  
8 January 2003



# USCG Healy

## 01 DECK

FWD



AFT

USCG HEALY  
RADIOISOTOPE VAN

