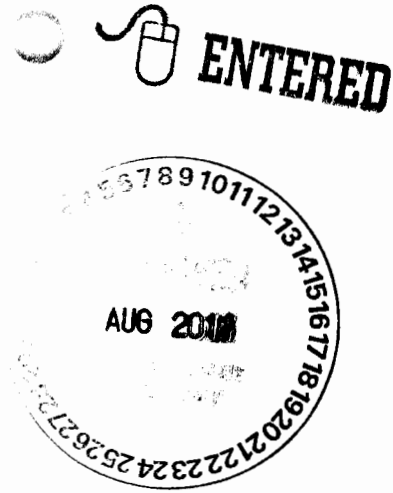




Department of Energy
 Carlsbad Field Office
 P. O. Box 3090
 Carlsbad, New Mexico 88221

AUG 08 2011



Mr. John Kieling, Acting Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, New Mexico 87505-6303

Subject: Waste Isolation Pilot Plant Groundwater Level Measurements for July 2011

Dear Mr. Kieling:

The purpose of this letter is to submit the Waste Isolation Pilot Plant Groundwater Level Measurements for July 2011, as required by Part 5, Section 5.10.2.2. of Hazardous Waste Facility Permit No. NM4890139088-TSDF.

We certify under penalty of law that this document and all enclosures 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 contact Mr. Daniel J. Ferguson at (575) 234-7018 if you have any questions regarding this data transmittal.

Sincerely,

Edward Ziemianski, Acting Manager
 Carlsbad Field Office

M. F. Sharif, General Manager
 Washington TRU Solutions LLC

Enclosure

cc: w/enclosure
 R. Maestas, NMED *ED
 B. Tongate, NMED ED
 C. Walker, Trinity Engineering ED
 CBFO M&RC
 *ED denotes electronic distribution



SUMMARY COMMENTS FOR THE WATER LEVEL MEASUREMENTS FOR THE
MONTH OF JULY 2011

1. The WIPP Hazardous Waste Facility Permit (Permit), Attachment L, Section L-4c (1) requires reporting of cumulative fluctuations noted in the Detection Monitoring Program (DMP) wells of more than two feet in the course of one year which are not attributable to site tests and subsequent stabilization. The Calendar Year 2009 Annual Site Environmental Report (ASER), was submitted to the New Mexico Environment Department in compliance with the Permit, and summarizes and discusses DMP water level changes greater than two feet for calendar year 2009. Changes in DMP well water levels greater than two feet for calendar year 2010 will be in the 2010 ASER.
2. Calculations used to derive water level and fresh water head elevations in Table 1:
 - $\text{Adjusted Depth to Water(ft)} = \text{Depth to Water from Measuring Point(ft)} - \text{Adjustment(ft)}$
 - $\text{Water Level(ft amsl)} = \text{Top of Surveyed Casing Elevation(ft amsl)} - \text{Adjusted Depth to Water(ft)}$
 - $\text{Column Height(ft)} = \text{Water Level(ft amsl)} - \text{Culebra Midpoint Elevation(ft amsl)}$
 - $\text{Fresh-water Head(ft amsl)} = \text{Specific Gravity} \times \text{Column Height(ft)} + \text{Culebra Midpoint Elevation(ft amsl)}$
3. For production-injection packers (PIPs) installed on tubing or Water Quality Sampling Program wells with tubing access ports, an adjustment is necessary to reference the water level to the surveyed fixed permanent casing [Top of Casing(TOC)]. If the measuring point is above the TOC, the depth to water relative to TOC is less. If the measuring point is below the TOC, the depth to water relative to TOC is greater (ref: WP 02-EM1014, Rev 6).
4. Groundwater level measurements were not taken at wells H-09bR and H-09c due to Sandia National Laboratories testing and instrumentation activities. Water level measurements at H-09bR and H-09c are anticipated to resume in August 2011.

