

Tritium Laboratory
12 August 2011

SWAB REPORT # 591

SWAB DATE: 2 August 2011

R/V Atlantis and Radioisotope Van

James D. Happell

Distribution:
SWAB Committee
David Fissichella

REPORT FOR SWAB # 591

LOCATION: Astoria, OR

DATE: 2 August 2011

VESSEL: *R/V Atlantis*

TECHNICIAN: Cecilia Roig

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
1	1st Vial Bkgnd	0	± 0	0	± 0
2	Initial bucket blank C.O. #1	0	± 0	7	± 37
	<u>Main Lab (Figure 1)</u>				
3	Inside Revco #1 freezer	0	± 0	0	± 0
4	Inside Revco #2 freezer	5	± 0	0	± 0
5	Inside freezer top	16	± 51	0	± 0
6	Inside refrigerator bottom	0	± 0	0	± 0
7	Deck in front of freezers	198	± 63	12	± 19
8	Port sink area	0	± 0	30	± 37
9	Deck inside forward port entrance	2	± 0	0	± 0
10	Deck inside aft port entrance	36	± 67	0	± 0
11	Center bench top across stbd. sink	19	± 48	2	± 22
12	Starboard sink area	2	± 109	0	± 0
13	Inside fume hood	0	± 0	4	± 38
14	Deck in front of fume hood	11	± 45	2	± 27
	<u>Bio/Analytical Lab (Figure 1)</u>				
15	Inside Cospolich top	0	± 0	5	± 39
16	Inside Cospolich bottom	1	± 0	0	± 0
17	Forward sink area	17	± 51	0	± 0
18	Deck in front of Cospolich	8	± 49	1	± 20
19	Inside fume hood	0	± 0	10	± 36
20	Aft sink area	9	± 346	0	± 0
21	Deck in front of hood	19	± 38	15	± 34
22	Deck inside starboard door	0	± 0	1	± 0
	<u>Misc. Areas (Figure 2)</u>				
23	Bench top inside forward walk-in cooler	0	± 0	23	± 39
24	Deck inside forward walk-in cooler	32	± 38	22	± 34
25	Final Bucke blank C.O. #1	0	± 0	0	± 0
26	Initial bucket blank C.O. #2	42	± 54	0	± 0
27	Aft bench top of aft walk-in cooler	3	± 14	14	± 35
28	Deck inside aft walk-in cooler	0	± 0	41	± 38
29	Deck center of walk-in vestibule	0	± 0	0	± 0

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
<u>Electronic/Computer Lab (Figure 2)</u>					
30	Deck inside starboard door	0	± 0	0	± 0
31	Deck inside forward door	6	± 24	14	± 35
32	Deck inside dark room	0	± 0	19	± 36
<u>Wet Lab (Figure 3)</u>					
33	Inside fume hood	0	± 0	21	± 36
34	Sink Area	48	± 14	*335	± 46
35	Deck inside aft double doors	0	± 0	17	± 37
<u>Hydro Lab (Figure 3)</u>					
36	Inside Cospolich top	7	± 26	12	± 34
37	Inside Cospolich bottom	0	± 0	2	± 47
38	Deck in fron of Cospolich	21	± 43	7	± 30
39	Inside fume hood	2	± 22	5	± 34
40	Deck inside aft door	0	± 0	9	± 40
41	Port sink area	0	± 0	2	± 40
42	Deck inside stbd. doors	0	± 0	15	± 38
43	Intermediate bucket blank	17	± 52	0	± 0
<u>Rad Van WHOU 2001400 (Figure 4)</u>					
44	Inside hood	0	± 0	*3,877	± 110
45	Bench top across sink	0	± 0	*846	± 60
46	Mid port bench top	23	± 2	*2,648	± 93
47	Bench top above freezer	27	± 7	*505	± 51
48	Deck under escape hatch	0	± 0	*1,989	± 83
49	Inside freezer	0	± 0	*165	± 41
50	Bench top above fridge	0	± 0	*2,727	± 95
51	Sink area	0	± 0	*785	± 59
52	Deck center of van	0	± 0	*9,607	± 169
53	Inside fridge	0	± 0	**25,273	± 270
54	Deck in front of sink	0	± 0	**38,927	± 335
55	Deck inside doors	0	± 0	*9,031	± 164
56	Final bucket blank C.O. #2	8	± 22	21	± 35

