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Station A Exhaust Air Monitoring at the Waste Isolation Pilot Plant/ New Mexico conducted by NMED/DOE OB, July – December, 2009

The New Mexico Environment Department (NMED) DOE Oversight Bureau has compiled and assessed data collected from Station A for July through December, 2009. The accompanying data report shows results for selected analytes as determined by ALS / Paragon Analytical Services, with graphs indicating these results in $\text{nBq/m}^3 \pm 2\text{TPU}$ (Total Propagated Uncertainty) and a Table of Analytical Laboratory Results.

For July through December, there were no detections for any of the analytes of concern exceeding the sample Minimum Detectable Concentration from Station A.

Response

Questions and or comments may be addressed to Thomas Kesterson by phone at (575)-887-6851, by e-mail at thomasl.kesteron@state.nm.us, or to the address in the above letterhead.

- Enclosures:
- (1) Graph 1– Results for Am-241 from Station A, July – December 2009.
 - (2) Graph 2 – Results for Cs-137 from Station A, July – December 2009.
 - (3) Graph 3– Results for Pu-238 from Station A, July – December 2009.
 - (4) Graph 4 – Results for Pu-239/240 from Station A, July – December 2009.
 - (5) Graph 5 – Results for Sr-90 from Station A, July – December 2009.
 - (6) Graph 6 – Results for U-234 from Station A, July – December 2009.
 - (7) Graph 7 – Results for U-235 from Station A, July – December 2009.
 - (8) Graph 8 – Results for U-238 from Station A, July – December 2009.
 - (9) Table 1 – Laboratory Results for Selected Analytes from Station A, July – December, 2009.
 - (10) Definitions

Cc: Dan Ferguson, Site Regulatory Specialist, DOE / CBFO
Thomas Skibitski, Bureau Chief, NMED DOE OB

