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Ambient Air Monitoring at the Waste Isolation Pilot Plant Conducted by NMED/DOE OB for CY 2010 Q-4

The New Mexico Environment Department DOE Oversight Bureau has compiled and assessed ambient air data collected during CY 2010 Q-4. The Bureau collected independent low-volume air samples from three locations at the WIPP site. Filters from the air samplers were collected bi-weekly and composited by location. The samples were sent to an independent analytical laboratory for analysis of gross alpha/beta, americium-241, cesium-137, plutonium-238, plutonium-239/240, and strontium-90.

The Bureau performs environmental monitoring and oversight to assure that activities at the WIPP are protective of the public health and environment. The ambient air monitoring program is implemented to independently verify the radiological monitoring results obtained by WIPP personnel, and to confirm that the operation of the WIPP is not increasing levels of radionuclides present in the ambient air as determined from preoperational studies.

This set of data is the first batch returned from a new contract lab. All results of specific requested analytes are "U"- Result is less than 2sTPU and the sample MDC. Gross alpha and gross beta are new analyses for the WIPP Oversight Section's ambient air program. They will be tracked to aid in data analysis and to improve the Bureau's characterization of the WIPP environment.

Questions and/or comments may be addressed to Julia Marple by phone at (575) 885-9023, or by e-mail at Julia.marple@state.nm.us

Enclosures: 1. Ambient Air Sampling Results CY 2010 Q-4
2. Map of NMED's Ambient Air Sampling Locations

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Ambient Air Sampling Results CY 2010 Q-4

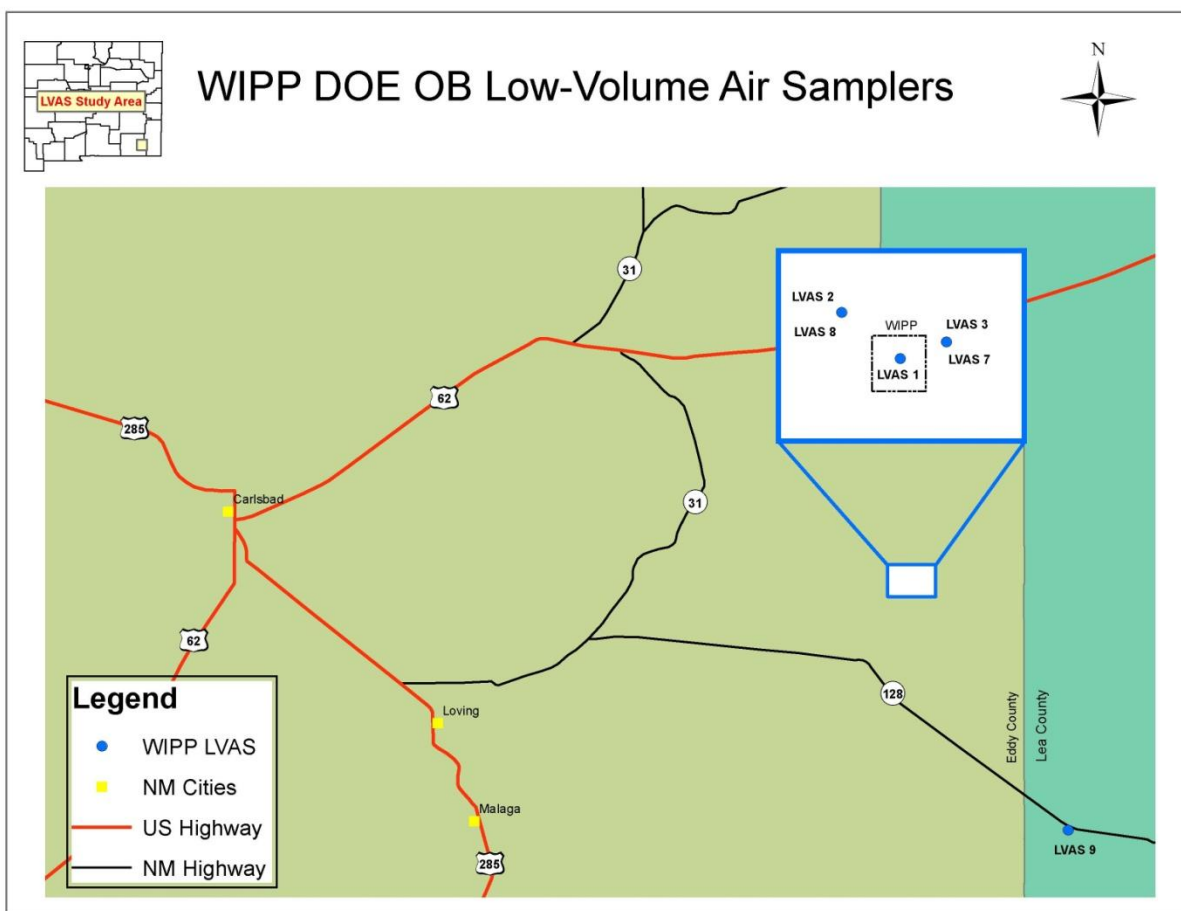
LVAS 1 WIPP Salt Shaft							
Analyte	pCi/sample			Lab Flag	nBq/m3		
	Result	±2 s TPU	MDC		Result	±2 s TPU	MDC
Gross alpha	124	15	2		735000	89000	11900
Gross beta	144	15	1		854000	89000	5930
Am-241	0.07	0.12	0.20	U	415	712	1190
Cs-137	0.05	1.7	2.9	U	297	10100	17200
Pu-238	0.020	0.056	0.12	U	119	332	712
Pu-239/240	-0.007	0.014	0.12	U	-42	83	712
Sr-90	1.03	0.86	1.40	U	6110	5100	8300
Total Air Volume (m³)					6238		