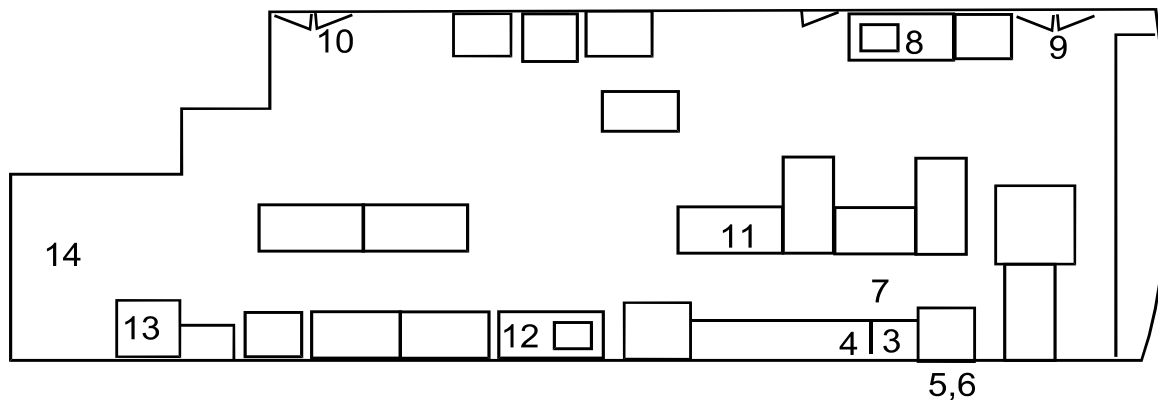
Comments

Please note that the error reported for each isotope is the two-standard deviation counting error. Areas tested on the ship were free of contamination, except the Wet Lab sink area. This area tested positive for ¹⁴C contamination and requires cleaning before any natural tracer work. In

the radioisotope van all samples showed some ^{14}C contamination but only two areas require cleaning. These areas are inside the refrigerator and the deck in front of the sink, however, we recommend cleaning all deck areas to prevent tracking contamination into the ship.

