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June 2, 2009

Jody Plum
Department of Energy
Carlsbad Field Office
Carlsbad, NM 88220

Subject: Ambient Air Monitoring at the Waste Isolation Pilot Plant Conducted by NMED/DOE OB for the First Calendar Quarter 2008

Mr. Plum,

This letter transmits the subject report for your review.

The monitoring results are provided to DOE for review and comment prior to their release as final to other State of New Mexico and federal agencies, the NMED website and interested members of the public. If you have any questions, or would like copies of the complete data set, please contact me at 575-887-6851.

Sincerely,

Thomas Kesterson
Environmental Specialist –O
WIPP Oversight Section

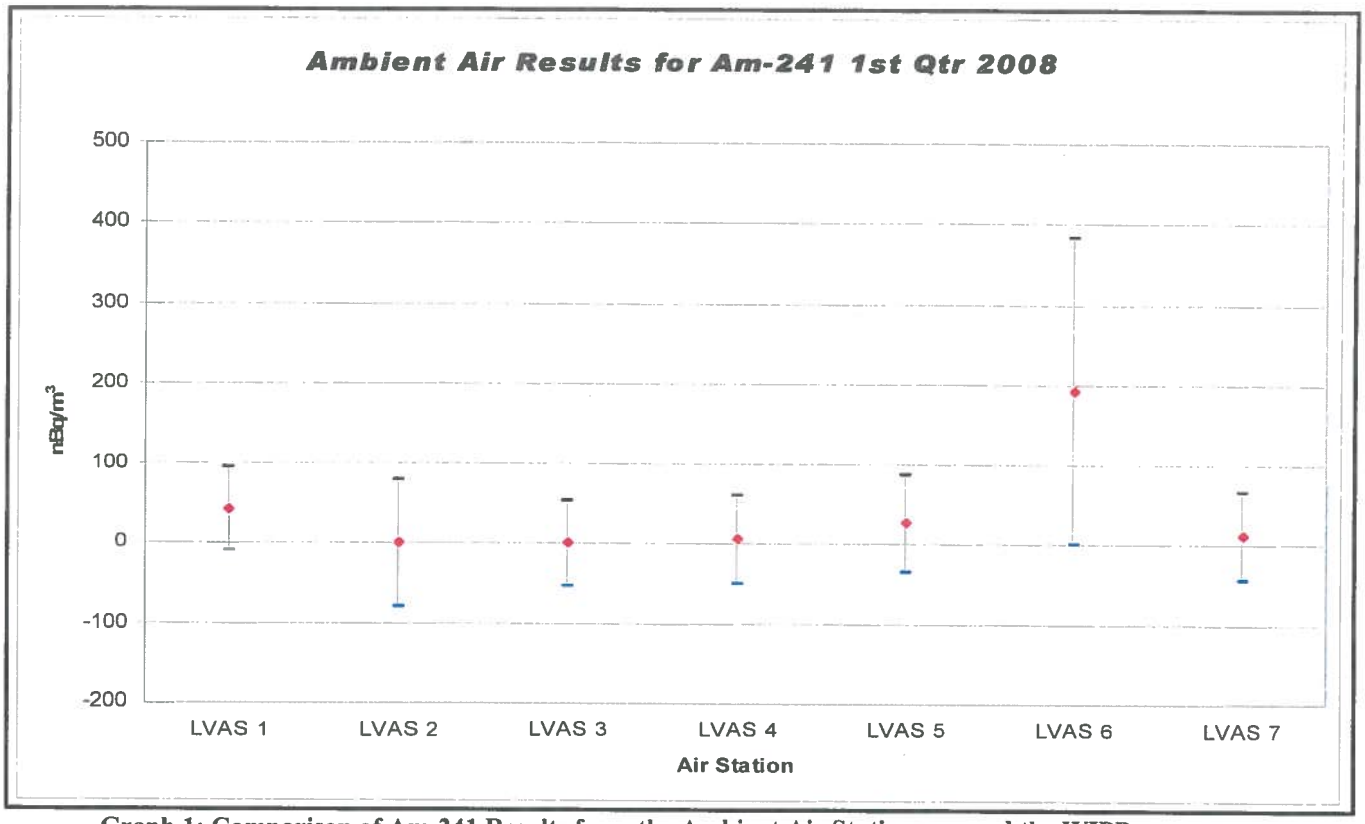
Enclosure: Draft data submittal entitled: "Ambient Air Monitoring at the Waste Isolation Pilot Plant Conducted by NMED/DOE OB for the First Calendar Quarter 2008" with the following enclosures:

1. Graph 1 – Comparison of Am-241 Results from the Ambient Air Stations around the WIPP.
2. Graph 2 - Comparison of Cs-137 Results from the Ambient Air Stations around the WIPP.
3. Graph 3 - Comparison of Pu-238 Results from the Ambient Air Stations around the WIPP.
4. Graph 4 -Comparison of Pu-239/240 Results from the Ambient Air Stations around the WIPP.
5. Graph 5 - Comparison of Sr-90 Results from the Ambient Air Stations around the WIPP.
6. Graph 6 - Comparison of U-234 Results from the Ambient Air Stations around the WIPP.
7. Graph 7 - Comparison of U-235 Results from the Ambient Air Stations around the WIPP.