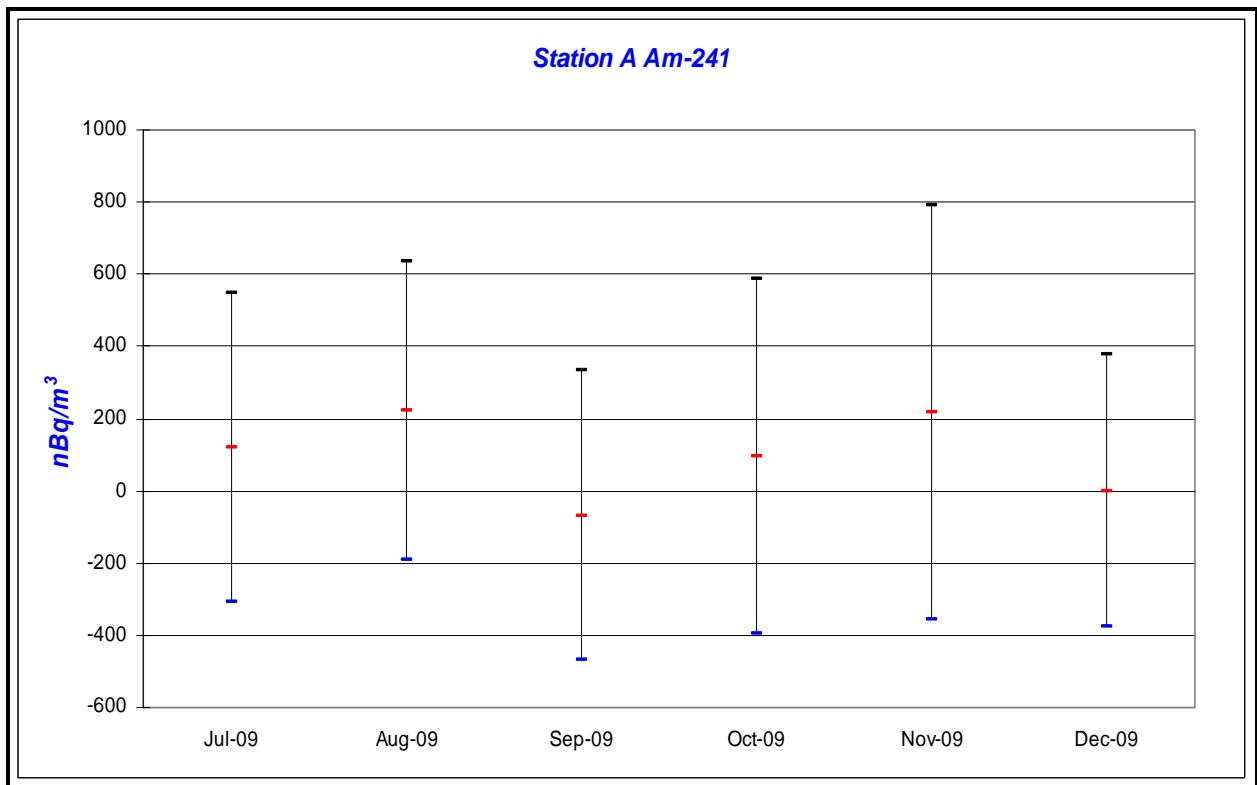
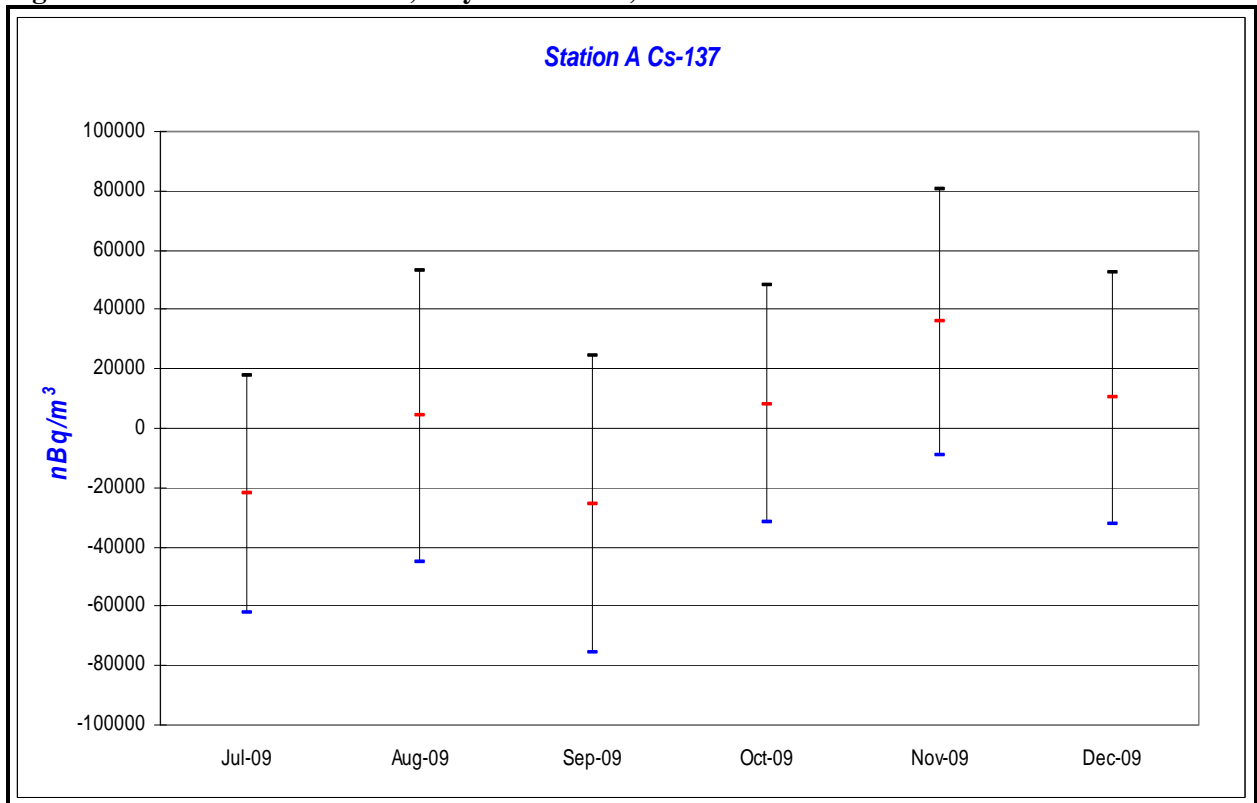


Figure 1: Am-241 from Station A, July - December, 2009.

