



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

December 28, 2004

ENTERED



Mr. Steve Zappe, WIPP Project Leader  
Hazardous Waste Permits Program  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 E. Rodeo Park Dr. Bldg. 1  
Santa Fe, New Mexico 87505-6303

**Subject:** Transmittal of the Waste Isolation Pilot Plant Groundwater Level Measurements for the Month of December 2004

Dear Mr. Zappe:

The purpose of this letter is to submit the Waste Isolation Pilot Plant groundwater level data for the month of December 2004, as required by Module V.J.2.b of the Hazardous Waste Facility Permit No. NM4890139088—TSDF.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Please feel free to contact Mr. Jody Plum at (505) 234-7462, if you have any questions regarding this data transmittal.

Sincerely,

  
L. L. Piper, Acting Manager  
Carlsbad Field Office

  
S. D. Warren, General Manager  
Washington TRU Solutions LLC

Enclosure

cc: w/enclosure  
C. Walker, Trinity Engineering

cc: w/o enclosure  
J. Kieling, NMED  
J. Bearzi, NMED



SUMMARY COMMENTS FOR THE WATER LEVEL MEASUREMENTS FOR THE  
MONTH OF DECEMBER 2004

1. The WIPP Groundwater Detection Monitoring Program Plan, Attachment L, Section L-4c (1) requires cumulative fluctuations noted in the Detection Monitoring Program wells of more than two feet in the course of one year which are not attributable to site tests or natural stabilization to be reported. None of the Water Quality Sampling Program (WQSP) wells indicate more than two feet of cumulative change from November 2003 through December 2004. Interim fluctuations in the DMP wells greater than two feet are related to specific pumping episodes or natural stabilization.
2. Groundwater level measurements were not taken at well H-15 due to instrumentation installed by Sandia National Laboratories (SNL). Also automated water level monitoring testing continues at well H-15. Water level measurements will not be taken from this well until all testing is completed and all instrumentation removed.
3. Groundwater level measurements were not taken at well SNL-9 due to SNL pump testing. Water level measurements will not be taken from this well until all testing is completed and all instrumentation removed.
4. Groundwater level measurements were not taken at well WIPP-26 due to road hazards after recent rainfall. Water level measurements will not be taken until road hazards have been repaired.
5. Adjusted freshwater heads are based on the most current fluid density measured for each well. Calendar year 2004 density survey was completed 12/15/04.