8. Graph 8 - Comparison of U-238 Results from the Ambient Air Stations around the WIPP.
9. Table 1 - First Calendar Quarter 2008 Ambient Air laboratory Results.

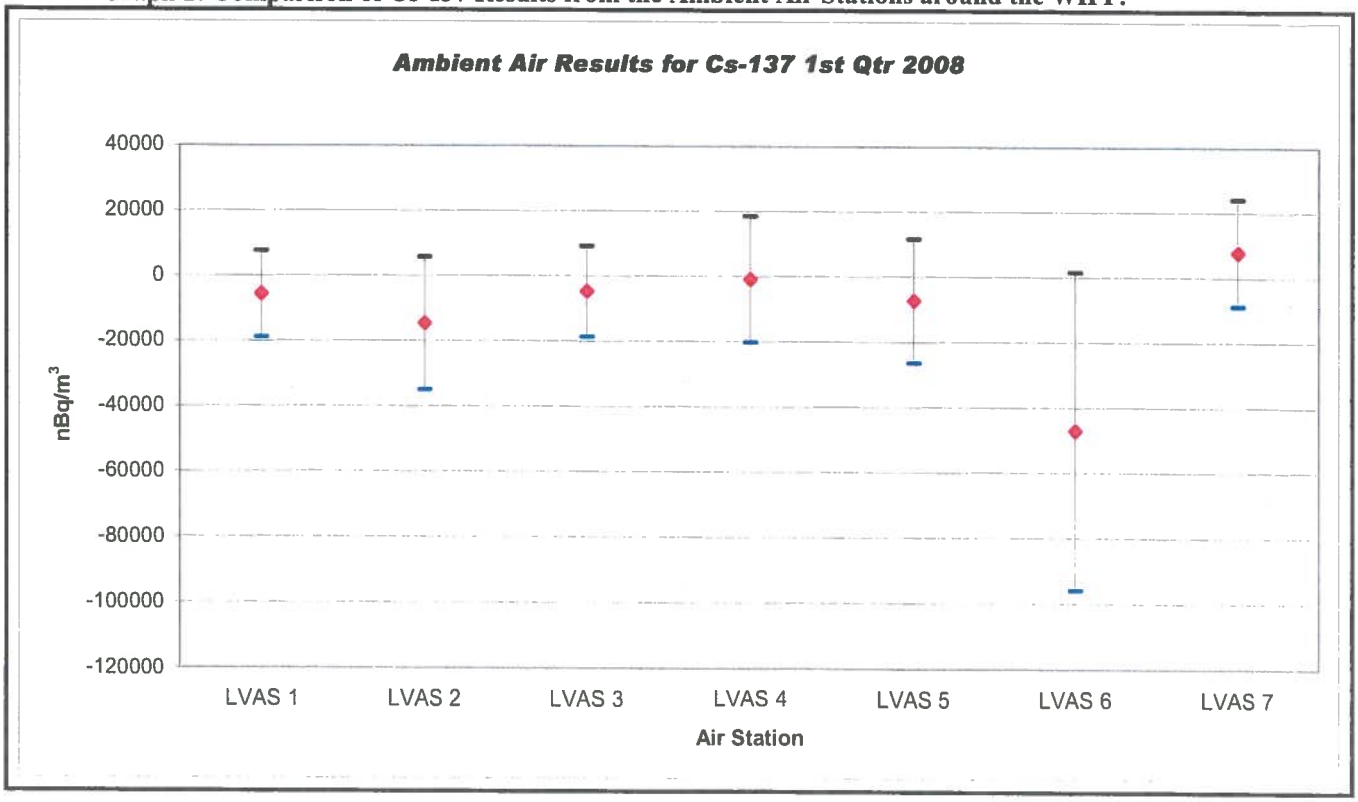
Cc: Dan Ferguson, Site Regulatory Specialist, DOE / CBFO
Tom Skibitski, Bureau Chief, NMED DOE OB
Barry Birch, Program Manager, NMED DOE OB Sandia