Figure 1
SWAB #591
2 August 2011

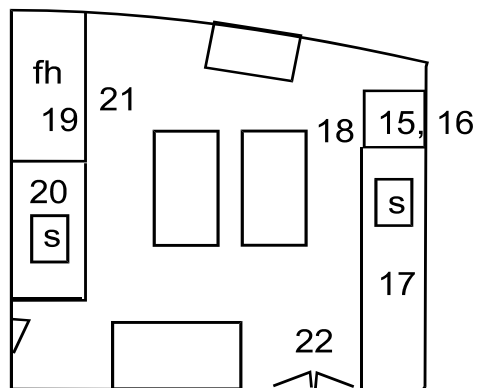
Atlantis Main Lab Port



Aft

Fwd

Biology/Analytical Clean Lab



Stbd

Figure 2
SWAB #591
2 August 2011

R/V ATLANTIS

F

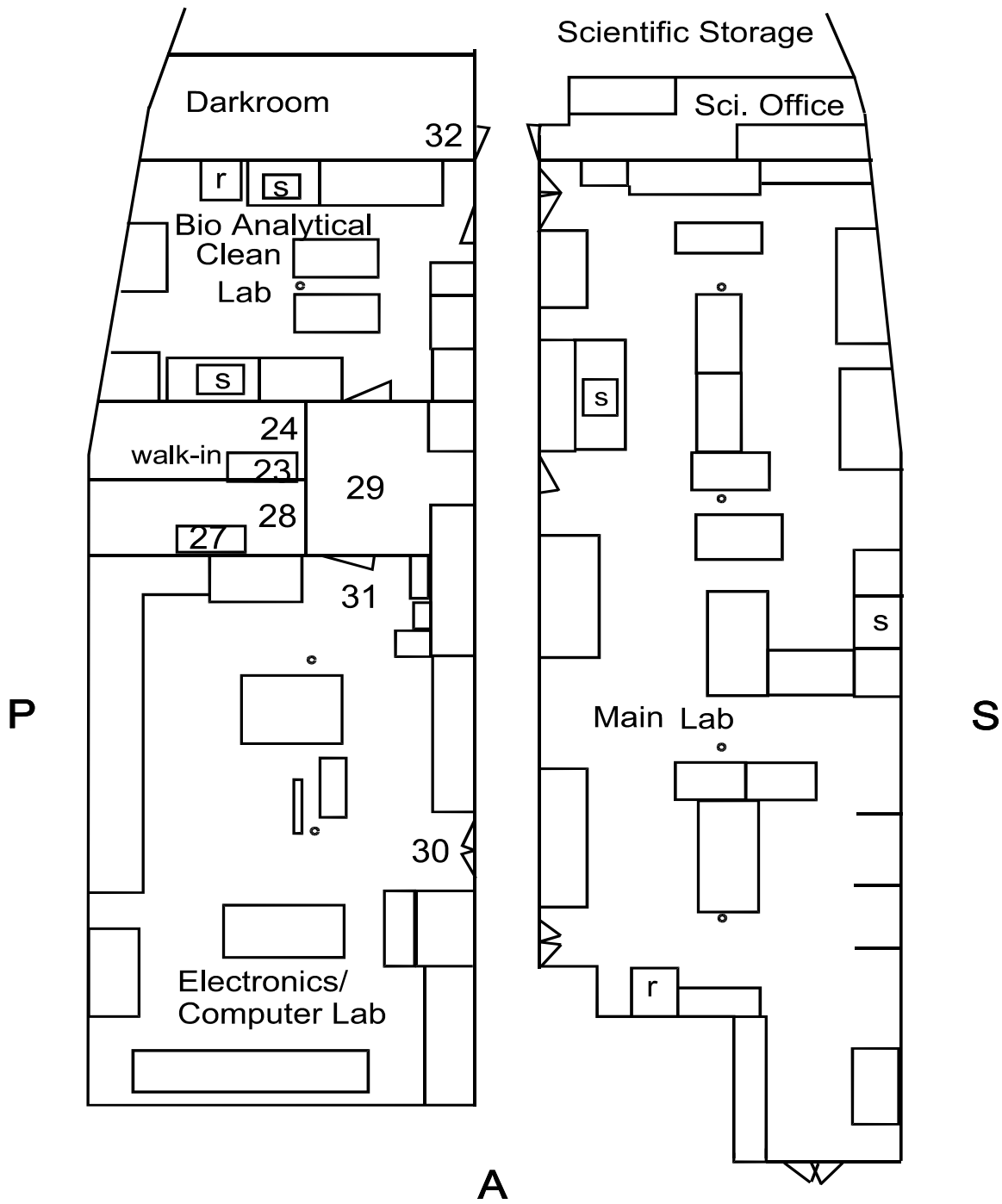


Figure 3
SWAB #591
2 August 2011

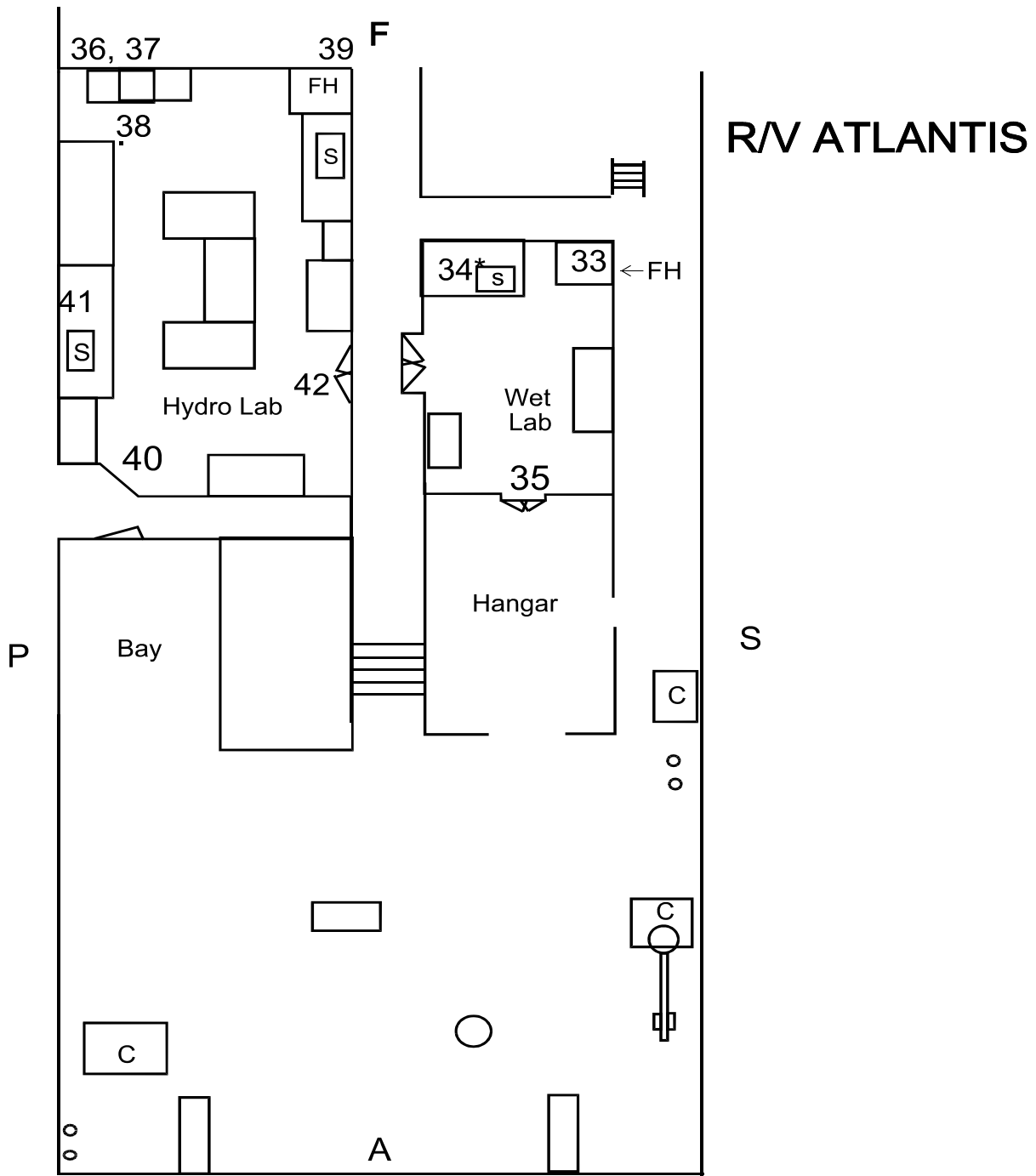


Figure 4
SWAB #591
2 August 2011

RADIOISOTOPE VAN

