UNIVERSITY OF MIAMI
ROSENSTIEL
SCHOOL of MARINE &
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Tritium Laboratory
11 August 2025

SWAB REPORT # 1124

SWAB DATE: 4 August 2025

R/V Sally Ride & Radioisotope Van 625.1.01-2

James Happell Digitally signed by James Happell
Date: 2025.08.11 22:19:21 -04'00'

Dr. James D. Happell
Associate Research Professor

Distribution:
SWAB Committee
Matt Durham
Gary Lain

COMMENTS TO SWAB REPORTS 12 May 2014

Typical LSC instrument background values for ^{3}H and ^{14}C are 2 and 5 cpm, respectively. The LSC is a Tricarb 2910 TR with the low level counting option.

All samples are counted for 60 minutes, the instrument background is subtracted, and activities are reported in dpm/m^2. Bucket blank activities are not subtracted. Counting errors (2 standard deviations) are also reported in dpm/m^2. An error larger than the activity indicates that the activity is not significantly different from zero.

Criteria for SWAB Results

Category	^{3}H (dpm/m^2)	^{14}C (dpm m^2)	Recommendations
A	<500	<50	No action
B*	500-10,000	50-10,000	Needs cleaning before any natural tracer work. Decks in radiation vans with activities above 1000 dpm/m^2 should be cleaned.
C**	10,000-100,000	10,000-50,000	Must be cleaned before any use.
D***	>100,000	>50,000	May be a health hazard. Notify local radiation safety official.

Note: ^{14}C and ^{35}S have peak energies of 156 and 167 KeV, respectively; thus ^{35}S will be registered as ^{14}C by our counting techniques. Categories A, B and C are not a health hazard.

Recommended Cleaning Proceedure

Wearing ordinary household rubber gloves:

^{3}H: Wash and scrub with radioactive cleanup detergent such as COUNT-OFF (50 ml COUNT-OFF to 4 liters of water), using sponges to distribute solution and reabsorb it.

^{14}C: 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 ^{3}H.

Disposal of Cleaning Materials (gloves, sponges, etc)

Categories A & B dispose as ordinary garbage, C & D contact your institution's radiation safety office.

Note: If category C or D is encountered, we try to notify the insitution promptly by phone or email.

REPORT FOR SWAB # 1124

LOCATION: San Diego, CA
VESSEL: *R/V Sally Ride*

DATE: 4 August 2025
TECHNICIAN: Yudy Mendoza

Sample #	Sample Identification	^{3}H dpm/m^{2} activity	±	error	^{14}C dpm/m^{2} activity	±	error
1	1st Vial Bkgnd	0	±	0	0	±	0
2	Initial bucket blank C.O. # 1	-2	±	12	-14	±	8
	Wet Lab (Figure 1)						
3	Inside fume hood	12	±	50	-15	±	9
4	Sink area	-16	±	81	-16	±	10
5	Starboard benchtop	2	±	9	-7	±	4
6	Wood benchtop opposite of fume hood	2	±	3	26	±	16
7	Port benchtop aft of sink	19	±	42	-20	±	25
8	Deck inside aft entrance	-12	±	62	-14	±	17
9	Deck inside port entrance	-7	±	35	-13	±	16
10	Deck in front of forward entrance	7	±	35	-17	±	21
11	Deck outside Scientific Freezer MD-1	-38	±	104	-3	±	3
12	Starboard aft benchtop	-9	±	26	-5	±	159
13	Deck in front of fume hood	11	±	29	-6	±	7
	Main Lab (Figure 2)						
14	Inside port fume hood	-4	±	28	-4	±	5
15	Inside freezer - bottom section	0	±	0	-9	±	12
16	Deck in front of freezer	-19	±	133	-12	±	15
17	Aft section of port benchtop	-3	±	22	-11	±	14
18	Benchtop across from starboard fume hood	17	±	35	-14	±	17
19	Deck inside aft entrance	15	±	51	-18	±	23
20	Forward port and center benchtop	17	±	38	-15	±	19
21	Aft port and center benchtop	-12	±	87	-24	±	29
22	Deck inside forward entrance	-5	±	33	-8	±	10
23	Benchtop opposite to starboard sink	-15	±	108	-7	±	9
24	Aft center benchtop	8	±	42	-9	±	12
25	Benchtop opposite to MilliQ spares cabinet	22	±	29	-10	±	13
26	Starboard sink area	-4	±	30	-30	±	37
27	Inside starboard fume hood	5	±	37	-14	±	18

