

August 6, 2008
Mr. H.L. (Jody) Plum
Department of Energy
Carlsbad Field Office
Carlsbad, NM 88220

Subject: NMED DOE-OB Data Submittal for Low Volume Air Sampling Results near the Waste Isolation Pilot Plant, Third and Fourth Calendar Quarter 2007

Mr. Plum,

The accompanying laboratory report show ambient air results at various locations in the area surrounding the Waste Isolation Pilot Plant, as well as sites in Carlsbad, Malaga, and Artesia. Equipment used include Gast Model 1023 vacuum pumps, Hi-Q Model PNLMT-CNTRLANL Flow Controllers, and Pall Corporation Versapor-3000T w/wa, 3.0 μm , 47 mm Supported Membrane Filters, Part Number 66387.

The analytes targeted during the third and fourth calendar quarters of 2007 include Isotopic Plutonium, Americium-241, Cesium-137, Strontium-90, Gross α and Gross β . Laboratory analysis was performed by Eberline Service's Albuquerque Laboratory (now closed). Final Data Reports were dated and signed 05/08/2008 by Laboratory Manager Karen Schoendaller.

Sample Delivery Group #08-03002 is the results from the third quarter of 2007. Sample Delivery Group #08-03003 is the results from the fourth quarter of 2007. Following each of these please find the "in-house" spreadsheet used by the Oversight Bureau, Carlsbad Office, to convert the lab results to nBq/m^3 for comparison to background data compiled by the Environmental Evaluation Group prior to waste emplacement at WIPP. Figures in red indicate those results bearing closer examination.

Please call me at 505-887-6851 so that we might arrange time to discuss these results.

Thank you,

Thomas Kesterson
Environmental Scientist
NMED-OB
604B North Canal Street
Carlsbad, New Mexico 88220

CC: Tom Skibitski, Bureau Chief, DOE-OB

2007 3rd Qtr LVAS 1		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	8.330E+01	7.330E+00	6.270E-01			4.682E+05	4.120E+04		
Gross Beta	1.080E+02	8.480E+00	1.750E+00			6.070E+05	4.766E+04		
Sr 90	4.590E+00	1.220E+00	2.020E+00			2.580E+04	6.857E+03	1260±2290	
Pu-239/40	-4.450E-02	2.810E-02	1.550E-01			-2.501E+02	1.579E+02	23±56	
Pu-238	-1.270E-02	4.330E-02	1.390E-01			-7.138E+01	2.434E+02	6±62	
Am 241	5.070E-02	6.210E-02	8.990E-02			2.310E+02	3.490E+02	27±109	
Cs 137	1.720E+00	3.150E+00	5.350E+00			9.667E+03	1.770E+04	60±2460	
(m3)		(ft³)							
Total Air Flow	6583.1972								

3rd Qtr LVAS 2		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	5.570E+01	5.120E+00	5.250E-01			3.286E+05	3.021E+04		
Gross Beta	1.140E+02	8.900E+00	1.620E+00			6.726E+05	5.251E+04		
Sr 90	3.470E+00	1.110E+00	1.900E+00			2.047E+04	6.549E+03	1260±2290	
Pu-239/40	9.220E-04	5.010E-02	1.450E-01			5.440E+00	2.956E+02	23±56	
Pu-238	-1.570E-02	5.380E-02	1.730E-01			-9.263E+01	3.174E+02	6±62	
Am 241	-2.480E-02	1.860E-02	1.100E-01			-1.463E+02	1.097E+02	27±109	
Cs 137	4.580E+00	3.210E+00	5.260E+00			2.702E+04	1.894E+04	60±2460	
(m3)		(ft³)							
Total Air Flow	6271.4371								

3rd Qtr LVAS 3		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	9.980E+01	8.310E+00	5.710E-01			4.910E+05	4.088E+04		
Gross Beta	1.270E+02	9.830E+00	1.620E+00			6.248E+05	4.836E+04		
Sr 90	2.670E+00	1.050E+00	1.860E+00			1.313E+04	5.165E+03	1260±2290	
Pu-239/40	-4.160E-02	5.110E-02	1.800E-01			-2.046E+02	2.514E+02	23±56	
Pu-238	-3.780E-02	2.660E-02	1.530E-01			-1.860E+02	1.309E+02	6±62	
Am 241	-1.030E-02	3.730E-02	1.130E-02			-5.067E+01	1.835E+02	27±109	
Cs 137	3.890E+00	5.600E+00	9.440E+00			1.914E+04	2.755E+04	60±2460	
Total Air Flow		(m3)	(ft³)						
		7521.2852							