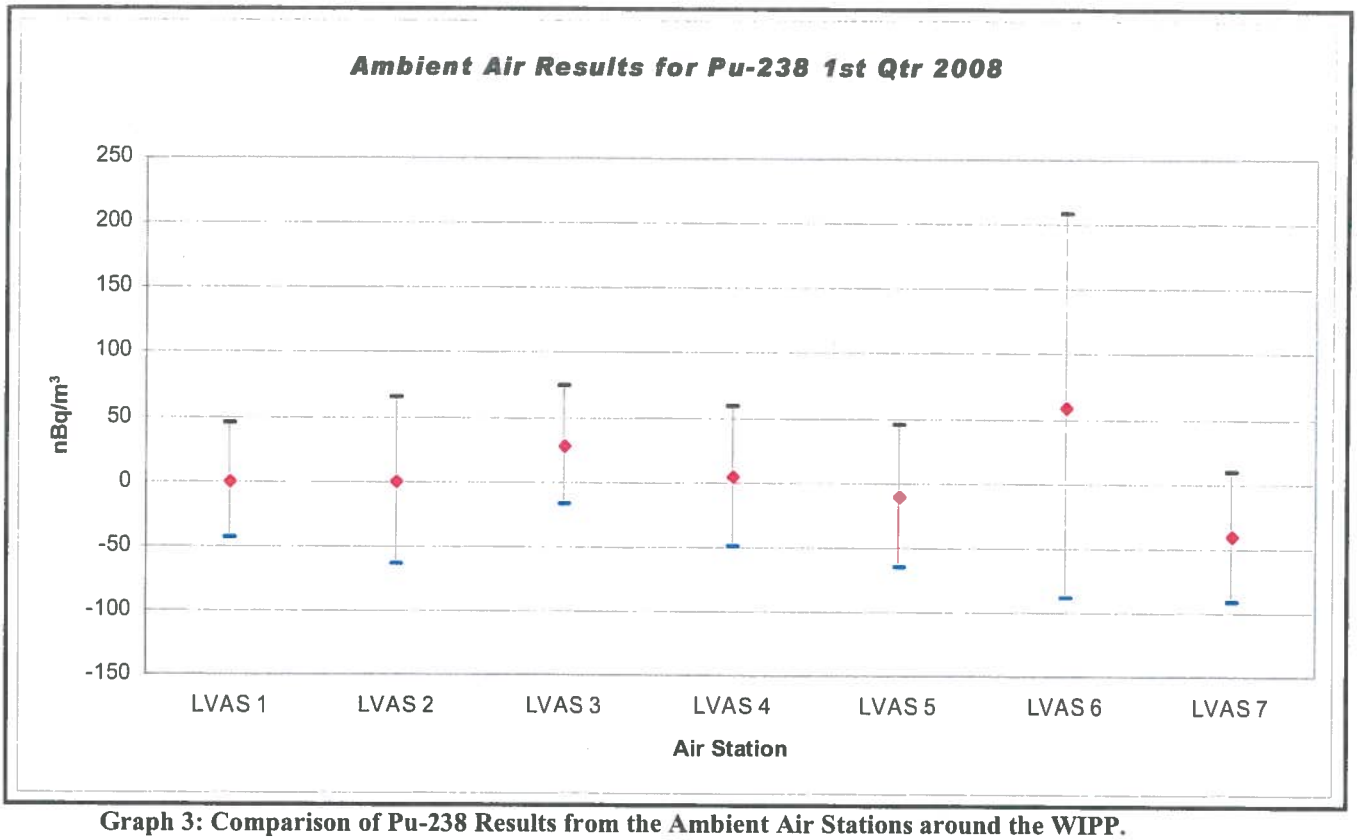
GRAPHS



Graph 1: Comparison of Am-241 Results from the Ambient Air Stations around the WIPP.