Figure 2: Cs-137 from Station A, July - December, 2009.



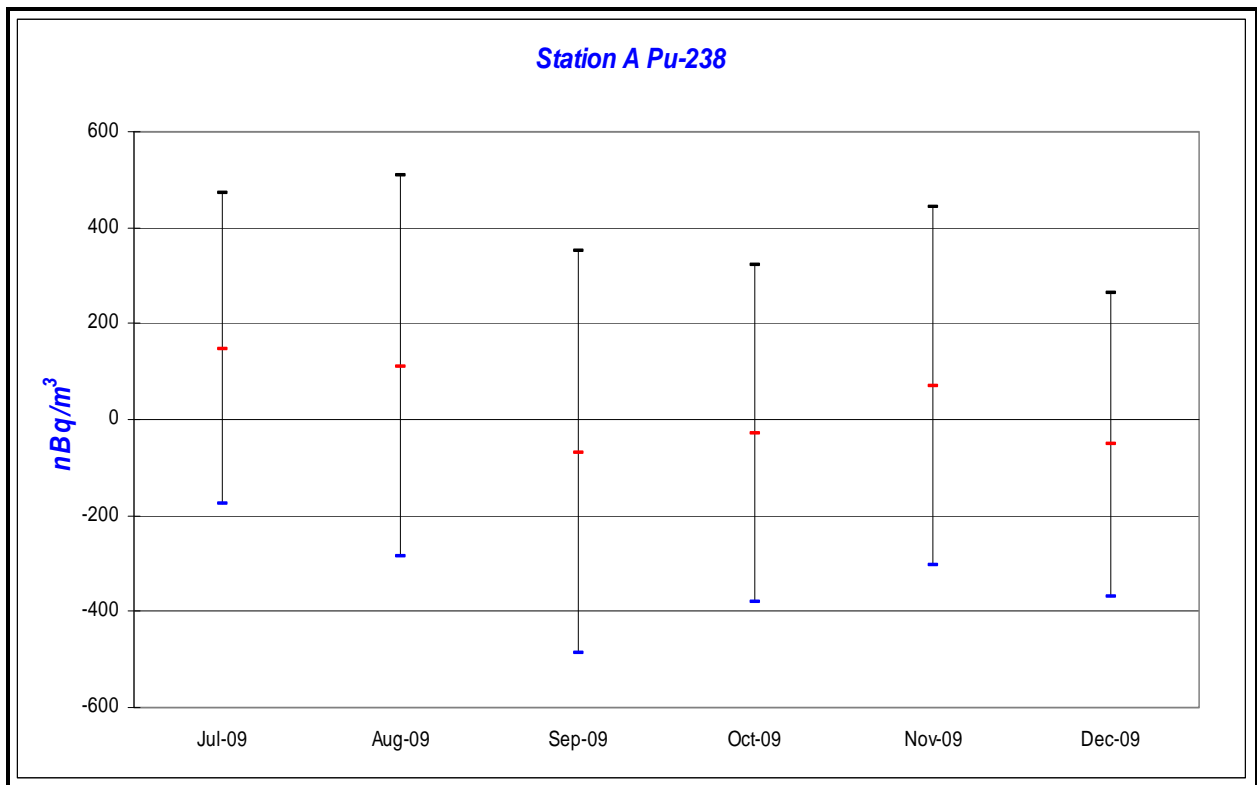
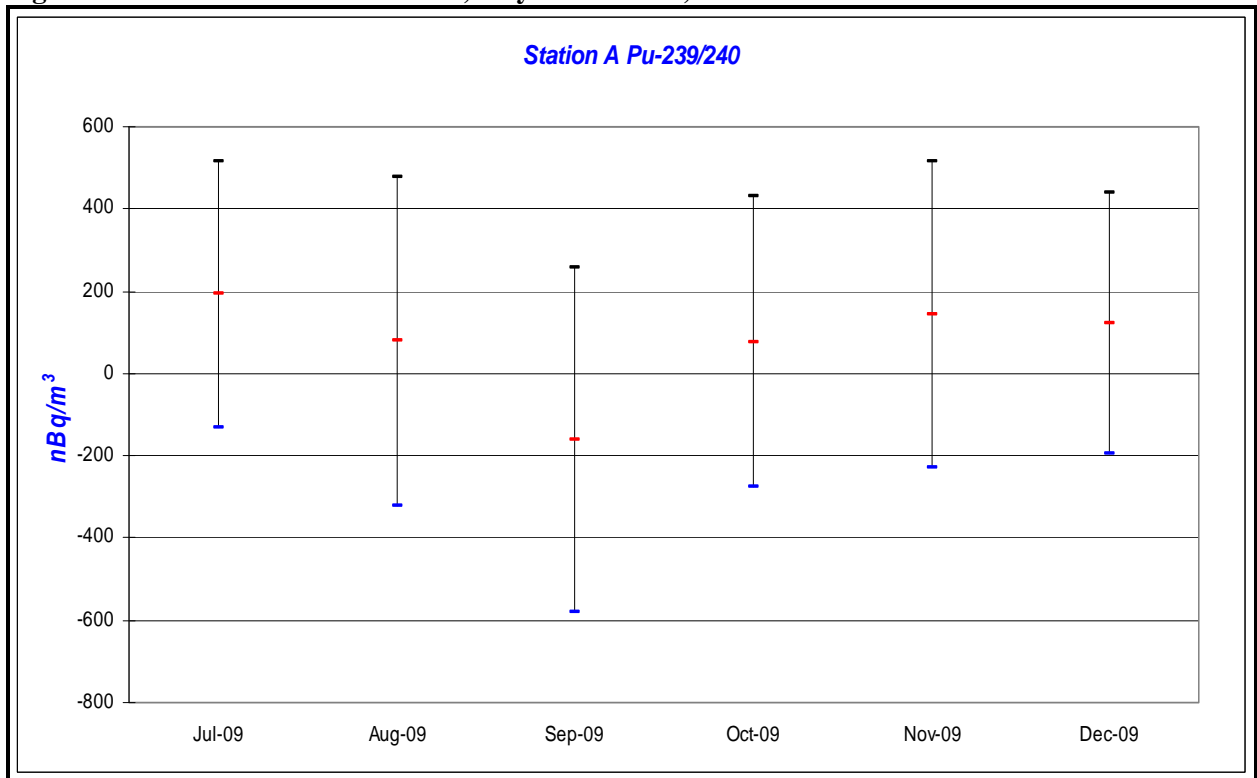