3rd Qtr LVAS 4		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	9.800E+01	8.440E+00	6.210E-01			6.212E+05	5.350E+04		
Gross Beta	1.100E+02	8.580E+00	1.610E+00			6.973E+05	5.439E+04		
Sr 90	3.950E+00	1.190E+00	2.010E+00			2.504E+04	7.544E+03	1260±2290	
Pu-239/40	4.170E-02	8.310E-02	1.560E-01			2.643E+02	5.268E+02	23±56	
Pu-238	-8.050E-03	6.330E-02	1.690E-01			-5.103E+01	4.013E+02	6±62	
Am 241	1.390E-03	5.330E-02	1.350E-01			8.811E+00	3.379E+02	27±109	
Cs 137	5.580E+00	5.400E+00	8.990E+00			3.537E+04	3.423E+04	60±2460	
(m3)		(ft³)							
Total Air Flow	5836.721664								

3rd Qtr LVAS 5		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	1.480E+02	1.230E+01	9.250E-01			7.447E+05	6.189E+04		
Gross Beta	1.330E+02	1.030E+01	1.730E+00			6.692E+05	5.182E+04		
Sr 90	1.780E+00	1.120E+00	2.090E+00			8.956E+03	5.635E+03	1260±2290	
Pu-239/40	-3.930E-02	2.610E-02	1.470E-01			-1.977E+02	1.313E+02	23±56	
Pu-238	2.340E-02	5.290E-02	1.060E-01			1.177E+02	2.662E+02	6±62	
Am 241	-1.620E-02	3.380E-02	1.130E-01			-8.151E+01	1.701E+02	27±109	
Cs 137	5.490E+00	4.870E+00	8.000E+00			2.762E+04	2.450E+04	60±2460	
(m3)		(ft³)							
Total Air Flow	7353.66362								

3rd Qtr LVAS 6		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	1.150E+02	1.010E+01	1.290E+00			5.788E+05	5.084E+04		
Gross Beta	1.170E+02	9.080E+00	1.750E+00			5.889E+05	4.570E+04		
Sr 90	3.330E+00	1.180E+00	2.070E+00			1.676E+04	5.939E+03	1260±2290	
Pu-239/40	1.110E-02	6.880E-02	1.550E-01			5.587E+01	3.463E+02	23±56	
Pu-238	5.960E-03	5.660E-02	1.390E-01			3.000E+01	2.849E+02	6±62	
Am 241	4.340E-02	5.320E-02	7.690E-02			2.184E+02	2.678E+02	27±109	
Cs 137	2.460E+00	2.960E+00	4.960E+00			1.238E+04	1.490E+04	60±2460	
(m3)		(ft³)							
Total Air Flow	7351.091334								

3rd Qtr LVAS 7		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	3.910E+01	3.710E+00	6.990E-01			5.166E+05	4.902E+04		
Gross Beta	5.340E+01	4.500E+00	1.740E+00			7.056E+05	5.946E+04		
Sr 90	6.860E-01	1.090E+00	2.110E+00			9.064E+03	1.440E+04	1260±2290	
Pu-239/40	-1.940E-02	1.920E-02	1.270E-01			-2.563E+02	2.537E+02	23±56	
Pu-238	-1.380E-02	4.710E-02	1.510E-01			-1.823E+02	6.223E+02	6±62	
Am 241	-1.120E-02	3.820E-02	1.230E-01			-1.480E+02	5.047E+02	27±109	
Cs 137	4.090E+00	5.100E+00	8.560E+00			5.404E+04	6.739E+04	60±2460	
Total Air Flow		(m3) 2800.247626	(ft³)						