Waterlevel Measurements  
For  
December 2004

WELL NUMBER	ZONE	CASING ELEVATION ft amsl	DATE	TIME (MST)	DEPTH TO WATER ft	ADJUST TO TOC ft	ADJUSTED DEPTH TOC ft	ADJUSTED DEPTH METERS	WATER LEVEL ELEVATION ft amsl	ELEVATION IN METERS amsl	ADJUSTED FRESHWATER HEAD ft amsl
AEC-7	CUL	3657.29	12/07/04	08:27	617.71	0.00	617.71	188.28	3039.58	926.46	3062.65
C-2737 (PIP)	CUL	3400.19	12/08/04	10:59	390.24	0.89	389.35	118.67	3010.84	917.70	3015.95
DOE-1	CUL	3466.04	12/08/04	12:52	478.77	0.00	478.77	145.93	2987.27	910.52	3016.83
ERDA-9	CUL	3410.10	12/08/04	10:47	400.88	0.65	400.23	121.99	3009.87	917.41	3025.38
H-02a	CUL	3378.09	12/09/04	08:43	338.02	0.00	338.02	103.03	3040.07	926.61	3043.63
H-02b2	CUL	3378.31	12/09/04	08:35	339.96	0.00	339.96	103.62	3038.35	926.09	3040.71
H-02c	CUL	3378.41	12/09/04	08:24	340.04	0.00	340.04	103.64	3038.37	926.10	3051.29
H-03b2	CUL	3390.03	12/09/04	08:00	389.96	0.00	389.96	118.86	3000.07	914.42	3011.46
H-03b3	CUL	3388.67	12/09/04	08:05	384.36	0.00	384.36	117.15	3004.31	915.71	3014.19
H-04b	CUL	3333.35	12/08/04	11:52	330.56	0.00	330.56	100.75	3002.79	915.25	3006.41
H-05a	CUL	3506.24	12/07/04	09:26	473.98	0.00	473.98	144.47	3032.26	924.23	3072.30
H-05b	CUL	3506.04	12/07/04	09:20	476.38	0.00	476.38	145.20	3029.66	923.44	3074.67
H-06a	CUL	3348.11	12/06/04	09:37	293.10	0.00	293.10	89.34	3055.01	931.17	3067.29
H-06b	CUL	3348.25	12/06/04	09:48	294.27	0.00	294.27	89.69	3053.98	930.85	3066.21
H-07b1	CUL	3164.17	12/07/04	13:39	163.72	0.00	163.72	49.90	3000.45	914.54	3000.91
H-07b2	CUL	3165.07	12/07/04	13:33	164.87	0.00	164.87	50.25	3000.20	914.46	3000.11
H-09c (PIP)	CUL	3407.30	12/07/04	11:32	411.38	0.08	411.30	125.36	2996.00	913.18	2996.25
H-10c	CUL	3688.64	12/07/04	10:47	663.44	0.00	663.44	202.22	3025.20	922.08	3025.20
H-11b1	CUL	3411.62	12/08/04	13:18	418.00	0.00	418.00	127.41	2993.62	912.46	3017.72
H-11b4	CUL	3410.89	12/08/04	13:06	424.76	0.00	424.76	129.47	2986.13	910.17	3006.33
H-17	CUL	3385.31	12/08/04	13:36	420.43	0.00	420.43	128.15	2964.88	903.70	3014.59
H-19b0	CUL	3418.38	12/09/04	07:35	427.21	0.00	427.21	130.21	2991.17	911.71	3013.03
H-19b2	CUL	3419.01	12/09/04	07:00	428.58	0.00	428.58	130.63	2990.43	911.48	3012.35
H-19b3	CUL	3419.09	12/09/04	07:30	428.76	0.00	428.76	130.69	2990.33	911.45	3012.14
H-19b4	CUL	3419.03	12/09/04	07:18	428.00	0.00	428.00	130.45	2991.03	911.67	3012.74
H-19b5	CUL	3418.63	12/09/04	07:12	428.03	0.00	428.03	130.46	2990.60	911.53	3012.22
H-19b6	CUL	3419.07	12/09/04	07:23	428.68	0.00	428.68	130.66	2990.39	911.47	3012.14
H-19b7	CUL	3418.99	12/09/04	07:41	428.78	0.00	428.78	130.69	2990.21	911.42	3011.99
I-461	CUL	3289.48	12/06/04	09:04	239.30	0.00	239.30	72.94	3050.18	929.69	3052.78
P-17	CUL	3337.24	12/08/04	13:49	351.25	0.00	351.25	107.06	2985.99	910.13	3000.34
SNL-01	CUL	3512.84	12/06/04	12:22	438.65	0.00	438.65	133.70	3074.19	937.01	3078.65
SNL-02	CUL	3323.03	12/06/04	10:09	253.13	0.00	253.13	77.15	3069.90	935.71	3073.16
SNL-03	CUL	3490.34	12/06/04	11:38	423.23	0.00	423.23	129.00	3067.11	934.86	3076.74
SNL-05	CUL	3381.88	12/06/04	11:14	311.06	0.00	311.06	94.81	3070.82	935.99	3072.86
SNL-12	CUL	3339.44	12/07/04	13:06	337.91	0.00	337.91	102.99	3001.53	914.87	3002.45
WIPP-12	CUL	3472.06	12/08/04	09:43	439.77	0.00	439.77	134.04	3032.29	924.24	3069.11
WIPP-13	CUL	3405.71	12/07/04	07:15	348.87	0.00	348.87	106.34	3056.84	931.72	3067.40
WIPP-19	CUL	3435.14	12/08/04	10:18	394.56	0.00	394.56	120.26	3040.58	926.77	3078.45
WIPP-21	CUL	3418.96	12/08/04	10:38	401.81	0.00	401.81	122.47	3017.15	919.63	3041.37
WIPP-22	CUL	3428.12	12/08/04	10:28	396.98	0.00	396.98	121.00	3031.14	923.69	3062.30
WIPP-25 (PIP)	CUL	3214.39	12/06/04	08:40	151.23	0.42	150.81	45.97	3063.58	933.78	3060.47
WIPP-27 (PIP)	CUL	3178.98	12/06/04	07:55	93.96	0.42	93.54	28.51	3085.44	940.44	3091.63
WIPP-29	CUL	2978.26	12/07/04	14:12	10.29	0.00	10.29	3.14	2967.97	904.64	2971.30
WIPP-30 (PIP)	CUL	3429.05	12/06/04	11:47	358.29	0.70	357.59	108.99	3071.46	936.18	3078.61
WQSP-1	CUL	3419.20	12/08/04	07:33	364.48	0.16	364.32	111.04	3054.88	931.13	3071.62
WQSP-2	CUL	3463.90	12/08/04	08:22	403.99	0.16	403.83	123.09	3060.07	932.71	3079.84
WQSP-3	CUL	3480.30	12/08/04	09:30	468.41	0.16	468.25	142.72	3012.05	918.07	3069.22
WQSP-4	CUL	3433.00	12/08/04	12:26	444.69	0.16	444.53	135.49	2988.47	910.89	3013.50
WQSP-5	CUL	3384.40	12/08/04	12:14	380.61	0.16	380.45	115.96	3003.95	915.60	3011.03
WQSP-6	CUL	3364.70	12/08/04	11:22	347.21	0.16	347.05	105.78	3017.65	919.78	3021.41
C-2737 (ANNULUS)	MAG	3399.30	12/08/04	11:07	256.15	0.00	256.15	78.07	3143.15	958.03	*
H-02b1	MAG	3378.46	12/09/04	08:27	234.70	0.00	234.70	71.54	3143.76	958.22	*
H-03b1	MAG	3390.64	12/09/04	07:49	245.45	0.00	245.45	74.81	3145.19	958.65	*
H-04c	MAG	3334.04	12/08/04	12:00	192.70	0.00	192.70	58.73	3141.34	957.48	*
H-05c	MAG	3506.04	12/07/04	09:33	349.36	0.00	349.36	106.48	3156.68	962.16	*
H-06c	MAG	3348.52	12/06/04	09:44	281.43	0.00	281.43	85.78	3067.09	934.85	*
H-08a	MAG	3432.99	12/07/04	12:04	405.68	0.00	405.68	123.65	3027.31	922.72	*
H-09c (ANNULUS)	MAG	3407.30	12/07/04	11:37	271.79	0.00	271.79	82.84	3135.51	955.70	*
H-10a	MAG	3688.67	12/07/04	10:40	466.65	0.00	466.65	142.23	3222.02	982.07	*
H-11b2	MAG	3411.64	12/08/04	13:13	278.40	0.00	278.40	84.86	3133.24	955.01	*
H-14	MAG	3347.11	12/08/04	14:44	236.51	0.00	236.51	72.09	3110.60	948.11	*
H-18	MAG	3414.21	12/08/04	07:55	338.90	0.00	338.90	103.30	3075.31	937.35	*
WIPP-18	MAG	3458.76	12/08/04	09:55	314.20	0.00	314.20	95.77	3144.56	958.46	*
WIPP-25 (ANNULUS)	MAG	3214.39	12/06/04	08:44	152.86	0.00	152.86	46.59	3061.53	933.15	*
H-03d/DL (PVC)	DL	3390.01	12/09/04	07:55	314.23	2.22	312.01	95.10	3078.00	938.17	*
WQSP-6a	DL	3363.80	12/08/04	11:37	166.91	0.25	166.66	50.80	3197.14	974.49	*