Sample #	Sample Identification	^{3}H dpm/m^{2} activity		error	^{14}C dpm/m^{2} activity		error
28	Deck in front of fume hood	-3	±	19	-10	±	13
29	Deck in front of starboard sink	-3	±	20	-4	±	5
	Main Deck (Figure 3)						
30	Deck outside starboard entrance to Wet Lab	4	±	29	-10	±	13
31	Deck outside Mess entrance	6	±	194	-11	±	14
32	Intermediate bucket blank	2	±	11	-6	±	7
	Radioisotope Van R4(Figure 4)						
33	Benchtop across from sink	12	±	48	-15	±	19
34	Benchtop adjacent to sink	26	±	30	-12	±	15
35	Benchtop adjacent to fume hood	14	±	40	-15	±	18
36	Inside fume hood	**63**	**±**	**35**	-31	±	38
37	Deck in front of fume hood	**344**	±	53	8	±	9
38	Benchtop under LSC	6	±	39	-6	±	7
39	Inside incubator next to sink	**119**	**±**	**35**	7	±	8
40	Inside incubator across from LSC	22	±	36	-18	±	22
41	Deck in center of van below LSC	**30**	**±**	**26**	-2	±	3
42	Sink area	18	±	25	-3	±	3
43	Inside door entrance	-17	±	0	-11	±	14
44	Final bucket blank	19	±	46	-22	±	27

Comments

Please note that the error reported for each isotope is the two-standard deviation counting error. Reports may now contain values less than zero. Decay counting background samples will be distributed about the background vial, which means that negative values are possible. In the past we rounded the negative values to zero. Values are only significantly above background when they are positive and larger than the error. Please note that we are now using a Quantulus 6220 LSC which counts very near natural background. While the cleanup standards have not changed; all values above background will now be in bold. All areas tested on the ship and the Rad Van were free from isotope contamination requiring cleaning.

Figure 1
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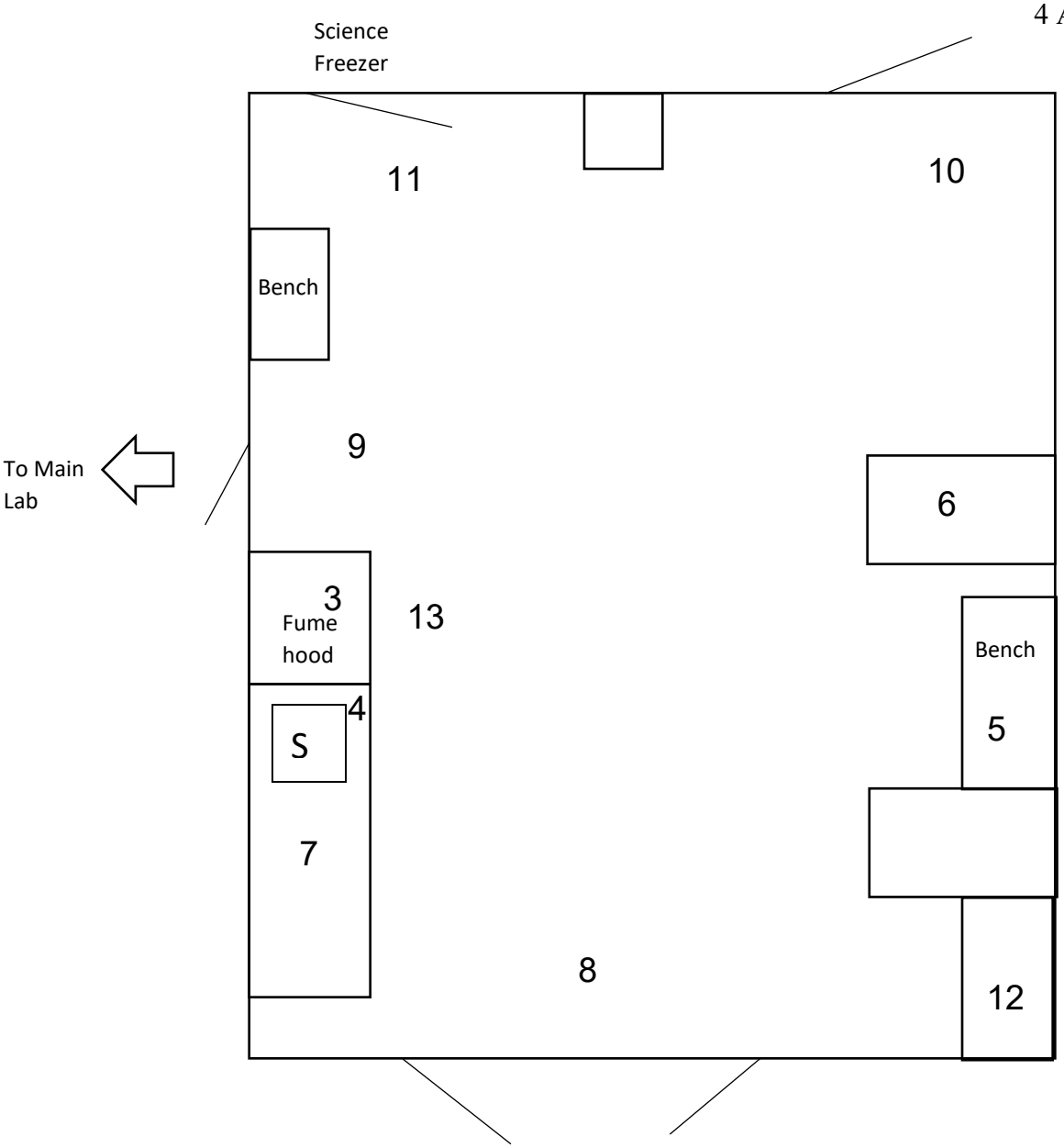

