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### NEW MEXICO ENVIRONMENT DEPARTMENT

## DOE Oversight Bureau

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# Station A Exhaust Air Monitoring at the Waste Isolation Pilot Plant Conducted by the New Mexico Environment Department, DOE Oversight Bureau, January – March 2011

The New Mexico Environment Department DOE Oversight Bureau has compiled and assessed data collected from Station A for January through March 2011. The accompanying data report shows results for selected analytes and sample blanks as determined by an independent analytical laboratory.

There were no detections of activity exceeding the sample MDC for Sr-90, Pu-238, Pu-239/240, U-235, or U-238. U-234 was detected with activities exceeding the sample MDC in January. Cs-137 was detected with activity exceeding the sample MDC for March, which agrees with the Permittees Station A results. Am-241 was also detected in March, with activity exceeding the sample MDC. This analyte was also detected in the Oversight Bureau's matrix blank.

#### Response

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

Enclosure: (1) Table 1 – Laboratory Results for Selected Analytes from Station A, January - March, 2011

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Table 1 – Laboratory Results for Selected Analytes from Station A, January – March, 2011.

Jan-11	Analytical Results			Data Summaries		
Station A	Monthly Composite Sample					
Analyte	Result	2 s TPU	Sample	Lab	Result	2 s
-	pCi/composite		MDC	Flag	nBq/m <sup>3</sup>	
Sr-90	0.0034	0.23	0.53	U	91	6200
Pu-239/40	0.0089	0.023	0.040	U	240	620
Pu-238	0.030	0.029	0.033	U	805	780
Am-241	0.020	0.022	0.029	U	540	590
Cs-137	-0.95	2.8	4.8	U	-26000	75000
U-234	0.084	0.053	0.061	LT	2300	1400
U-235	0.0029	0.026	0.046	U	78	700
U-238	0.017	0.033	0.069	U	460	890
	(m <sup>3</sup> )	(ft <sup>3</sup> )				
Total Air Flow	1378	48682				

Feb-11 Station A	Analytical Results Monthly Composite Sample			Data Summaries			
Analyte	Result	2 s TPU	Sample	Lab	Result	2 s	
	pCi/composite		MDC	Flag	nBq	nBq/m <sup>3</sup>	
Sr-90	0.041	0.24	0.55	U	750	4400	
Pu-239/40	0.017	0.026	0.047	U	310	470	
Pu-238	0.016	0.022	0.032	U	290	401	
Am-241	0.0041	0.021	0.031	U	75	380	
Cs-137	1.0	2.6	4.3	U	18000	47000	
U-234	0.041	0.036	0.047	U	750	660	
U-235	-0.011	0.026	0.060	U	-201	470	
U-238	0.035	0.033	0.047	U	640	602	
	$(m^3)$	$(ft^3)$					
Total Air Flow	2028	71650					

Mar-11 Station A	Analytical Results Monthly Composite Sample			Data Summaries			
Analyte	Result	2 s TPU	Sample	Lab	Result	2 s	
	pCi/composite		MDC	Flag	nBq	nBq/m <sup>3</sup>	
Sr-90	-0.040	0.23	0.53	U	-820	4700	
Pu-239/40	0.021	0.026	0.039	U	430	530	
Pu-238	0.033	0.031	0.039	U	680	640	
Am-241	0.036	0.029	0.028	LT	740	590	
Cs-137	7.0	3.0	4.3	LT	140000	62000	
U-234	0.0096	0.024	0.054	U	190	492	
U-235	0	0.027	0.020	U	0	550	
U-238	0.014	0.027	0.057	U	290	550	
	$(m^3)$	$(ft^3)$					
Total Air Flow	1805	63742					

Table 1 – Laboratory Results for Selected Analytes from Station A, January – March, 2011.

Station A						
Analyte	Result	2 s TPU	MDC	Lab		
	pCi/cor	nposite		Flag		
Sr 90	-0.25	0.24	0.57	U		
Pu-239/40	0.013	0.023	0.017	U		
Pu-238	0.004	0.023	0.033	U		
Am 241	0.029	0.027	0.016	LT		
Cs 137	0.9	3.7	6.2	U		
U-234	0.021	0.031	0.058	U		
U-235	-0.002	0.025	0.036	U		
U-238	-0.007	0.021	0.046	U		

## **Definitions:**

## **Qualifiers / Flags**

U – Result is less than the sample specific MDC.

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

## **Abbreviations:**

TPU – Total Propagated Uncertainty

MDC – Minimum Detectable Concentration