

## Radionuclide Analysis Facility Gamma Analysis Report

Issued by Meka E. Francis

Report Date: December 22, 2015  
 Work Request #: 15-356C  
 Submitted by: M. Quinn on 12/7/2015  
 Workbook: HPGe #2-11, page 26

### LArTF Sieves

The ESH&Q Section/RF Group submitted 2 molecular sieve samples on Work Request# 15-356 for analysis of naturally produced radionuclides. The samples were counted on detector HPGe#2 for 24 hours on the dates listed below. Averaged results for a blank sample were subtracted from the averaged sample results to obtain the activities quoted.

Sample ID#	Sample Time	Location	Container	Count Info	Mass	Count Dates	Radionuclide	Activity (pCi/g)	Activity (Bq/kg)
151207MQ01	10:30	ASGE 4Å Molecular Sieves 8x12 beads	250 mL Bottle	86,400 sec @ 4cm	181.934 g	12/9/15 @ 13:31 12/15/15 @ 9:49	<b>Thorium Series</b>		
							Ac-228	0.16 ± 0.04	6 ± 2
							Pb-212	0.22 ± 0.04	8 ± 1
							Tl-208	0.08 ± 0.02	3.1 ± 0.6
							<b>Uranium Series</b>		
							Ra-226	0.3 ± 0.2	11 ± 8
							Pb-214	0.24 ± 0.04	9 ± 1
							Bi-214	0.31 ± 0.05	12 ± 2
							K-40	1.5 ± 0.7	50 ± 20
							151207MQ02	10:30	ASGE 4Å Molecular Sieves 1/16" pellets
Ac-228	0.29 ± 0.05	11 ± 2							
Pb-212	0.18 ± 0.03	7 ± 1							
Tl-208	0.07 ± 0.02	2.5 ± 0.6							
<b>Uranium Series</b>									
Ra-226	0.2 ± 0.2	8 ± 7							
Pb-214	0.17 ± 0.04	6 ± 1							
Bi-214	0.26 ± 0.05	10 ± 2							
K-40	1.5 ± 0.7	60 ± 30							

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