Groundwater level Measurements for July 2011

| Well Number | Zone | Top of Casing Elevation (ft amsl) | Date | Time | Depth to Water from Measuring Point (feet) | Adjustment (feet) | Adjusted Depth to Water (feet) | Adjusted Depth to Water (m) | Water Level (ft amsl) | Water Level (m amsl) | Fresh-water Head (ft amsl) | Culebra Midpoint Elevation (ft amsl) | Specific Gravity | Column Height (feet) | Notes |
|------------------|------|-----------------------------------|----------|-------|--|-------------------|--------------------------------|-----------------------------|-----------------------|----------------------|----------------------------|--------------------------------------|------------------|----------------------|-------|
| AEC-7 | CUL | 3657.06 | 07/12/11 | 09:21 | 612.18 | 0.00 | 612.18 | 186.59 | 3044.88 | 928.08 | 3065.18 | 2784.60 | 1.078 | 260.28 | N/A |
| C-2737 (PIP) | CUL | 3400.76 | 07/13/11 | 13:55 | 386.10 | -0.60 | 386.70 | 117.87 | 3014.06 | 918.69 | 3022.28 | 2709.70 | 1.027 | 304.36 | N/A |
| ERDA-9 | CUL | 3410.17 | 07/13/11 | 14:46 | 398.04 | -0.03 | 398.07 | 121.33 | 3012.10 | 918.09 | 3035.08 | 2693.00 | 1.072 | 319.10 | N/A |
| H-02b2 | CUL | 3378.36 | 07/12/11 | 15:30 | 335.70 | 0.00 | 335.70 | 102.32 | 3042.66 | 927.40 | 3046.56 | 2742.80 | 1.013 | 299.86 | N/A |
| H-03b2 | CUL | 3389.91 | 07/13/11 | 14:13 | 387.91 | 0.00 | 387.91 | 118.23 | 3002.00 | 915.01 | 3014.89 | 2702.20 | 1.043 | 299.80 | N/A |
| H-04bR | CUL | 3334.64 | 07/12/11 | 14:50 | 330.54 | 0.00 | 330.54 | 100.75 | 3004.10 | 915.65 | 3007.29 | 2826.76 | 1.018 | 177.34 | N/A |
| H-05b | CUL | 3506.78 | 07/12/11 | 09:51 | 466.14 | 0.00 | 466.14 | 142.08 | 3040.64 | 926.79 | 3081.95 | 2596.50 | 1.093 | 444.14 | N/A |
| H-06bR | CUL | 3349.22 | 07/12/11 | 13:30 | 290.15 | 0.00 | 290.15 | 88.44 | 3059.07 | 932.40 | 3071.18 | 2731.90 | 1.037 | 327.17 | N/A |
| H-07b1 | CUL | 3163.72 | 07/11/11 | 12:53 | 165.96 | 0.00 | 165.96 | 50.58 | 2997.76 | 913.72 | 2998.38 | 2893.80 | 1.006 | 103.96 | N/A |
| H-10c | CUL | 3688.40 | 07/13/11 | 10:10 | 719.85 | 0.00 | 719.85 | 219.41 | 2968.55 | 904.81 | 3027.90 | 2316.30 | 1.091 | 652.25 | N/A |
| H-11b4 | CUL | 3410.79 | 07/13/11 | 08:32 | 423.22 | 0.00 | 423.22 | 129.00 | 2987.57 | 910.61 | 3003.53 | 2674.60 | 1.051 | 312.97 | N/A |
| H-12 | CUL | 3427.33 | 07/13/11 | 09:19 | 456.54 | 0.00 | 456.54 | 139.15 | 2970.79 | 905.50 | 3011.65 | 2588.90 | 1.107 | 381.89 | N/A |
| H-15R | CUL | 3482.02 | 07/13/11 | 14:30 | 507.10 | 0.00 | 507.10 | 154.56 | 2974.92 | 906.76 | 3018.43 | 2609.30 | 1.119 | 365.62 | N/A |
