



**Department of Energy**

Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221



RECEIVED

MAY 10 2004



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: Waste Isolation Pilot Plant's Groundwater Level Data for April 2004

Dear Mr. Zappe:

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

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

If you have any questions regarding this data transmittal, please contact Mr. Jody Plum at (505) 234-7462.

Sincerely,

*Chuan-Fu Wu for*

R. Paul Detwiler, Acting Manager  
Carlsbad Field Office

*Steve Warren*

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

Enclosure

cc: w/enclosure  
C. Walker, Trinity Engineering  
C. Byrum, EPA

cc: w/o enclosure  
S. Martin, NMED  
J. Kieling, NMED



SUMMARY COMMENTS FOR THE WATER LEVEL MEASUREMENTS FOR THE  
MONTH OF APRIL 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 is 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 May 2003 through April 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 wells SNL-3 and H-15 due to instrumentation installed by Sandia National Laboratories (SNL). These wells will not have water level measurements taken from them until SNL completes their well testing and removes their instrumentation.
3. CB-1 and DOE-2 were reconfigured to Bell Canyon monitoring wells in February 2004 and March 2004, respectively.
4. No water level measurement was taken at H-12, due to an obstruction at approximately 105 feet.
5. No water level measurement was taken at WIPP-22 due to inaccessibility and construction in the area surrounding the well.
6. Adjusted freshwater heads are based on the most current fluid density measured for each well.
7. No water level measurement was obtained at AEC-7 because it was being reconfigured as a Culebra monitoring well.
8. Water levels were taken from the shallow subsurface water wells out of the usual quarterly sequence to monitor effects of the heavy rainfall April 2 through 4.
9. The well bore fluid density in wells SNL-2, SNL-3, SNL-9, and SNL-12 have changed from those used in the previous round due to additional well development.