Figure 3: Pu-238 from Station A, July - December, 2009.

Figure 4: Pu-239/240 from Station A, July - December, 2009.



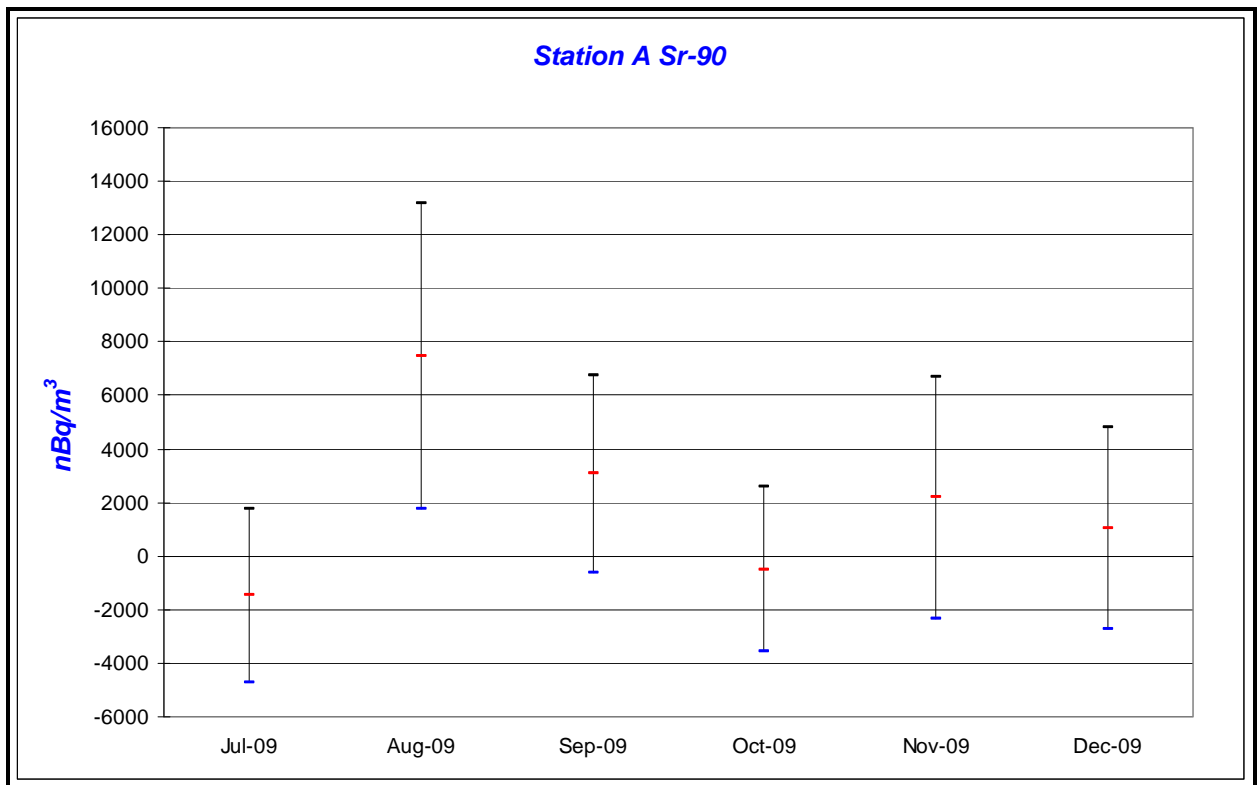
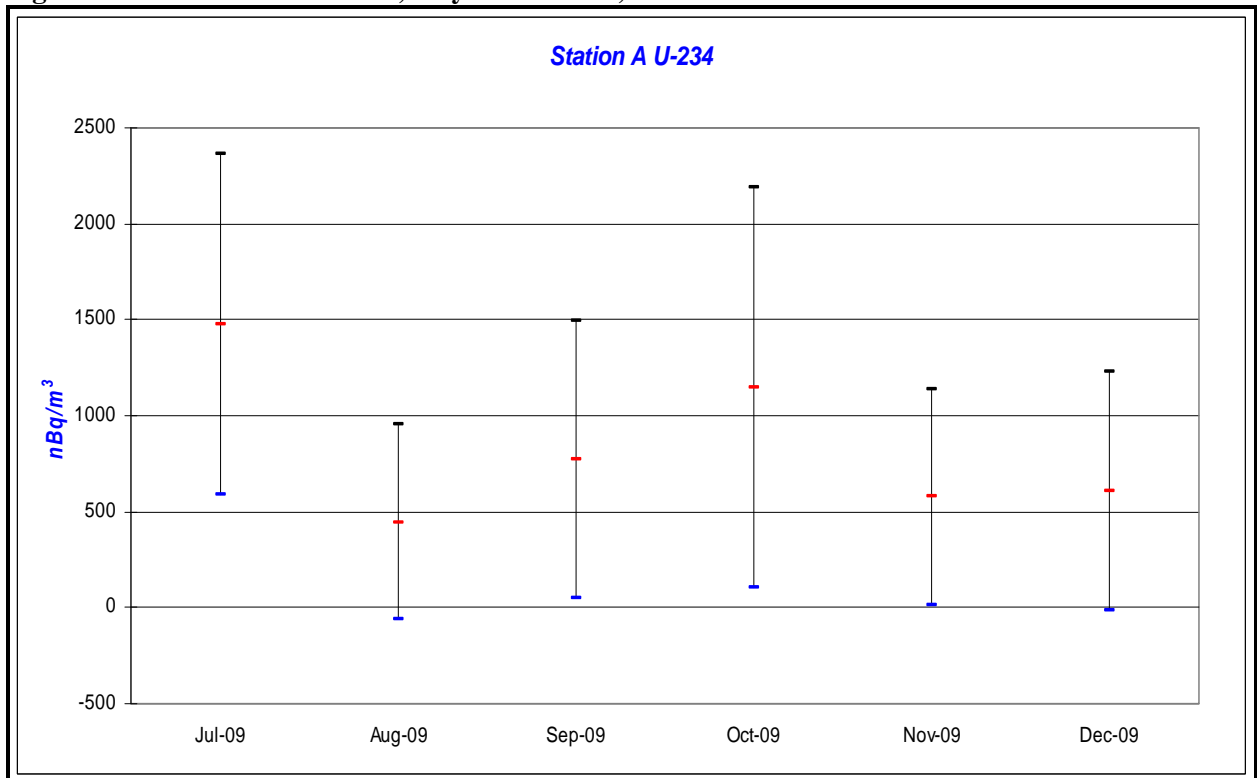