| H-16 | CUL | 3410.06 | 07/14/11 | 07:34 | 373.43 | 0.00 | 373.43 | 113.82 | 3036.63 | 925.56 | 3049.25 | 2695.63 | 1.037 | 341.00 | N/A |
| H-17 | CUL | 3385.24 | 07/13/11 | 07:20 | 417.99 | 0.00 | 417.99 | 127.40 | 2967.25 | 904.42 | 3008.38 | 2664.80 | 1.136 | 302.45 | N/A |
| H-19b0 | CUL | 3418.33 | 07/13/11 | 11:44 | 425.59 | 0.00 | 425.59 | 129.72 | 2992.74 | 912.19 | 3015.07 | 2664.40 | 1.068 | 328.34 | N/A |
| I-461 | CUL | 3283.61 | 07/11/11 | 12:09 | 240.72 | 0.00 | 240.72 | 73.37 | 3042.89 | 927.47 | 3043.57 | 2907.10 | 1.005 | 135.79 | N/A |
| SNL-01 | CUL | 3512.84 | 07/11/11 | 09:37 | 433.71 | 0.00 | 433.71 | 132.19 | 3079.13 | 938.52 | 3084.15 | 2900.00 | 1.028 | 179.13 | N/A |
| SNL-02 | CUL | 3323.06 | 07/11/11 | 11:07 | 253.57 | 0.00 | 253.57 | 77.29 | 3069.49 | 935.58 | 3071.44 | 2852.30 | 1.009 | 217.19 | N/A |
| SNL-03 | CUL | 3490.35 | 07/12/11 | 08:17 | 418.46 | 0.00 | 418.46 | 127.55 | 3071.89 | 936.31 | 3081.64 | 2723.80 | 1.028 | 348.09 | N/A |
| SNL-05 | CUL | 3379.98 | 07/11/11 | 10:49 | 308.07 | 0.00 | 308.07 | 93.90 | 3071.91 | 936.32 | 3074.64 | 2731.00 | 1.008 | 340.91 | N/A |
| SNL-06 | CUL | 3646.11 | 07/12/11 | 08:48 | 675.97 | 0.00 | 675.97 | 206.04 | 2970.14 | 905.30 | 3124.44 | 2307.90 | 1.233 | 662.24 | 1 |
| SNL-08 | CUL | 3555.73 | 07/13/11 | 06:40 | 543.31 | 0.00 | 543.31 | 165.60 | 3012.42 | 918.19 | 3052.50 | 2586.00 | 1.094 | 426.42 | N/A |
| SNL-09 | CUL | 3360.96 | 07/12/11 | 13:55 | 311.49 | 0.00 | 311.49 | 94.94 | 3049.47 | 929.48 | 3054.07 | 2793.80 | 1.018 | 255.67 | N/A |
| SNL-10 | CUL | 3377.59 | 07/11/11 | 15:00 | 326.16 | 0.00 | 326.16 | 99.41 | 3051.43 | 930.08 | 3054.02 | 2764.10 | 1.009 | 287.33 | N/A |
| SNL-12 | CUL | 3339.46 | 07/11/11 | 14:25 | 338.04 | 0.00 | 338.04 | 103.03 | 3001.42 | 914.83 | 3002.58 | 2768.60 | 1.005 | 232.82 | N/A |
| SNL-13 | CUL | 3294.22 | 07/11/11 | 14:42 | 277.49 | 0.00 | 277.49 | 84.58 | 3016.73 | 919.50 | 3019.57 | 2893.10 | 1.023 | 123.63 | 2 |
| SNL-14 | CUL | 3368.41 | 07/13/11 | 07:46 | 377.10 | 0.00 | 377.10 | 114.94 | 2991.31 | 911.75 | 3004.76 | 2698.90 | 1.046 | 292.41 | NA |
| SNL-15 | CUL | 3479.93 | 07/13/11 | 08:56 | 569.17 | 0.00 | 569.17 | 173.48 | 2910.76 | 887.20 | 2991.39 | 2557.10 | 1.228 | 353.66 | 3 |
| SNL-16 | CUL | 3133.00 | 07/11/11 | 12:32 | 125.18 | 0.00 | 125.18 | 38.15 | 3007.82 | 916.78 | 3008.55 | 2926.70 | 1.009 | 81.12 | N/A |
| SNL-17 | CUL | 3238.06 | 07/11/11 | 14:00 | 232.82 | 0.00 | 232.82 | 70.96 | 3005.24 | 916.00 | 3005.71 | 2888.50 | 1.004 | 116.74 | N/A |