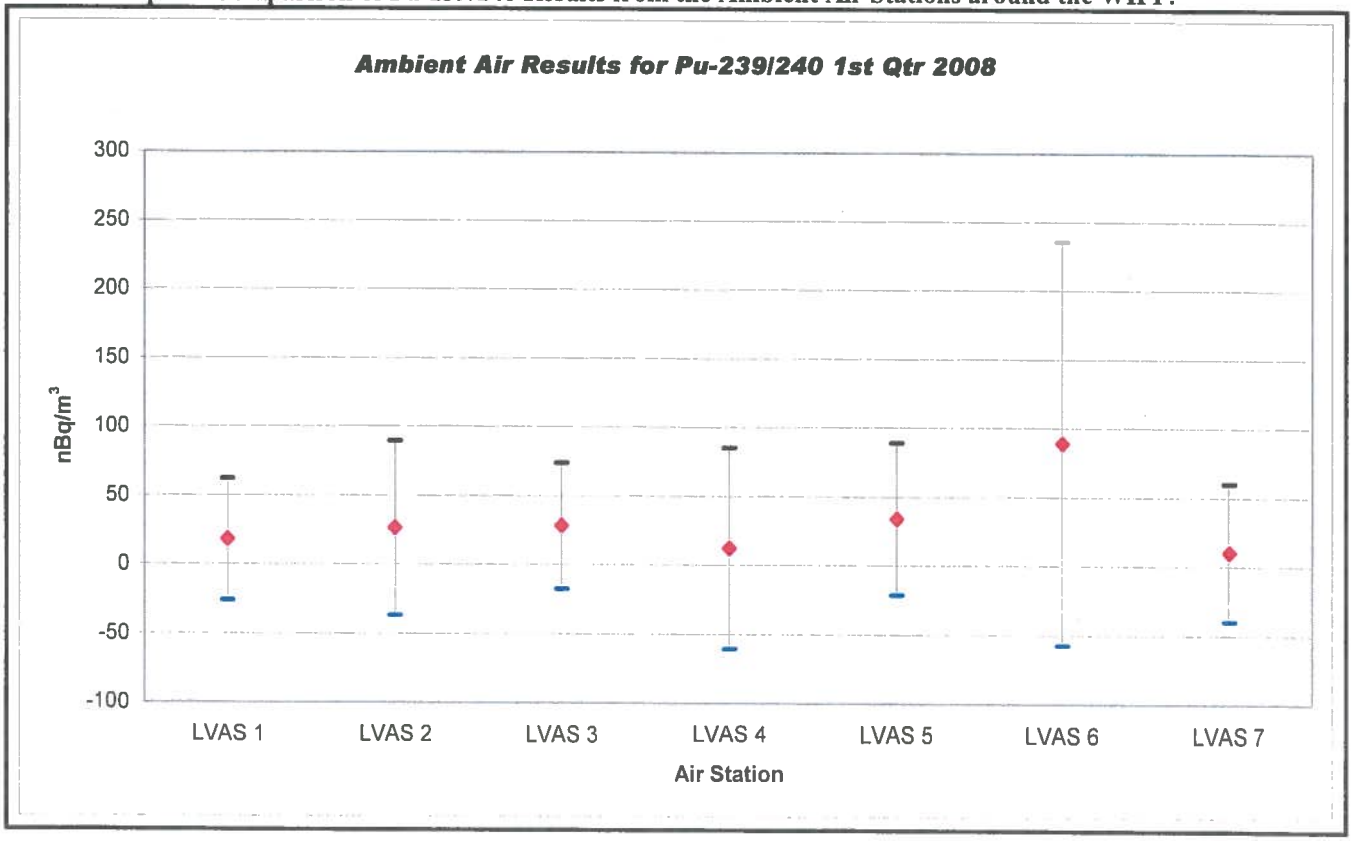
Graph 2: Comparison of Cs-137 Results from the Ambient Air Stations around the WIPP.