Figure 5: Sr-90 from Station A, July - December, 2009.

Figure 6: U-234 from Station A, July - December, 2009.



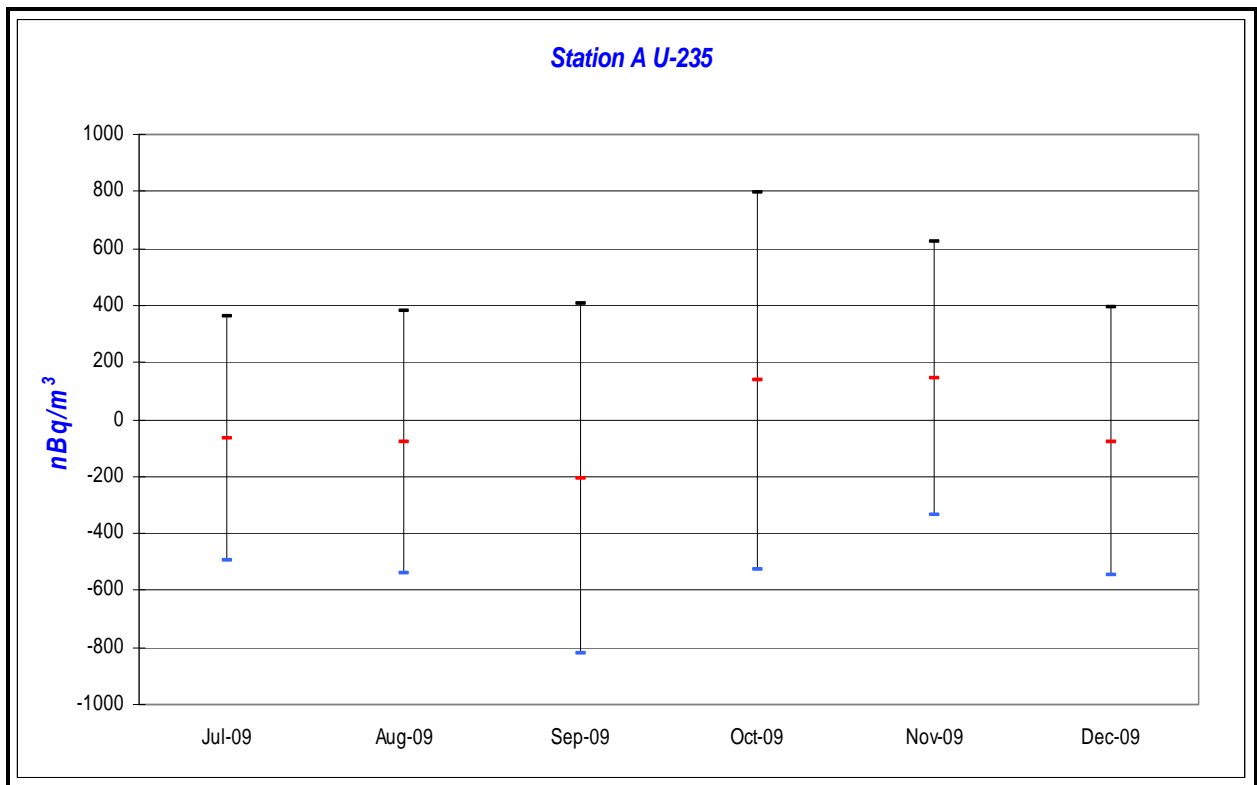


Figure 7: U-235 from Station A, July - December, 2009.