| SNL-18 | CUL | 3375.44 | 07/11/11 | 10:24 | 301.90 | 0.00 | 301.90 | 92.02 | 3073.54 | 936.81 | 3075.04 | 2824.20 | 1.006 | 249.34 | N/A |
| SNL-19 | CUL | 3222.65 | 07/11/11 | 11:35 | 152.27 | 0.00 | 152.27 | 46.41 | 3070.38 | 935.85 | 3071.60 | 2867.60 | 1.006 | 202.78 | N/A |
| WIPP-11 | CUL | 3427.78 | 07/12/11 | 12:44 | 363.58 | 0.00 | 363.58 | 110.82 | 3064.20 | 933.97 | 3082.49 | 2570.00 | 1.037 | 494.20 | N/A |
| WIPP-13 | CUL | 3405.67 | 07/12/11 | 12:22 | 343.65 | 0.00 | 343.65 | 104.74 | 3062.02 | 933.30 | 3078.38 | 2690.30 | 1.044 | 371.72 | N/A |
| WIPP-19 | CUL | 3435.11 | 07/12/11 | 10:26 | 389.95 | 0.00 | 389.95 | 118.86 | 3045.16 | 928.16 | 3064.55 | 2665.00 | 1.051 | 380.16 | N/A |
| WQSP-1 | CUL | 3419.25 | 07/13/11 | 15:11 | 359.74 | 0.18 | 359.56 | 109.59 | 3059.69 | 932.59 | 3077.04 | 2705.60 | 1.049 | 354.09 | N/A |
| WQSP-2 | CUL | 3463.87 | 07/12/11 | 10:14 | 399.79 | 0.20 | 399.59 | 121.80 | 3064.28 | 933.99 | 3084.28 | 2638.80 | 1.047 | 425.48 | N/A |
| WQSP-3 | CUL | 3480.14 | 07/12/11 | 10:47 | 463.63 | 0.19 | 463.44 | 141.26 | 3016.70 | 919.49 | 3074.97 | 2620.30 | 1.147 | 396.40 | N/A |
| WQSP-4 | CUL | 3433.09 | 07/13/11 | 11:57 | 443.04 | 0.18 | 442.86 | 134.98 | 2990.23 | 911.42 | 3016.60 | 2652.20 | 1.078 | 338.03 | N/A |
| WQSP-5 | CUL | 3384.38 | 07/13/11 | 12:30 | 378.57 | 0.20 | 378.37 | 115.33 | 3006.01 | 916.23 | 3013.86 | 2725.70 | 1.028 | 280.31 | N/A |
| WQSP-6 | CUL | 3364.72 | 07/13/11 | 12:10 | 343.75 | 0.19 | 343.56 | 104.72 | 3021.16 | 920.85 | 3025.22 | 2767.60 | 1.016 | 253.56 | N/A |
| C-2737 (ANNULUS) | MAG | 3400.76 | 07/13/11 | 14:56 | 256.64 | 0.00 | 256.64 | 78.22 | 3144.12 | 958.33 | N/A | N/A | N/A | N/A | N/A |
| H-02b1 | MAG | 3378.49 | 07/12/11 | 15:37 | 278.66 | 0.00 | 278.66 | 84.94 | 3099.83 | 944.83 | N/A | N/A | N/A | N/A | N/A |
| H-03b1 | MAG | 3390.72 | 07/13/11 | 14:31 | 244.13 | 0.00 | 244.13 | 74.41 | 3146.59 | 959.08 | N/A | N/A | N/A | N/A | N/A |
| H-04c | MAG | 3334.28 | 07/12/11 | 14:43 | 189.02 | 0.00 | 189.02 | 57.61 | 3145.26 | 958.68 | N/A | N/A | N/A | N/A | N/A |
| H-06c | MAG | 3348.69 | 07/12/11 | 13:21 | 277.75 | 0.00 | 277.75 | 84.66 | 3070.94 | 936.02 | N/A | N/A | N/A | N/A | N/A |
| H-08a | MAG | 3433.28 | 07/11/11 | 13:51 | 408.46 | 0.00 | 408.46 | 124.50 | 3024.82 | 921.97 | N/A | N/A | N/A | N/A | N/A |
| H-10a | MAG | 3688.45 | 07/13/11 | 10:00 | 575.88 | 0.00 | 575.88 | 175.53 | 3112.57 | 948.71 | N/A | N/A | N/A | N/A | N/A |