3rd Qtr Blank		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/filter			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	9.660E-01	4.030E-01	3.960E-01			3.578E+07	1.493E+07		
Gross Beta	5.130E-01	8.740E-01	1.670E+00			1.900E+07	3.237E+07		
Sr 90	-3.690E-01	9.720E-01	1.960E+00			-1.367E+07	3.600E+07	1260±2290	
Pu-239/40	-2.140E-02	6.200E-02	1.750E-01			-7.926E+05	2.296E+06	23±56	
Pu-238	-1.760E-02	4.540E-02	1.490E-01			-6.519E+05	1.681E+06	6±62	
Am 241	-2.380E-03	4.620E-02	1.200E-01			-8.815E+04	1.711E+06	27±109	
Cs 137	7.240E-02	5.530E+00	9.560E+00			2.681E+06	2.048E+08	60±2460	
		(m3)			(ft³)				
Total Air Flow	0								

2007 4th Qtr LVAS 1		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha						0.00	0.00		
Gross Beta	1.450E+02	1.110E+01	1.670E+00			7.193E+05	5.506E+04		
Sr 90	3.360E+00	1.120E+00	1.730E+00			1.667E+04	5.556E+03	1260±2290	
Pu-239/40	-2.290E-02	4.770E-02	1.590E-01			-1.136E+02	2.366E+02	23±56	
Pu-238	-4.270E-02	2.840E-02	1.600E-01			-2.118E+02	1.409E+02	6±62	
Am 241	-1.610E-02	4.150E-02	1.360E-01			-7.986E+01	2.059E+02	27±109	
Cs 137	-3.400E-01	5.480E+00	8.870E+00			-1.687E+03	2.718E+04	60±2460	
		(m3)	(ft ³)						
Total Air Flow	7459.05								

4th Qtr LVAS 2		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha						0.0	0.0		
Gross Beta	1.420E+02	1.100E+01	1.720E+00			8.821E+05	6.833E+04		
Sr 90	4.500E+00	1.150E+00	1.700E+00			2.795E+04	7.144E+03	1260±2290	
Pu-239/40	-2.810E-02	5.850E-02	1.960E-01			-1.746E+02	3.634E+02	23±56	
Pu-238	7.760E-03	7.370E-02	1.810E-01			4.821E+01	4.578E+02	6±62	
Am 241	5.490E-02	7.180E-02	1.160E-01			3.410E+02	4.460E+02	27±109	
Cs 137	2.320E+00	3.070E+00	5.160E+00			1.441E+04	1.907E+04	60±2460	
		(m3)	(ft³)						
Total Air Flow	5956.203								

4th Qtr LVAS 3		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha						0.0	0.0		
Gross Beta	1.850E+02	1.410E+01	1.560E+00			9.086E+05	6.925E+04		
Sr 90	3.040E+00	1.290E+00	2.060E+00			1.493E+04	6.336E+03	1260±2290	
Pu-239/40	-1.500E-02	5.110E-02	1.640E-01			-7.367E+01	2.510E+02	23±56	
Pu-238	-5.290E-02	3.360E-02	1.850E-01			-2.598E+02	1.650E+02	6±62	
Am 241	-1.950E-03	3.800E-02	9.880E-02			-9.577E+00	1.866E+02	27±109	
Cs 137	8.440E+00	6.020E+00	9.790E+00			4.145E+04	2.957E+04	60±2460	
Total Air Flow		(m3) 7533.67	(ft³)						

4th Qtr LVAS 4		Analytical Results Monthly Composite Sample			Data Summaries			
Analyte	Result	2 sigma	MDA	Lab	nBq/m3			
	pCi/filter			Flag	Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha					0.0	0.0		
Gross Beta	1.710E+02	1.310E+01	1.780E+00		8.800E+04	6.742E+04		
Sr 90	1.290E+00	1.080E+00	1.790E+00		6.639E+02	5.558E+03	1260±2290	
Pu-239/40	-2.260E-02	4.700E-02	1.570E-01		-1.163E+01	2.419E+02	23±56	
Pu-238	-3.120E-03	6.060E-02	1.580E-01		-1.606E+00	3.119E+02	6±62	
Am 241	-4.160E-02	2.630E-02	1.450E-01		-2.141E+01	1.354E+02	27±109	
Cs 137	1.750E+00	4.470E+00	7.680E+00		9.006E+02	2.300E+04	60±2460	
Total Air Flow		(m3) 7189.44	(ft³)					