Figure 8: U-238 from Station A, July - December, 2009.

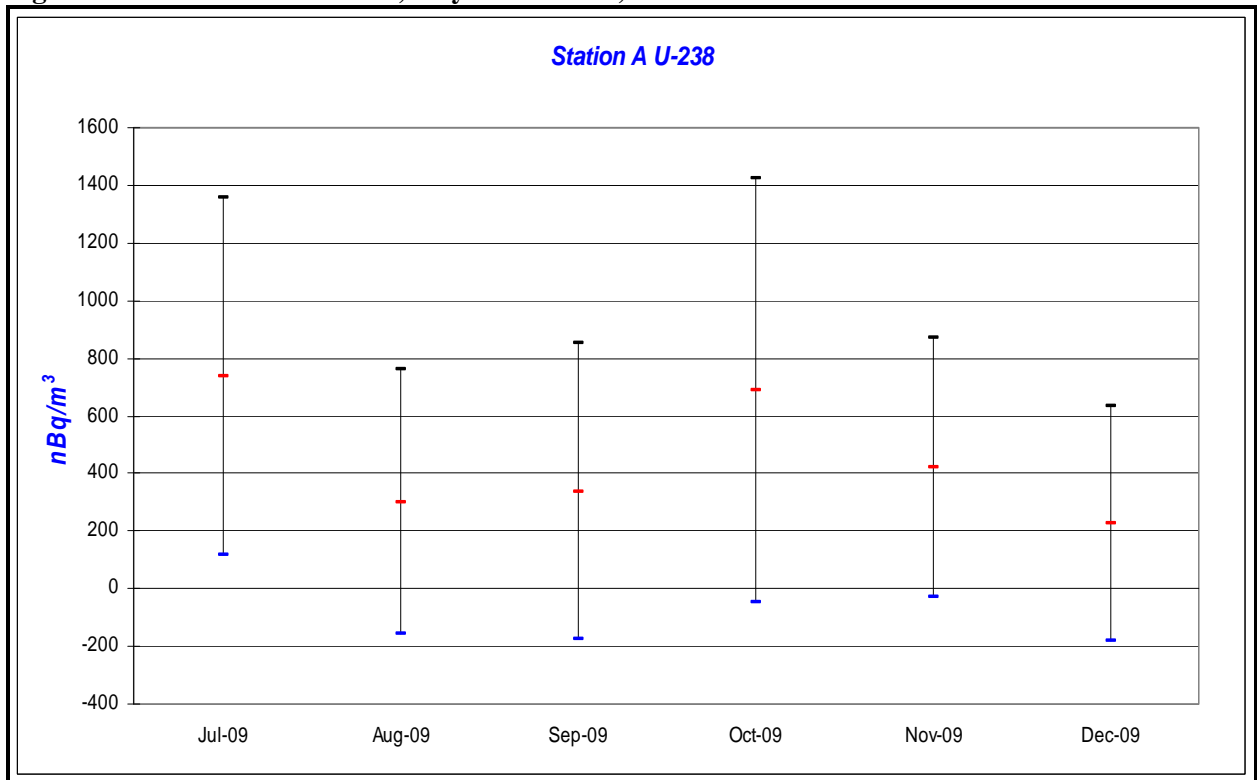


Table 1 – Laboratory Results for Selected Analytes from Station A, July-December, 2009.