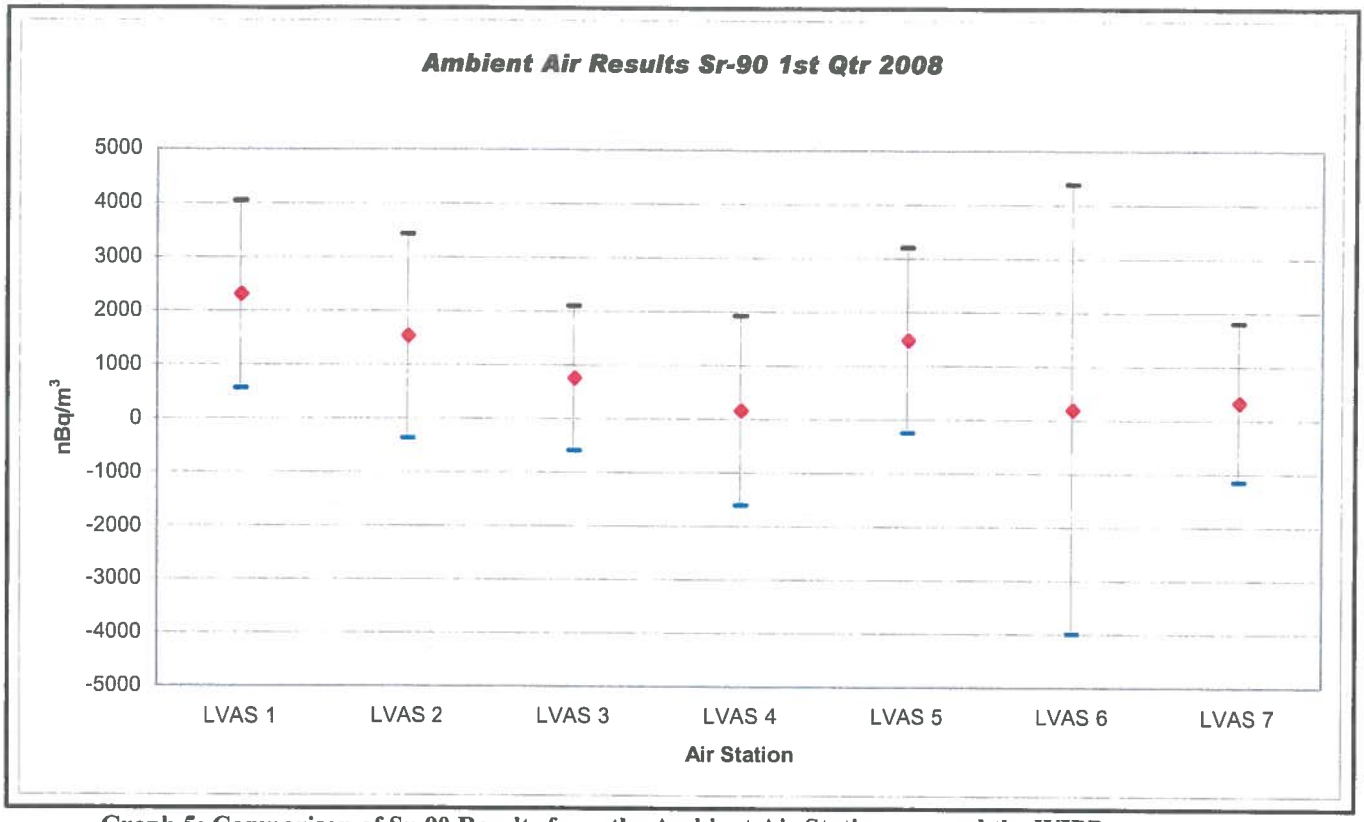




Graph 3: Comparison of Pu-238 Results from the Ambient Air Stations around the WIPP.

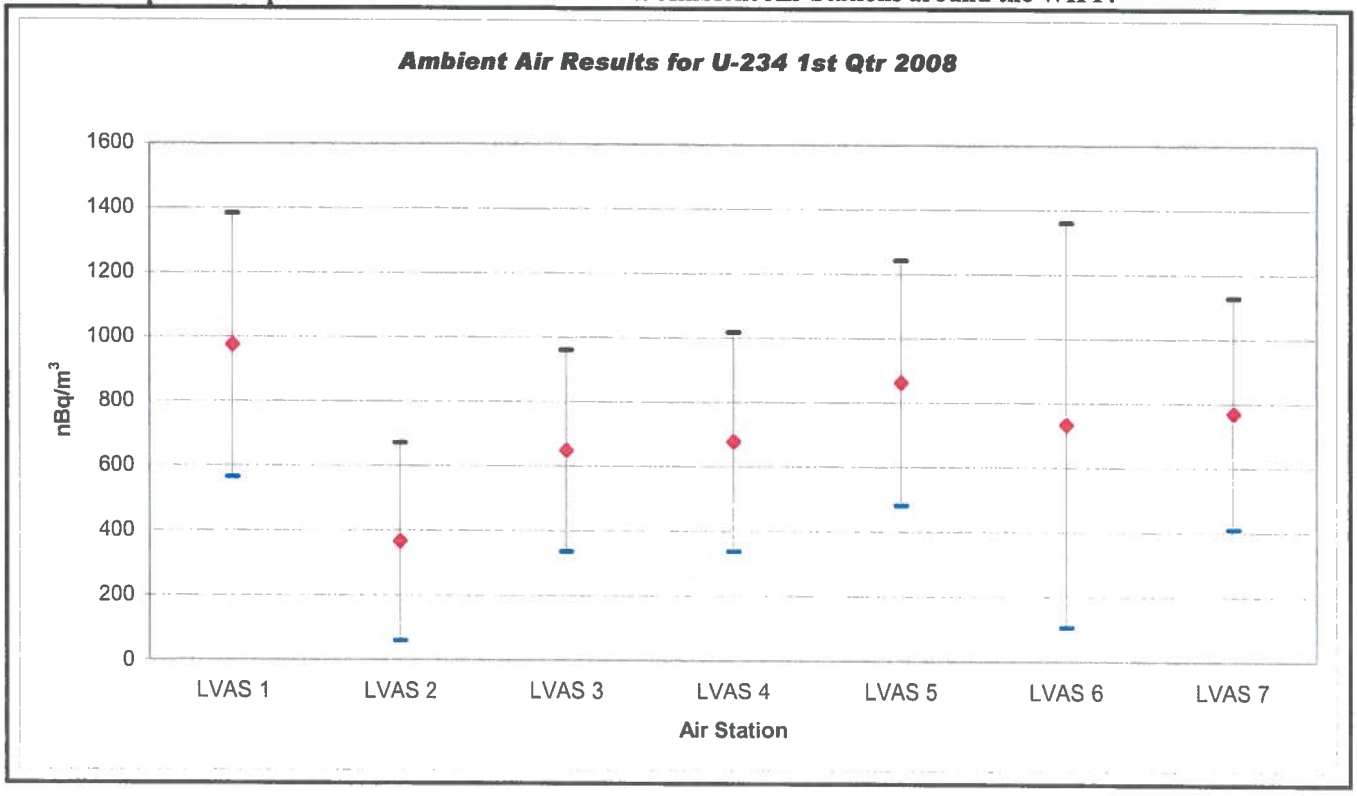
Graph 4: Comparison of Pu-239/240 Results from the Ambient Air Stations around the WIPP.

