



Radionuclide Analysis Facility

Gamma Analysis Report

Issued by Vernon Cupps

Report Date: September 16, 2011
 Work Request #: 11-182
 Submitted by: Bruce Brown on 7/26/11
 Workbook: P-HPGe #1-10, page(s) 64

MI C-307 Collimator

The Accelerator Division/ES&H Group submitted 2 steel and copper nub samples, on Work Request# 11-182, for analysis of accelerator produced radionuclides. Each sample was counted on detector P-HPGe#1.

The following table lists the radionuclides detected in the sample, along with the corresponding specific activity. If a sample activity was reported it has been corrected back to the time of sampling.

SampleID#	Location	Container	Count Info	Mass/Vol.	Count Date	Radionuclide	Activity (pCi/g)
110726BB01	MI Coll C-307[Steel-7/32](Unshielded)	None	7200sec @ 10cm	0.304 g	7/26/11 @ 8:24	Ar-42/K-42	1,510 ± 520
						Cr-48	863 ± 112
						Cr-51	10,700 ± 2,000
						Fe-52	904 ± 159
						K-43	1,240 ± 170
						Mn-52	12,600 ± 1,100
						Mn-54	2,200 ± 380
						Mn-56	60,600 ± 5,500
						Na-24	944 ± 155
						Sb-122	2,730 ± 480
						Sc-44m	3,840 ± 600
						Sc-46	463 ± 103
						Sc-47	3,080 ± 480
						Sc-48	702 ± 129
						Ti-44/Sc-44*	7,680 ± 1,200
V-48	4,430 ± 510						
110726BB02	MI Coll C-307[Cu-7/32](Unshielded)	None	7200sec @ 10cm	0.242 g	7/26/11 @ 10:36	Co-55	1,510 ± 290
						Co-56	642 ± 145
						Co-57	537 ± 197
						Co-58	3,310 ± 540
						Cu-61	47,800 ± 5,000
						Cu-64	1,890,000 ± 300,000

<u>SampleID#</u>	<u>Location</u>	<u>Container</u>	<u>Count Info</u>	<u>Mass/Vol.</u>	<u>Count Date</u>	<u>Radionuclide</u>	<u>Activity (pCi/g)</u>
cont. 110726BB02	MI Coll C-307[Cu-7/32](Unshielded)	None	7200sec @ 10cm	0.242 g	7/26/11 @ 10:36	K-43	800 ± 204
						Mn-52	2,490 ± 240
						Mn-56	5,400 ± 720
						Na-24	237 ± 124
						Ni-57	1,270 ± 250
						Sc-44m	1,030 ± 340
						Sc-47	501 ± 201
						Sc-48	413 ± 82
						Ti-44/Sc-44*	1,470 ± 280
						V-48	519 ± 107

cc: ES&H Setion Dist List [MS-119] B. Brown [MS-306]
V. Cupps, MS-325 RAF Folder
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