Analyte	Month	Result (pCi/composite)	2TPU	MDA	Flag	Result (nBq/m ³)	2TPU
Am-241	Jul-09	0.008	0.029	0.022	U	118	428
	Aug-09	0.014	0.026	0.019	U	223	413
	Sep-09	-0.004	0.025	0.044	U	-68	403
	Oct-09	0.006	0.032	0.047	U	95	490
	Nov-09	0.014	0.037	0.065	U	217	575
	Dec-09	0.000	0.025	0.018	U	0	378
Cs-137	Jul-09	-1.500	2.700	4.700	U	-22148	39866
	Aug-09	0.250	3.100	4.300	U, M	3975	49294
	Sep-09	-1.600	3.100	5.300	U, M	-25777	49943
	Oct-09	0.530	2.600	4.400	U	8121	39839
	Nov-09	2.300	2.900	4.700	U	35720	45039
	Dec-09	0.680	2.800	4.800	U	10285	42351
Pu-238	Jul-09	0.0100	0.0220	0.0320	U	148	325
	Aug-09	0.0070	0.0250	0.0190	U	111	398
	Sep-09	-0.0040	0.0260	0.0450	U	-69	419
	Oct-09	-0.0020	0.0230	0.0330	U	-29	352
	Nov-09	0.0050	0.0240	0.0350	U	71	373
	Dec-09	-0.0040	0.0210	0.0370	U	-53	318
Pu-239/240	Jul-09	0.013	0.022	0.044	U	192	325
	Aug-09	0.005	0.025	0.037	U	78	398
	Sep-09	-0.010	0.026	0.045	U	-161	419
	Oct-09	0.010	0.026	0.045	U	77	352
	Nov-09	0.009	0.024	0.041	U	143	373
	Dec-09	0.008	0.021	0.037	U	123	318

Table 1 – Laboratory Results for Selected Analytes from Station A, July-December,2009.

Analyte	Month	Result (pCi/composite)	2TPU	MDA	Flag	Result (nBq/m ³)	2TPU
Sr-90	Jul-09	-0.100	0.22	0.47	U	-1477	3248
	Aug-09	0.470	0.36	0.70	U	7474	5724
	Sep-09	0.190	0.23	0.46	U	3061	3705
	Oct-09	-0.032	0.20	0.44	U	-490	3065
	Nov-09	0.140	0.29	0.61	U	2174	4504
	Dec-09	0.068	0.25	0.52	U	1029	3781
U-234	Jul-09	0.100	0.060	0.067	LT	1477	886
	Aug-09	0.028	0.032	0.049	U	445	509
	Sep-09	0.048	0.045	0.056	U	773	725
	Oct-09	0.075	0.068	0.099	Y2, U	1149	1042
	Nov-09	0.037	0.036	0.051	U	575	559
	Dec-09	0.040	0.041	0.062	U	605	620
U-235	Jul-09	-0.005	0.029	0.050	U	-69	428
	Aug-09	-0.005	0.029	0.051	U	-78	461
	Sep-09	-0.013	0.038	0.082	U	-209	612
	Oct-09	0.009	0.043	0.024	Y2, U	135	659
	Nov-09	0.009	0.031	0.060	U	144	481
	Dec-09	-0.005	0.031	0.054	U	-79	469
U-238	Jul-09	0.050	0.042	0.056	U	738	620
	Aug-09	0.019	0.029	0.054	U	302	461
	Sep-09	0.021	0.032	0.056	U	338	516
	Oct-09	0.045	0.048	0.070	Y2, U	690	735
	Nov-09	0.027	0.029	0.038	U	144	481
	Dec-09	0.015	0.027	0.020	U	227	408

Defintions:**Qualifiers / Flags**

U – Result is less than the sample specific MDC.

LT – Results is less than Requested MDC, greater than sample specific MDC.

Y1 – Chemical yield is in control at 100 – 110%. Quantitative yield is assumed.

Y2 – Chemical yield outside default limits.

L – LCS recovery below lower control limit.

H – LCS recovery above upper control limit.

P – LCS recovery within control limits.

M – The requested MDC was not met.

M3 – The requested MDC was not met, but the reported activity is greater than the reported MDC.

Abbreviations:

TPU – Total Propagated Uncertainty

MDC – Minimum Detectable Concentration