Groundwater level Measurements for July 2011

| Well Number | Zone | Top of Surveyed Casing Elevation (ft amsl) | Date | Time | Depth to Water from Measuring Point (feet) | Adjustment (feet) | Adjusted Depth to Water (feet) | Adjusted Depth to Water (m) | Water Level (ft amsl) | Water Level (m amsl) | Fresh-water Head (ft amsl) | Culebra Midpoint Elevation (ft amsl) | Specific Gravity | Column Height (feet) | Notes |
|-------------|------|--|----------|-------|--|-------------------|--------------------------------|-----------------------------|-----------------------|----------------------|----------------------------|--------------------------------------|------------------|----------------------|-------|
| H-11b2 | MAG | 3411.86 | 07/13/11 | 08:40 | 272.22 | 0.00 | 272.22 | 82.97 | 3139.64 | 956.96 | N/A | N/A | N/A | N/A | N/A |
| H-14 | MAG | 3347.08 | 07/12/11 | 14:30 | 210.36 | 0.00 | 210.36 | 64.12 | 3136.72 | 956.07 | N/A | N/A | N/A | N/A | N/A |
| H-15 | MAG | 3483.50 | 07/13/11 | 14:38 | 341.56 | 0.00 | 341.56 | 104.11 | 3141.94 | 957.66 | N/A | N/A | N/A | N/A | N/A |
| H-18 | MAG | 3414.21 | 07/12/11 | 14:10 | 260.01 | 0.00 | 260.01 | 79.25 | 3154.20 | 961.40 | N/A | N/A | N/A | N/A | N/A |
| WIPP-18 | MAG | 3457.57 | 07/12/11 | 10:37 | 307.72 | 0.00 | 307.72 | 93.79 | 3149.85 | 960.07 | N/A | N/A | N/A | N/A | N/A |
| WQSP-6a | DL | 3364.05 | 07/13/11 | 12:17 | 167.62 | 0.25 | 167.37 | 51.01 | 3196.68 | 974.35 | N/A | N/A | N/A | N/A | N/A |
| CB-1 | B/C | 3329.12 | 07/13/11 | 08:17 | 313.25 | 0.00 | 313.25 | 95.48 | 3015.87 | 919.24 | N/A | N/A | N/A | N/A | N/A |
| DOE-2 | B/C | 3419.18 | 07/12/11 | 12:35 | 352.02 | 0.00 | 352.02 | 107.30 | 3067.16 | 934.87 | N/A | N/A | N/A | N/A | N/A |

Notes

1. Recovering from development 09/2005 and bailing 01/2007. 2. Rise in water level due to oil field activity.

3. Recovering from pumping 04/2007.

N/A = Not applicable

B/C= Bell Canyon
 CUL= Culebra
 MAG= Magenta
 DL= Dewey Lake
 SR= Santa Rosa