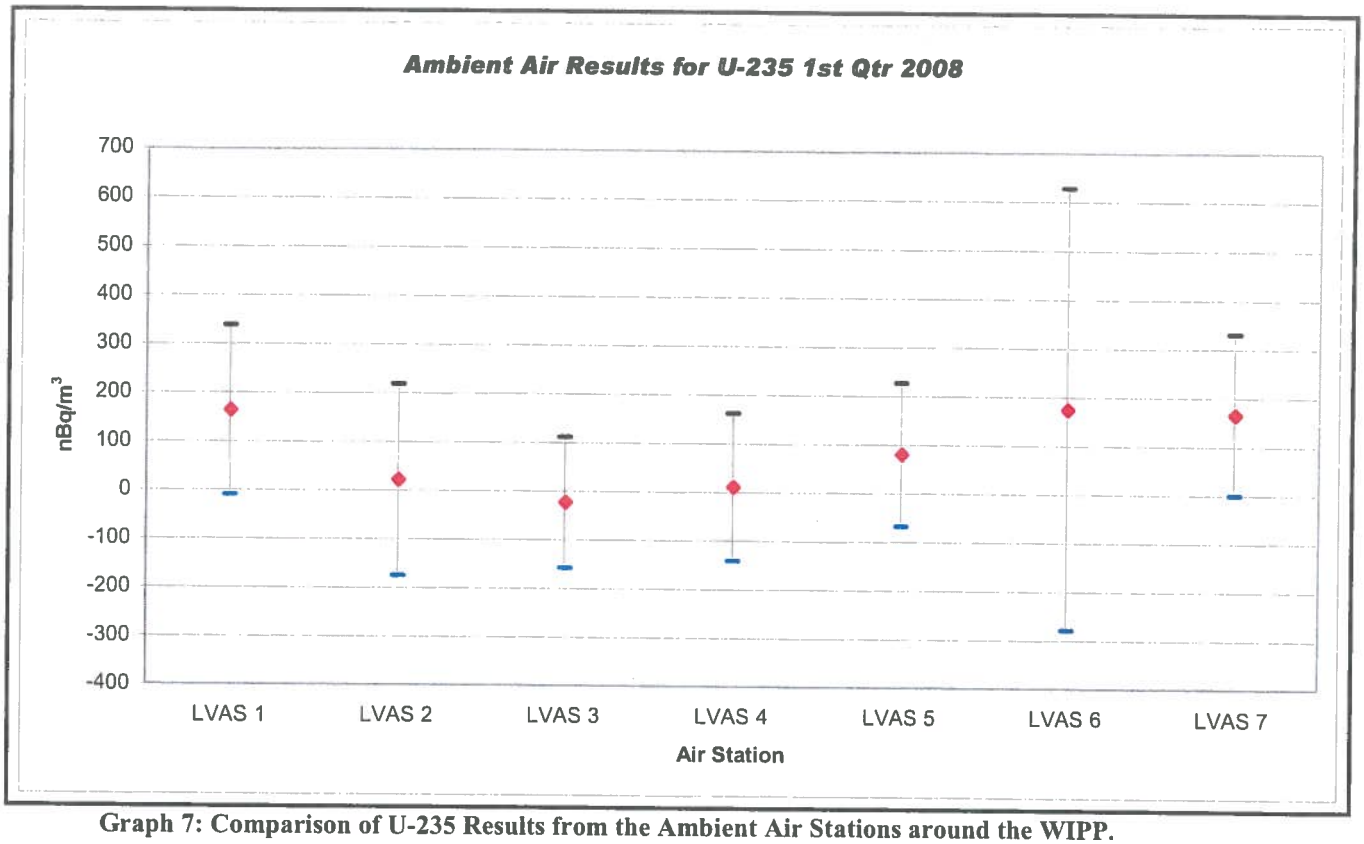




Graph 5: Comparison of Sr-90 Results from the Ambient Air Stations around the WIPP.

Graph 6: Comparison of U-234 Results from the Ambient Air Stations around the WIPP.





Graph 7: Comparison of U-235 Results from the Ambient Air Stations around the WIPP.

Graph 8: Comparison of U-238 Results from the Ambient Air Stations around the WIPP.