Waterlevel Measurements  
For  
April 2004

| WELL NUMBER      | ZONE    | CASING ELEVATION<br>ft amsl | DATE     | TIME (MST) | DEPTH TO WATER<br>ft | ADJUST TO TOC<br>ft | ADJUSTED DEPTH TOC<br>ft | ADJUSTED DEPTH METERS | WATER LEVEL ELEVATION<br>ft amsl | ELEVATION IN METERS<br>amsl | ADJUSTED FRESHWATER HEAD<br>ft amsl |
|------------------|---------|-----------------------------|----------|------------|----------------------|---------------------|--------------------------|-----------------------|----------------------------------|-----------------------------|-------------------------------------|
| C-2737 (PIP)     | CUL     | 3399.30                     | 04/14/04 | 10:53      | 390.94               | 0.75                | 390.19                   | 118.93                | 3009.11                          | 917.18                      | 3009.11                             |
| DOE-1            | CUL     | 3466.04                     | 04/13/04 | 10:53      | 483.54               | 0.00                | 483.54                   | 147.38                | 2982.50                          | 909.07                      | 3011.46                             |
| ERDA-9           | CUL     | 3410.10                     | 04/14/04 | 09:21      | 402.45               | 0.65                | 401.80                   | 122.47                | 3008.30                          | 916.93                      | 3023.73                             |
| H-02b2           | CUL     | 3378.31                     | 04/14/04 | 09:11      | 339.65               | 0.00                | 339.65                   | 103.53                | 3038.66                          | 926.18                      | 3041.02                             |
| H-03b2           | CUL     | 3390.03                     | 04/14/04 | 08:05      | 390.60               | 0.00                | 390.60                   | 119.05                | 2999.43                          | 914.23                      | 3010.80                             |
| H-04b            | CUL     | 3333.35                     | 04/13/04 | 11:15      | 332.57               | 0.00                | 332.57                   | 101.37                | 3000.78                          | 914.64                      | 3004.36                             |
| H-05b            | CUL     | 3506.04                     | 04/13/04 | 14:14      | 476.50               | 0.00                | 476.50                   | 145.24                | 3029.54                          | 923.40                      | 3074.54                             |
| H-06b            | CUL     | 3348.25                     | 04/12/04 | 12:37      | 295.77               | 0.00                | 295.77                   | 90.15                 | 3052.48                          | 930.40                      | 3064.66                             |
| H-07b2           | CUL     | 3165.07                     | 04/12/04 | 08:10      | 167.59               | 0.00                | 167.59                   | 51.08                 | 2997.48                          | 913.63                      | 2997.39                             |
| H-09c (PIP)      | CUL     | 3407.30                     | 04/13/04 | 07:51      | 413.01               | 0.08                | 412.93                   | 125.86                | 2994.37                          | 912.68                      | 2994.62                             |
| H-10c            | CUL     | 3688.64                     | 04/13/04 | 08:46      | 663.70               | 0.00                | 663.70                   | 202.30                | 3031.94                          | 922.00                      | 3024.94                             |
| H-11b4           | CUL     | 3410.89                     | 04/13/04 | 09:46      | 427.03               | 0.00                | 427.03                   | 130.16                | 2983.86                          | 909.48                      | 3003.91                             |
| H-17             | CUL     | 3385.31                     | 04/13/04 | 10:04      | 422.49               | 0.00                | 422.49                   | 128.77                | 2962.82                          | 903.07                      | 3012.19                             |
| H-19b0           | CUL     | 3418.38                     | 04/13/04 | 11:02      | 428.22               | 0.00                | 428.22                   | 130.52                | 2990.16                          | 911.40                      | 3011.96                             |
| P-17             | CUL     | 3337.24                     | 04/13/04 | 10:38      | 353.85               | 0.54                | 353.31                   | 107.69                | 2983.93                          | 909.50                      | 2998.14                             |
| SNL-02           | CUL     | 3323.03                     | 04/12/04 | 11:04      | 257.95               | 0.00                | 257.95                   | 78.62                 | 3065.08                          | 934.24                      | 3068.27                             |
| SNL-09           | CUL     | 3360.95                     | 04/12/04 | 11:44      | 312.68               | 0.00                | 312.68                   | 95.30                 | 3048.27                          | 929.11                      | 3052.55                             |
| SNL-12           | CUL     | 3339.44                     | 04/13/04 | 08:12      | 340.50               | 0.00                | 340.50                   | 103.78                | 2998.94                          | 914.08                      | 2999.85                             |
| WIPP-12          | CUL     | 3472.06                     | 04/14/04 | 09:48      | 440.09               | 0.00                | 440.09                   | 134.14                | 3031.97                          | 924.14                      | 3068.75                             |
| WIPP-13          | CUL     | 3405.71                     | 04/13/04 | 14:46      | 349.71               | 0.00                | 349.71                   | 106.59                | 3056.00                          | 931.47                      | 3066.53                             |
| WIPP-19          | CUL     | 3435.14                     | 04/14/04 | 10:00      | 395.00               | 0.00                | 395.00                   | 120.40                | 3040.14                          | 926.63                      | 3077.97                             |
| WIPP-21          | CUL     | 3418.96                     | 04/14/04 | 10:18      | 404.23               | 0.00                | 404.23                   | 123.21                | 3014.73                          | 918.89                      | 3038.78                             |
| WIPP-25 (PIP)    | CUL     | 3214.39                     | 04/12/04 | 10:35      | 155.04               | 0.42                | 154.62                   | 47.13                 | 3059.77                          | 932.62                      | 3056.70                             |
| WIPP-26          | CUL     | 3153.20                     | 04/12/04 | 08:43      | 130.27               | 0.00                | 130.27                   | 39.71                 | 3022.93                          | 921.39                      | 3023.07                             |
