

Tritium Laboratory  
23 November 2010

SWAB REPORT # 563

SWAB DATE: 17 November 2010

R/V Atlantic Explorer and UNOLS shared use van #2409-01

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Distribution:  
SWAB Committee  
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# REPORT FOR SWAB # 563

LOCATION: St. George, Bermuda

DATE: 17 November 2010

TECHNICIAN: Jim Happell

VESSEL/LAB: R/V Atlantic Explorer & UNOLS van 2409-01

Sample #	Sample Identification	<sup>3</sup> H dpm/m <sup>2</sup>			<sup>14</sup> C dpm/m <sup>2</sup>		
		activity	error		activity	error	
1	1st Vial background	0	±	0	0	±	0
2	Initial bucket blank	9	±	500	0	±	0
<u>Aft/Wet Lab (See Figure 1)</u>							
3	Inside fume hood	108	±	62	0	±	0
4	Deck at entrance to fume hood room	66	±	58	0	±	0
5	Benchtop forward of sink	25	±	44	9	±	33
6	Inside roper freezer top	47	±	45	6	±	25
7	Inside roper refrigerator bottom	19	±	63	0	±	0
8	Inside small black GE refrigerator	0	±	0	8	±	45
9	Forward bench top	1	±	8	8	±	37
10	Center bench top	31	±	53	0	±	0
11	Deck at forward entrance	47	±	60	0	±	0
<u>Dry Lab (See Figure 1)</u>							
12	Bench top aft of sink	0	±	0	0	±	0
13	Bench top forward of sink	7	±	30	8	±	36
14	Forward benchtop	41	±	50	10	±	31
15	Deck at starboard entrance	60	±	66	0	±	0
16	Deck at entrance to infirmary	11	±	462	0	±	0
17	Deck at top of stairs	13	±	94	0	±	0
18	Deck in front of ice machine in mess	0	±	0	0	±	0
19	Center bench top	13	±	639	0	±	0
<u>Main Lab (See Figure 1)</u>							
20	Port aft. freezer	200	±	43	* 65	±	33
21	Starboard aft freezer	0	±	0	0	±	0
22	Bench top aft of sink	22	±	123	0	±	0
23	Bench top forward of sink	0	±	0	0	±	0
24	Inside clean air bench top	0	±	0	0	±	0
25	Starboard bench top	14	±	65	0	±	0
26	Aft bench top	36	±	55	0	±	0

Sample #	Sample Identification	<sup>3</sup> H dpm/m <sup>2</sup>			<sup>14</sup> C dpm/m <sup>2</sup>		
		activity		error	activity		error
<u>Main Lab (con't)</u>							
27	Deck in front of freezers	19	±	73	0	±	0
28	Deck in front of starboard bench	54	±	94	0	±	0
29	Deck in fron of aft bench	13	±	149	0	±	0
30	Center bench top	291	±	70	0	±	0
31	Intermediate bucket blank	0	±	0	0	±	0
<u>UNOLS Van #2409-01 (See Figure 2)</u>							
32	Inside fume hood	225	±	68	0	±	0
33	Inside refrigerator	* 2100	±	137	* 55	±	14
34	Bench top next to LSC	137	±	67	0	±	0
35	Bench top sround sink	469	±	79	0	±	0
36	Forward bench top	108	±	59	0	±	0
37	Deck between LSC and hood	* 1616	±	108	* 676	±	53
38	Deck at entrance	182	±	55	45	±	32
39	Top of LSC	239	±	69	0	±	0
40	Final bucket blank	0	±	0	1	±	0

### Comments

Please note that the error reported for each isotope is the two-standard deviation counting error. All areas on the Atlantic Explorer were free of radioisotope contamination except for the port aft freezer in the Main Lab, which had small amount of  $^3\text{H}$  and  $^{14}\text{C}$ . This freezer should be cleaned. Minor detectable amounts of  $^3\text{H}$  were found throughout the shared use van. It is recommended that the refrigerator and the deck between the hood and LSC be cleaned to prevent tracking of  $^3\text{H}$  and  $^{14}\text{C}$  into the ship









