



**NEW MEXICO
ENVIRONMENT DEPARTMENT**

***DOE Oversight Bureau
Carlsbad Field Office***

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**Ambient Air Monitoring at the Waste Isolation Pilot Plant Conducted by
NMED/DOE OB for the Third Calendar Quarter 2009**

The New Mexico Environment Department (NMED) DOE Oversight Bureau (OB) has compiled and assessed ambient air data collected during the third calendar quarter 2009. The accompanying data report includes results from four low-volume air stations around the WIPP and one at the Oversight Bureau Office in Carlsbad. Air filters from these stations are collected bi-weekly, composited quarterly, and sent to ALS-USA for analysis of americium-241, cesium-137, plutonium-238, plutonium-239/240, and strontium-90. All measured values are below both the requested detection limits and the minimum detectable concentrations.

Questions and or comments may be addressed to Julia Marple by phone at (575) 887-6851, by e-mail at julia.marple@state.nm.us or to the address in the above letterhead.

Enclosures: Table of Ambient Air Results by Sampling Location

Distribution: George Basabilvazo, DOE
Dan Ferguson, DOE
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Third Calendar Quarter 2009 Ambient Air Laboratory Results

2009 3rd Qtr						Data Summaries	
LVAS 1 WIPP salt shaft							
Analyte	pCi/sample				Lab Flag	nBq/m3	
	Result	±2 s TPU	MDC	Requested MDC		Result	±2 s TPU
Sr-90	0.50	0.34	0.64	1	U	3746	2547
Pu-239/240	-0.0048	0.022	0.053	0.1	U	-36	165
Pu-238	0	0.022	0.016	0.1	U	0	165
Am-241	-0.0055	0.022	0.043	0.1	U	-41	165
Cs-137	-0.83	1.6	2.8	5	U	-6218	11986
Total Air Volume 4939 m ³							

2009 3rd Qtr						Data Summaries	
LVAS 2 Far field							
Analyte	pCi/sample				Lab Flag	nBq/m3	
	Result	±2 s TPU	MDC	Requested MDC		Result	±2 s TPU
Sr-90	0.19	0.30	0.64	1	U	1218	1923
Pu-239/240	-0.0012	0.022	0.047	0.1	U	-8	141
Pu-238	0.0024	0.022	0.038	0.1	U	15	141
Am-241	0.0055	0.028	0.041	0.1	U	35	179
Cs-137	-0.27	2.8	4.7	5	U	-1730	17946
Total Air Volume 5773 m ³							

2009 3rd Qtr						Data Summaries	
LVAS 3 Met tower							
Analyte	pCi/sample				Lab Flag	nBq/m3	
	Result	±2 s TPU	MDC	Requested MDC		Result	±2 s TPU
Sr-90	0.073	0.25	0.54	1	U	703	2408
Pu-239/240	0.0088	0.022	0.049	0.1	U	85	212
Pu-238	0.00059	0.021	0.042	0.1	U	6	202
Am-241	-0.0040	0.024	0.042	0.1	U	-39	231
Cs-137	-2.7	2.9	5.1	5	U,M	-26002	27928
Total Air Volume 3842 m ³							

2009 3rd Qtr						Data Summaries	
LVAS 5 Carlsbad							
Analyte	pCi/sample				Lab Flag	nBq/m3	
	Result	±2 s TPU	MDC	Requested MDC		Result	±2 s TPU
Sr-90	0.51	0.34	0.66	1	U	2761	1841
Pu-239/240	0.0069	0.023	0.045	0.1	U	37	125
Pu-238	0.00063	0.023	0.045	0.1	U	3	125
Am-241	-0.0020	0.024	0.035	0.1	U	-11	130
Cs-137	0.13	2.8	4.8	5	U	704	15157
Total Air Volume 6835 m ³							

2009 3rd Qtr						Data Summaries	
LVAS 7 Met tower duplicate							
Analyte	pCi/sample				Lab Flag	nBq/m3	
	Result	±2 s TPU	MDC	Requested MDC		Result	±2 s TPU
Sr-90	0.26	0.25	0.51	1	U	1483	1426
Pu-239/240	0.00060	0.022	0.043	0.1	U	3	126
Pu-238	-0.0036	0.022	0.038	0.1	U	-21	126
Am-241	0.0068	0.025	0.018	0.1	U	39	143
Cs-137	-0.16	1.8	3.1	5	U	-913	10270
Total Air Volume 6485 m ³							

Abbreviations

TPU – Total Propagated Uncertainty

MDC – Minimum Detectable Concentration

Qualifiers/Flags

U – Result is less than the sample specific MDC.

M – The requested MDC was not met.