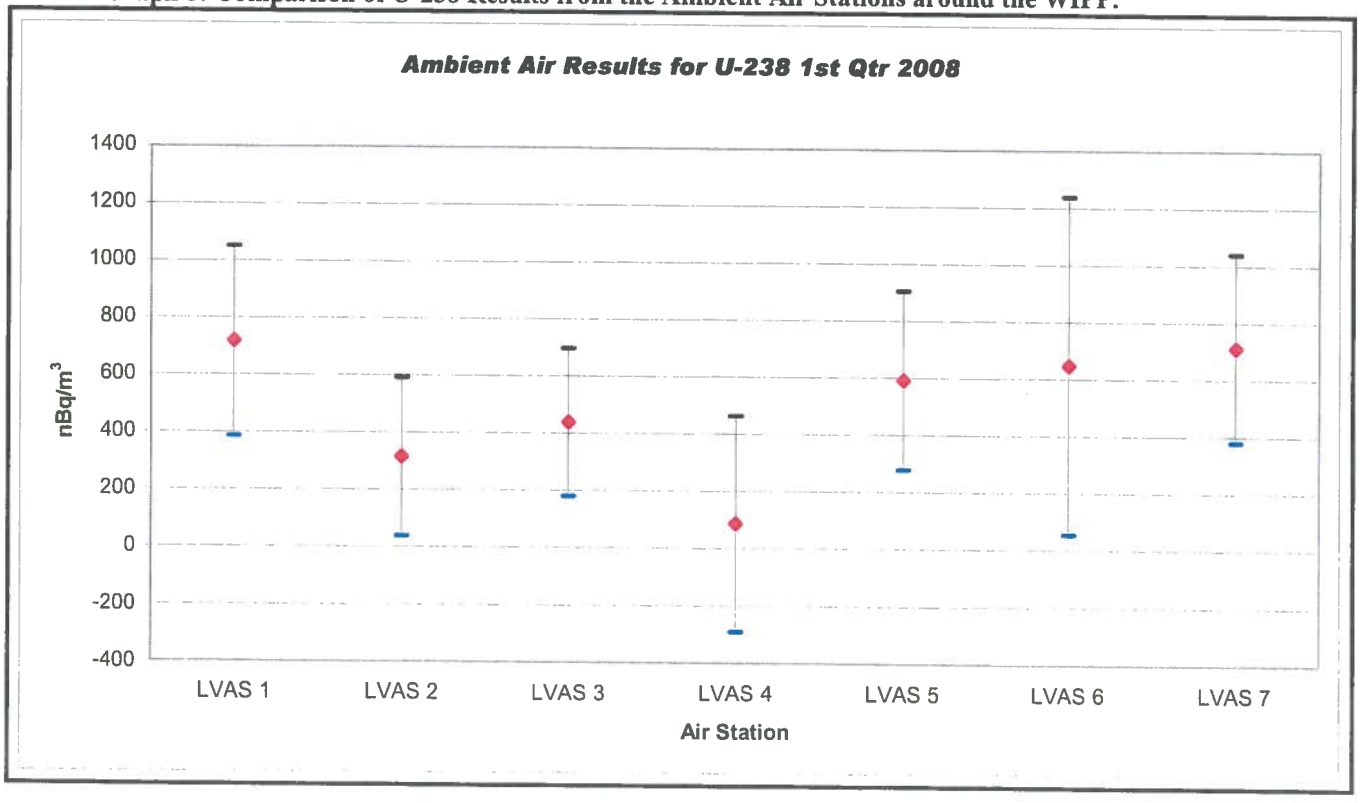


TABLE 1

First Calendar Quarter 2008 Ambient Air Laboratory Results

2008 1st Qtr
LVAS 1

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.1900	0.0800	0.0830	LT	973.5494	409.9155
U-235	0.0320	0.0340	0.0520	U	163.9662	174.2141
U-238	0.1400	0.0650	0.0580	LT	717.3522	333.0564
Sr 90	0.4500	0.3400	0.6800	U	2305.7748	1742.1410
Pu-239/40	0.0035	0.0086	0.0130	U	17.9338	44.0659
Pu-238	0.0000	0.0086	0.0130	U	0.0000	44.0659
Am 241	0.0083	0.0100	0.0056	LT	42.5287	51.2394
Cs 137	-1.1000	2.6000	4.5000	U	-5636.3385	13322.2545
Total Air Flow	7221.00	m^3				

2008 1st Qtr
LVAS 2

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.0500	0.0420	0.0600	U	364.7476	306.3880
U-235	0.0030	0.0270	0.0470	U	21.8849	196.9637
U-238	0.0430	0.0380	0.0500	U	313.6830	277.2082
Sr 90	0.2100	0.2600	0.5700	U	1531.9401	1896.6877
Pu-239/40	0.0036	0.0087	0.0130	U	26.2618	63.4661
Pu-238	0.0000	0.0088	0.0049	U	0.0000	64.1956
Am 241	0.0000	0.0110	0.0170	U	0.0000	80.2445
Cs 137	-2.0000	2.8000	4.9000	U	-14589.9054	20425.8675
Total Air Flow	5072.00	m^3				

2008 1st Qtr
LVAS 3

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.1200	0.0580	0.0450	LT	647.1360	312.7824
U-235	-0.0043	0.0250	0.0490	U	-23.1890	134.8200
U-238	0.0810	0.0480	0.0460	LT	436.8168	258.8544
Sr 90	0.1400	0.2500	0.5600	U	754.9920	1348.2000
Pu-239/40	0.0052	0.0085	0.0047	LT	28.0426	45.8388
Pu-238	0.0052	0.0085	0.0047	LT	28.0426	45.8388
Am 241	0.0000	0.0100	0.0056	U	0.0000	53.9280
Cs 137	-0.8800	2.6000	4.4000	U	-4745.6639	14021.2797
Total Air Flow	6861.00	m^3				