| WIPP-27 (PIP)    | CUL     | 3178.98                     | 04/12/04 | 09:54      | 98.70                | 0.42                | 98.28                    | 29.96                 | 3080.70                          | 939.00                      | 3086.75                             |
| WIPP-29          | CUL     | 2978.26                     | 04/12/04 | 09:12      | 10.58                | 0.00                | 10.58                    | 3.22                  | 2967.68                          | 904.55                      | 2970.96                             |
| WIPP-30 (PIP)    | CUL     | 3429.05                     | 04/13/04 | 13:13      | 359.93               | 0.70                | 359.23                   | 109.49                | 3069.82                          | 935.68                      | 3076.93                             |
| WQSP-1           | CUL     | 3419.20                     | 04/14/04 | 11:30      | 365.69               | 0.16                | 365.53                   | 111.41                | 3053.67                          | 930.76                      | 3070.35                             |
| WQSP-2           | CUL     | 3463.90                     | 04/14/04 | 11:18      | 404.38               | 0.16                | 404.22                   | 123.21                | 3059.68                          | 932.59                      | 3079.43                             |
| WQSP-3           | CUL     | 3480.30                     | 04/14/04 | 09:40      | 469.12               | 0.16                | 468.96                   | 142.94                | 3011.34                          | 917.86                      | 3068.40                             |
| WQSP-4           | CUL     | 3433.00                     | 04/14/04 | 08:15      | 445.58               | 0.16                | 445.42                   | 135.76                | 2987.58                          | 910.61                      | 3012.54                             |
| WQSP-5           | CUL     | 3384.40                     | 04/14/04 | 08:37      | 381.08               | 0.16                | 380.92                   | 116.10                | 3003.48                          | 915.46                      | 3010.55                             |
| WQSP-6           | CUL     | 3363.80                     | 04/14/04 | 08:47      | 346.72               | 0.16                | 346.56                   | 105.63                | 3017.24                          | 919.65                      | 3020.99                             |
| C-2737 (ANNULUS) | MAG     | 3399.30                     | 04/14/04 | 10:57      | 260.40               | 0.00                | 260.40                   | 79.37                 | 3138.90                          | 956.74                      | *                                   |
| H-02b1           | MAG     | 3378.46                     | 04/14/04 | 09:07      | 233.60               | 0.00                | 233.60                   | 71.20                 | 3144.86                          | 958.55                      | *                                   |
| H-03b1           | MAG     | 3390.64                     | 04/14/04 | 07:50      | 250.69               | 0.00                | 250.69                   | 76.41                 | 3139.95                          | 957.06                      | *                                   |
| H-04c            | MAG     | 3334.04                     | 04/13/04 | 11:20      | 192.32               | 0.00                | 192.32                   | 58.62                 | 3141.72                          | 957.60                      | *                                   |
| H-05c            | MAG     | 3506.04                     | 04/13/04 | 14:20      | 349.54               | 0.00                | 349.54                   | 106.54                | 3156.50                          | 962.10                      | *                                   |
| H-06c            | MAG     | 3348.52                     | 04/12/04 | 12:30      | 282.02               | 0.00                | 282.02                   | 85.96                 | 3066.50                          | 934.67                      | *                                   |
| H-08a            | MAG     | 3432.99                     | 04/12/04 | 07:30      | 405.94               | 0.00                | 405.94                   | 123.73                | 3027.05                          | 922.64                      | *                                   |
| H-09c (ANNULUS)  | MAG     | 3407.30                     | 04/13/04 | 07:56      | 272.60               | 0.00                | 272.60                   | 83.09                 | 3134.70                          | 955.46                      | *                                   |
| H-10a            | MAG     | 3688.67                     | 04/13/04 | 08:38      | 466.29               | 0.00                | 466.29                   | 142.13                | 3222.38                          | 982.18                      | *                                   |
| H-11b2           | MAG     | 3411.64                     | 04/13/04 | 09:53      | 278.92               | 0.00                | 278.92                   | 85.01                 | 3132.72                          | 954.85                      | *                                   |
| H-14             | MAG     | 3347.11                     | 04/13/04 | 11:30      | 237.44               | 0.00                | 237.44                   | 72.37                 | 3109.67                          | 947.83                      | *                                   |
| H-18             | MAG     | 3414.21                     | 04/12/04 | 12:56      | 339.50               | 0.00                | 339.50                   | 103.48                | 3074.71                          | 937.17                      | *                                   |
| WIPP-18          | MAG     | 3458.76                     | 04/14/04 | 09:55      | 315.69               | 0.00                | 315.69                   | 96.22                 | 3143.07                          | 958.01                      | *                                   |
| H-03d/DL (PVC)   | DL      | 3390.01                     | 04/14/04 | 08:00      | 315.32               | 2.22                | 313.10                   | 95.43                 | 3076.91                          | 937.84                      | *                                   |
| WQSP-6a          | DL      | 3364.70                     | 04/14/04 | 08:52      | 166.98               | 0.25                | 166.73                   | 50.82                 | 3197.97                          | 974.74                      | *                                   |
| H-08c            | RUS/SAL | 3432.90                     | 04/13/04 | 07:18      | 452.31               | 0.00                | 452.31                   | 137.86                | 2980.59                          | 908.48                      | *                                   |
| AEC-8            | B/C     | 3537.10                     | 04/13/04 | 13:52      | 477.50               | 0.00                | 477.50                   | 145.54                | 3059.60                          | 932.57                      | *                                   |
| CB-1 (PIP)       | B/C     | 3328.38                     | 04/13/04 | 10:34      | 603.26               | 0.00                | 603.26                   | 183.87                | 2725.12                          | 830.62                      | *                                   |

