

## NEW MEXICO ENVIRONMENT DEPARTMENT

#### DOE Oversight Bureau



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Station A Exhaust Air Monitoring at the Waste Isolation Pilot Plant Conducted by the New Mexico Environment Department, DOE Oversight Bureau, January – March 2010

The New Mexico Environment Department (NMED) DOE Oversight Bureau has compiled and assessed data collected from Station A for January through March, 2010. The accompanying data report shows results for selected analytes as determined by an independent analytical laboratory.

For Am-241, results for January through March were above the sample Minimum Detectable Concentration (MDC), but below the requested MDC. For the remaining requested analytes, results indicated no detections above the sample MDC.

#### Response

Questions and or comments may be addressed to Thomas Kesterson by phone at 575-887-6851, by email at <a href="mailto:thomasl.kesterson@state.nm.us">thomasl.kesterson@state.nm.us</a>, or to the address in the above letterhead.

Enclosure: (1) Table 1 – Laboratory Results for Selected Analytes from Station A, January – March, 2010.

(2) Definitions

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Table 1: Laboratory Results for Selected Analytes from Station A, January – March, 2010.

| <b>Jan-10</b>  | ·                        | Ana                | Data Summaries |           |      |        |       |
|----------------|--------------------------|--------------------|----------------|-----------|------|--------|-------|
| Station A      | Monthly Composite Sample |                    |                |           |      |        |       |
| Analyte        | Result                   | 2 s                | Sample         | Requested | Lab  | Result | 2 s   |
|                | pCi/composite            |                    | MDC            | MDC       | Flag | nBq/m3 |       |
| Sr-90          | -0.11                    | 0.29               | 0.62           | 1         | U    | -1667  | 4395  |
| Pu-239/40      | 0.0031                   | 0.024              | 0.046          | 0.1       | U    | 47     | 364   |
| Pu-238         | 0.0015                   | 0.024              | 0.037          | 0.1       | U    | 23     | 364   |
| Am-241         | 0.014                    | 0.020              | 0.013          | 0.1       | LT   | 212    | 303   |
| Cs-137         | -2.00                    | 3.10               | 5.30           | 10        | U    | -30311 | 46983 |
| U-234          | 0.047                    | 0.044              | 0.067          | 0.2       | U    | 712    | 667   |
| U-235          | 0.013                    | 0.027              | 0.017          | 0.2       | U    | 197    | 409   |
| U-238          | 0.024                    | 0.036              | 0.063          | 0.2       | U    | 364    | 546   |
|                | (m3)                     | (ft <sup>3</sup> ) |                |           |      |        |       |
| Total Air Flow | 2441                     | 86235              |                |           |      |        |       |

| Feb-10<br>Station A | Analytical Results  Monthly Composite Sample |                             |        |           |      | Data Summaries |       |
|---------------------|--|-----------------------------|--------|-----------|------|----------------|-------|
| Analyte             | Result                                       | 2 s                         | Sample | Requested | Lab  | Result         | 2 s   |
|                     | pCi/composite                                |                             | MDC    | MDC       | Flag | nBq/m3         |       |
| Sr-90               | -0.021                                       | 0.29                        | 0.600  | 1         | U    | -368           | 5075  |
| Pu-239/40           | 0.0027                                       | 0.021                       | 0.040  | 0.1       | U    | 47             | 368   |
| Pu-238              | -0.0035                                      | 0.021                       | 0.032  | 0.1       | U    | -61            | 368   |
| Am-241              | 0.036  | 0.026                       | 0.012  | 0.1       | LT   | 630            | 455   |
| Cs-137              | 2.50   | 3.90                        | 6.40   | 10        | U    | 43754          | 68256 |
| U-234               | 0.014  | 0.026                       | 0.048  | 0.2       | U    | 245            | 455   |
| U-235               | 0.019  | 0.025                       | 0.039  | 0.2       | U    | 333            | 438   |
| U-238               | 0.018  | 0.025                       | 0.042  | 0.2       | U    | 315            | 438   |
| Total Air Flow      | (m3)<br>2114                                 | (ft <sup>3</sup> )<br>74676 |        |           |      |                |       |

| Mar-10<br>Station A | Analytical Results Monthly Composite Sample |                             |              |           |        | Data Summaries |       |
|---------------------|---|-----------------------------|--------------|-----------|--------|----------------|-------|
| Analyte             | Result                                      | 2 s                         | Sample       | Requested | Lab    | Result         | 2 s   |
|                     | pCi/composite                               |                             | MDC MDC Flag |           | nBq/m3 |                |       |
| Sr-90               | -0.039                                      | 0.27                        | 0.57         | 1         | U      | -535           | 3703  |
| Pu-239/40           | 0.0028                                      | 0.022                       | 0.042        | 0.1       | U      | 38             | 302   |
| Pu-238              | 0   | 0.022                       | 0.014        | 0.1       | U      | 0              | 302   |
| Am-241              | 0.030                                       | 0.023                       | 0.011        | 0.1       | LT     | 411            | 315   |
| Cs-137              | -0.64                                       | 4.00                        | 7.10         | 10        | U      | -8776          | 54853 |
| U-234               | 0.007                                       | 0.038                       | 0.079        | 0.2       | U      | 96             | 521   |
| U-235               | 0   | 0.028                       | 0.018        | 0.2       | U      | 0              | 384   |
| U-238               | 0.013                                       | 0.024                       | 0.038        | 0.2       | U      | 178            | 329   |
| Total Air Flow      | (m3)<br>2698                                | (ft <sup>3</sup> )<br>95306 |              |           |        |                |       |

# **Defintions:**

# **Qualifiers / Flags**

U – Result is less than the sample specific MDC.

LT – Results is less than Requested MDC, greater than sample specific MDC.

### **Abbreviations:**

TPU – Total Propagated Uncertainty MDC – Minimum Detectable Concentration