2008 1st Qtr
LVAS 4

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.1100	0.0560	0.0420	LT	676.6417	341.0138
U-235	0.0170	0.0250	0.0440	U	10.3522	152.2383
U-238	0.1400	0.0620	0.0160	LT	85.2535	377.5510
Sr 90	0.2600	0.2900	0.6100	U	158.3278	1765.9645
Pu-239/40	0.0200	0.0120	0.0049	LT	12.1791	73.0744
Pu-238	0.0072	0.0090	0.0049	LT	4.3845	54.8058
Am 241	0.0091	0.0090	0.0049	LT	5.5415	54.8058
Cs 137	-1.4000	3.2000	5.5000	U, M	-852.5346	19486.5043
Total Air Flow	6076.00	m^3				

2008 1st Qtr
LVAS 5

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.1400	0.0620	0.0300	LT	861.1804	381.3799
U-235	0.0130	0.0240	0.0180	U	79.9667	147.6309
U-238	0.0960	0.0510	0.0400	LT	590.5237	313.7157
Sr 90	0.2400	0.2800	0.6100	U	1476.3092	1722.3608
Pu-239/40	0.0055	0.0090	0.0049	LT	33.8321	55.3616
Pu-238	-0.0018	0.0090	0.0140	U	-11.0723	55.3616
Am 241	0.0043	0.0100	0.0058	U	26.4505	61.5129
Cs 137	-1.2000	3.1000	5.4000	U, M	-7381.5461	19068.9942
Total Air Flow	6015.00	m^3				

2008 1st Qtr
LVAS 6

Data Summaries

Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.0420	0.0360	0.0480	U	732.3280	627.7097
U-235	0.0100	0.0260	0.0460	U	174.3638	453.3459
U-238	0.0370	0.0340	0.0440	U	645.1461	592.8369
Sr 90	0.0110	0.2400	0.5600	U	191.8002	4184.7314
Pu-239/40	0.0051	0.0084	0.0130	U	88.9255	146.4656
Pu-238	0.0034	0.0085	0.0047	U	59.2837	148.2092
Am 241	0.0110	0.0110	0.0061	LT	191.8002	191.8002
Cs 137	-2.7000	2.8000	4.8000	U	-47078.2281	48821.8662
Total Air Flow	2122.00	m^3				

2008 1st Qtr *LVAS 7*					*Data Summaries*	
Analyte	Result	2 s TPU	MDC	Lab Flag	Result	Uncertainty (2σ)
	pCi/filter				nBq/m^3	
U-234	0.1300	0.0610	0.0420	LT	767.8799	360.3129
U-235	0.0280	0.0280	0.0190	LT	165.3895	165.3895
U-238	0.1200	0.0560	0.0310	LT	708.8123	330.7791
Sr 90	0.0550	0.2500	0.6000	U	324.8723	1476.6922
Pu-239/40	0.0017	0.0085	0.0130	U	10.0415	50.2075
Pu-238	-0.0070	0.0086	0.0210	U	-41.3474	50.7982
Am 241	0.0019	0.0094	0.0180	U	11.2229	55.5236
Cs 137	1.3000	2.8000	4.7000	U	7678.7995	16538.9527
Total Air Flow	6264.00	m^3				

Qualifiers / Flags:

U – Result is less than the sample Specific MDC.
LT – Result is less than Requested MDC, greater than sample specific MDC.
M – The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty
MDC – Minimum Detectable Concentration

April 13, 2009,

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, First Calendar Quarter 2008

Mr. Plum,

The enclosed "Sample Results" report concentrations of eight selected radionuclides from our low volume air sampling stations near the Waste Isolation Pilot Plant, as well as sites in Carlsbad, Malaga, and Artesia (please see accompanying maps). The sampling period was the first calendar quarter of 2008.

Equipment used include Gast Model 1023 vacuum pumps, Hi-Q Model PNLMNT-CNTRLLANL Flow Controllers, and Pall Corporation Versapor-3000T w/wa, 3.0 µm, 47 mm Supported Membrane Filters, Part Number 66387.

Requested analytes from each of the seven air sampling stations include Isotopic Plutonium (Pu-238, Pu-239/240), Isotopic Uranium (U-234, U-235, U-238), Americium-241, Cesium-137, and Strontium-90. Laboratory analysis was performed by ALS Paragon, with the Final Data Reports dated and signed 03/13/2009 by Laboratory Manager Lance Steere.

With eight analytes from seven different stations, there were, therefore, a total of fifty-six results. Of these fifty-six, thirty-seven results were below the sample MDA. The results from the remaining nineteen were above the sample MDA, but below the specified MDA.

To summarize, these results indicate no detections of these radionuclides above backgrounds establish by the Environmental Evaluation Group (EEG-90). These data will not be released for thirty days, allowing DOE and WIPP staff time for review and comment.

Please call me at 575-887-6851 if you have any questions.

Thank you,

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

CC: Tom Skibitski, Bureau Chief, DOE-OB