Waterlevel Measurements  
For  
December 2004

WELL NUMBER	ZONE	CASING ELEVATION ft amsl	DATE	TIME (MST)	DEPTH TO WATER ft	ADJUST TO TOC ft	ADJUSTED DEPTH TOC ft	ADJUSTED DEPTH METERS	WATER LEVEL ELEVATION ft amsl	ELEVATION IN METERS amsl	ADJUSTED FRESHWATER HEAD ft amsl
H-08c	RUS/SAL	3432.90	12/07/04	12:12	451.72	0.00	451.72	137.68	2981.18	908.66	*
AEC-8	B/C	3537.10	12/07/04	09:00	469.28	0.00	469.28	143.04	3067.82	935.07	*
CB-1(PIP)	B/C	3328.87	12/08/04	14:13	603.01	0.00	603.01	183.80	2725.86	830.84	*
DOE-2	B/C	3418.96	12/07/04	07:51	743.51	0.00	743.51	226.62	2675.45	815.48	*
C-2505	SR/D	3413.05	12/09/04	11:36	44.94	0.00	44.94	13.70	3368.11	1026.60	*
C-2506	SR/D	3412.87	12/09/04	11:27	44.34	0.00	44.34	13.51	3368.53	1026.73	*
C-2507	SR/D	3410.01	12/09/04	11:23	44.86	0.00	44.86	13.67	3365.15	1025.70	*
C-2811	SR/D	3398.92	12/09/04	08:50	58.02	0.00	58.02	17.68	3340.90	1018.31	*
PZ-01	SR/D	3413.41	12/09/04	11:11	41.98	0.00	41.98	12.80	3371.43	1027.61	*
PZ-02	SR/D	3413.42	12/09/04	11:41	42.85	0.00	42.85	13.06	3370.57	1027.35	*
PZ-03	SR/D	3416.15	12/09/04	11:46	44.32	0.00	44.32	13.51	3371.83	1027.73	*
PZ-04	SR/D	3412.10	12/09/04	11:15	46.45	0.00	46.45	14.16	3365.65	1025.85	*
PZ-05	SR/D	3415.31	12/09/04	11:51	41.57	0.00	41.57	12.67	3373.74	1028.32	*
PZ-06	SR/D	3413.49	12/09/04	11:59	42.90	0.00	42.90	13.08	3370.59	1027.36	*
PZ-07	SR/D	3413.99	12/09/04	10:54	36.93	0.00	36.93	11.26	3377.06	1029.33	*
PZ-09	SR/D	3421.21	12/09/04	10:37	55.41	0.00	55.41	16.89	3365.80	1025.90	*
PZ-10	SR/D	3405.80	12/09/04	09:17	35.11	0.00	35.11	10.70	3370.69	1027.39	*
PZ-11	SR/D	3418.95	12/09/04	09:33	44.70	0.00	44.70	13.62	3374.25	1028.47	*
PZ-12	SR/D	3408.99	12/09/04	09:07	51.83	0.00	51.83	15.80	3357.16	1023.26	*

\* Density data not acquired, therefore adjusted freshwater head measurements cannot be calculated for these wells.