Waterlevel Measurements  
For  
April 2004

| WELL NUMBER | ZONE  | CASING ELEVATION<br>ft amsl | DATE     | TIME (MST) | DEPTH TO WATER<br>ft | ADJUST TO TOC<br>ft | ADJUSTED DEPTH TOC<br>ft | ADJUSTED DEPTH METERS | WATER LEVEL ELEVATION<br>ft amsl | ELEVATION IN METERS<br>amsl | ADJUSTED FRESHWATER HEAD<br>ft amsl |
|-------------|-------|-----------------------------|----------|------------|----------------------|---------------------|--------------------------|-----------------------|----------------------------------|-----------------------------|-------------------------------------|
| C-2505      | SR/DL | 3413.05                     | 04/14/04 | 13:11      | 45.61                | 0.00                | 45.61                    | 13.90                 | 3367.44                          | 1026.40                     | *                                   |
| C-2506      | SR/DL | 3412.87                     | 04/14/04 | 13:07      | 44.96                | 0.00                | 44.96                    | 13.70                 | 3367.91                          | 1026.54                     | *                                   |
| C-2507      | SR/DL | 3410.01                     | 04/14/04 | 13:04      | 45.71                | 0.00                | 45.71                    | 13.93                 | 3364.30                          | 1025.44                     | *                                   |
| C-2811      | SR/DL | 3398.92                     | 04/14/04 | 11:07      | 59.89                | 0.00                | 59.89                    | 18.25                 | 3339.03                          | 1017.74                     | *                                   |
| PZ-01       | SR/DL | 3413.41                     | 04/14/04 | 13:00      | 42.28                | 0.00                | 42.28                    | 12.89                 | 3371.13                          | 1027.52                     | *                                   |
| PZ-02       | SR/DL | 3413.42                     | 04/14/04 | 13:14      | 43.51                | 0.00                | 43.51                    | 13.26                 | 3369.91                          | 1027.15                     | *                                   |
| PZ-03       | SR/DL | 3416.15                     | 04/14/04 | 13:18      | 44.86                | 0.00                | 44.86                    | 13.67                 | 3371.29                          | 1027.57                     | *                                   |
| PZ-04       | SR/DL | 3412.10                     | 04/14/04 | 12:55      | 47.45                | 0.00                | 47.45                    | 14.46                 | 3364.65                          | 1025.55                     | *                                   |
| PZ-05       | SR/DL | 3415.31                     | 04/14/04 | 13:22      | 42.60                | 0.00                | 42.60                    | 12.98                 | 3372.71                          | 1028.00                     | *                                   |
| PZ-06       | SR/DL | 3413.49                     | 04/14/04 | 13:26      | 43.88                | 0.00                | 43.88                    | 13.37                 | 3369.61                          | 1027.06                     | *                                   |
| PZ-07       | SR/DL | 3413.99                     | 04/14/04 | 11:47      | 37.67                | 0.00                | 37.67                    | 11.48                 | 3376.32                          | 1029.10                     | *                                   |
| PZ-09       | SR/DL | 3421.21                     | 04/14/04 | 10:09      | 56.65                | 0.00                | 56.65                    | 17.27                 | 3364.56                          | 1025.52                     | *                                   |
| PZ-10       | SR/DL | 3405.80                     | 04/14/04 | 10:40      | 38.58                | 0.00                | 38.58                    | 11.76                 | 3367.22                          | 1026.33                     | *                                   |
| PZ-11       | SR/DL | 3418.95                     | 04/14/04 | 11:40      | 45.23                | 0.00                | 45.23                    | 13.79                 | 3373.72                          | 1028.31                     | *                                   |
| PZ-12       | SR/DL | 3408.99                     | 04/14/04 | 10:36      | 53.73                | 0.00                | 53.73                    | 16.38                 | 3355.26                          | 1022.68                     | *                                   |

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