R/V Sally Ride

WET LAB

Figure 2
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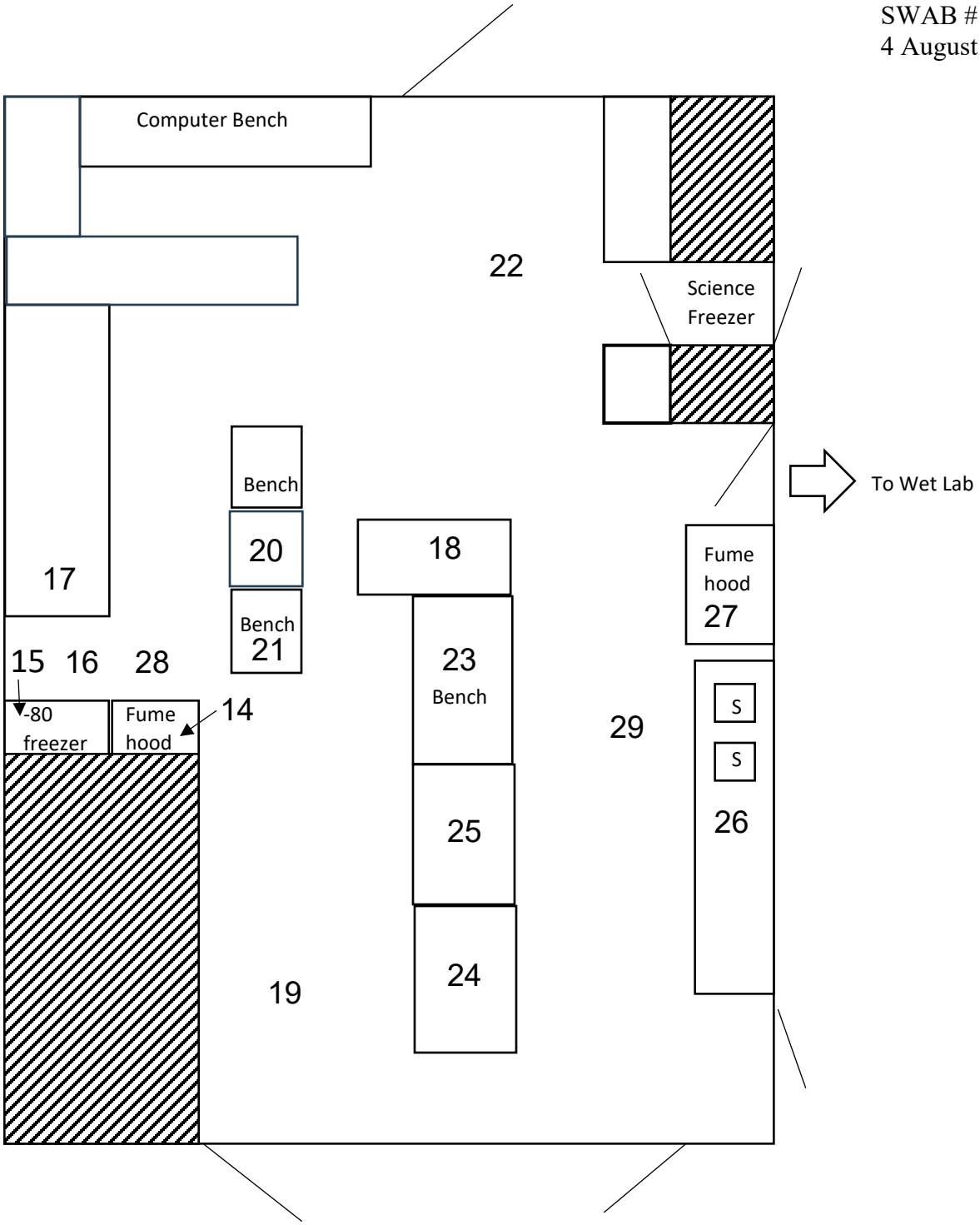
4 August 2025