LVAS 2 Far Field							
Analyte	pCi/sample			Lab Flag	nBq/m3		
	Result	±2 s TPU	MDC		Result	±2 s TPU	MDC
Gross alpha	142	17	2		690000	82700	9720
Gross beta	202	20	1		982000	97200	4860
Am 241	-0.016	0.023	0.17	U	-78	112	827
Cs-137	-0.3	1.7	2.8	U	-1460	8270	13600
Pu-238	0.07	0.12	0.21	U	340	583	1020
Pu-239/240	0.11	0.12	0.13	U	535	583	632
Sr-90	0.25	0.83	1.4	U	1220	4040	6810
Total Air Volume (m³)					7610		

LVAS 3 Met Tower							
Analyte	pCi/sample			Lab Flag	nBq/m3		
	Result	±2 s TPU	MDC		Result	±2 s TPU	MDC
Gross alpha	109	13	2		512000	61000	9390
Gross beta	170	17	1		798000	79800	4700
Am-241	0.023	0.063	0.14	U	108	296	657
Cs-137	-0.2	1.6	2.7	U	-939	7510	12700
Pu-238	-0.008	0.071	0.21	U	-38	333	986
Pu-239/240	0.047	0.091	0.16	U	221	427	751
Sr-90	1.31	0.90	1.4	U	6150	4230	6570
Total Air Volume (m³)					7879		

LVAS 7 Met Tower Duplicate

Analyte	pCi/sample			Lab Flag	nBq/m3		
	Result	±2 s TPU	MDC		Result	±2 s TPU	MDC
Gross alpha	51.2	7	1.7		283000	38600	9380
Gross beta	165	13	1		911000	71800	5520
Am-241	0.0	0.11	0.27	U	0.0	607	1490
Cs-137	0.3	2.0	3.4	U	1660	11000	18800
Pu-238	-0.008	0.099	0.26	U	-44	546	1440
Pu-239/240	0.11	0.13	0.16	U	607	718	883
Sr-90	0.2	1.4	2.4	U	1100	7730	13200
Total Air Volume (m³) 6703							



Map of NMED's Ambient Air Sampling Locations

Notes:

At the time of this report, the Bureau had not begun sampling at the LVAS 9 location on Hwy 128.
LVAS 8 was employed in an internal filter matrix study.