4th Qtr LVAS 5		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha						0	0		
Gross Beta	1.780E+02	1.360E+01	1.850E+00			9.491E+05	7.251E+04		
Sr 90	2.680E+00	1.150E+00	1.830E+00			1.429E+04	6.132E+03	1260±2290	
Pu-239/40	-3.350E-02	4.110E-02	1.450E-01			-1.786E+02	2.191E+02	23±56	
Pu-238	-1.830E-02	3.820E-02	1.280E-01			-9.757E+01	2.037E+02	6±62	
Am 241	-1.610E-02	3.350E-02	1.120E-01			-8.584E+01	1.786E+02	27±109	
Cs 137	8.620E+00	5.850E+00	9.280E+00			4.596E+04	3.119E+04	60±2460	
		(m3)	(ft ³)						
Total Air Flow	6939.498								

4th Qtr LVAS 6		Analytical Results Monthly Composite Sample			Data Summaries			
Analyte	Result	2 sigma	MDA	Lab	nBq/m3			
	pCi/filter			Flag	Background Uncertainty Activities Result (2σ) EEG-90			
Gross Alpha					0	0		
Gross Beta	1.530E+02	1.180E+01	1.770E+00		8.216E+05	6.337E+04		
Sr 90	1.730E+00	1.180E+00	1.930E+00		9.290E+03	6.337E+03	1260±2290	
Pu-239/40	-2.130E-02	4.440E-02	1.490E-01		-1.144E+02	2.384E+02	23±56	
Pu-238	-2.140E-02	4.450E-02	1.490E-01		-1.149E+02	2.390E+02	6±62	
Am 241	3.900E-03	2.960E-02	8.110E-02		2.094E+01	1.590E+02	27±109	
Cs 137	3.760E+00	5.220E+00	5.290E+00		2.019E+04	2.803E+04	60±2460	
Total Air Flow		(m3) 6890.11	(ft³)					

4th Qtr LVAS 7		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq/m3			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha						0	0		
Gross Beta	1.840E+02	1.400E+01	1.770E+00			8.935E+05	6.798E+04		
Sr 90	1.150E+00	1.100E+00	1.830E+00			5.584E+03	5.342E+03	1260±2290	
Pu-239/40	-3.590E-03	6.970E-02	1.810E-01			-1.743E+01	3.385E+02	23±56	
Pu-238	-1.530E-02	5.220E-02	1.670E-01			-7.430E+01	2.535E+02	6±62	
Am 241	-9.090E-03	3.100E-02	9.960E-02			-4.414E+01	1.505E+02	27±109	
Cs 137	3.180E+00	3.120E+00	5.190E+00			1.544E+04	1.515E+04	60±2460	
Total Air Flow		(m3) 7619.387	(ft³)						

4th Qtr Blank		Analytical Results Monthly Composite Sample				Data Summaries			
Analyte	Result	2 sigma	MDA	Lab		nBq			
	pCi/filter			Flag		Result	Uncertainty (2σ)	Background Activities EEG-90	
Gross Alpha	1.570E+00	5.730E-01	5.870E-01			5.815E+07	2.122E+07		
Gross Beta	1.380E+00	1.120E+00	1.810E+00			5.111E+07	4.148E+07		
Sr 90	6.130E-01	1.080E+00	1.820E+00			2.270E+07	4.000E+07	1260±2290	
Pu-239/40	-2.120E-02	6.140E-02	1.730E-01			-7.852E+05	2.274E+06	23±56	
Pu-238	-4.090E-02	2.720E-02	1.530E-01			-1.515E+06	1.007E+06	6±62	
Am 241	-2.850E-02	2.140E-02	1.270E-01			-1.056E+06	7.926E+05	27±109	
Cs 137	3.240E+00	3.100E+00	5.160E+00			1.200E+08	1.148E+08	60±2460	
Total Air Flow		(m3) 0	(ft³)						