R/V Sally Ride

MAIN LAB

Figure 3
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REMOVABLE PANAMA SINGLE CHOCK P/S
6"R DECK-SHELL CONNECTION
REMOVABLE BITT P/S
REMOVABLE WEATHER TIGHT VAN VESTIBULE (FOR 1 OR 2 VANS)
15"x23" FDQAWT ESC HATCH
GATE
UNOLS/ISO VAN SPACE 8 X 20
UNOLS/ISO VAN SPACE 8 X 20
LKR MD-4 (ELEC)
UPTAKE
COMPUTER LAB
REMOVABLE PANAMA DOUBLE CHOCK
127"x89" FDWT HATCH
MAIN LAB
ESCAPE ROUTE ONLY
GALLEY
MESS (24 SEATS)
BOSUN'S STORES
DRY STORES MD-1
AFT WORKING DECK
XDCR TUBE BOLTED HATCH
FS 10
MMR VENT
MMR VENT
SCIENTIFIC REFR/FRZR MD-2
LKR MD-3 (MECH/ELEC)
LKR MD-2 (CG)
LOUNGE
FS 8
FS 11
UP
DN
RACE
SCULLERY
UP
DN
LIFT
CL SHIP
REMOVABLE LIFELINES & STANCHIONS
22"ø FDQAWT LINE. LKR HATCH
STAGING BAY
WET LAB
SCIENTIFIC REFR/FRZR MD-1
REMOVABLE BITTS
SHORE POWER RECEPTACLES 2X
31
LAUNDRY
FS 9
30
122"x92" FDWT HATCH
STBD WORKING DECK
ET SHOP
HOSPITAL
T/S
SR MD-1 (ADA DBL)
ADA T/S
HEAD MD-1
LKR MD-1 (LINEN)
85"x92" FDWT HATCH
LKR MD-3 (DK GR)
60"x60" FDQAWT HATCH
REMOVABLE BITT P/S
REMOVABLE PANAMA SINGLE CHOCK P/S
6"R AT DECK-SHELL CONNECTION
GATE
HEAD MD-2
REMOVABLE BULWARKS
116"x77" BERP
80'

MAIN DECK

(1) DOUBLE STATEROOM

PLOT DATE: Thursday November 14 2013
PLOT TIME: 11:29:35 am
PLOT ID:
FILE DIR: 65311_C:\USERS\DC\APPDATA\LOCAL\TEMP\ACPUBLISH_5116\
FILE NAME: DCI 027-04 R6010 REV-D.DWG

HALF SIZE PRINT	DESIGNER: GUIDO PERLA & ASSOCIATES, Inc.	TITLE: GENERAL ARRANGEMENT DRAWINGS	
	SHIPBUILDER: DAKOTA CREEK INDUSTRIES, Inc.	D	DWG No. 65411-801-01 REV. D
	NAVSEA DWG No. 8565942	SCALE 3/32" = 1'-0"	SHEET: 4 OF 7

Figure 4
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UNOLS Rad Van #625.1.01-2