

7942

G-000-102.152

**RESOURCE CONSERVATION AND RECOVERY ACT ANALYTE LIST**

01/03/97

DOE-0362-97  
DOE-FEMP      OEPA  
4  
LETTER



**Department of Energy**

**Ohio Field Office  
Fernald Area Office**

P. O. Box 538705  
Cincinnati, Ohio 45253-8705  
(513) 648-3155



JAN 03 1997

DOE-0362-97

**Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5th Street  
Dayton, Ohio 45402-2911**

Dear Mr. Schneider:

**RESOURCE CONSERVATION AND RECOVERY ACT ANALYTE LIST**

The purpose of this letter is to request approval to monitor an alternate target analyte list for the Resource Conservation and Recovery Act (RCRA) Boundary Wells beginning in January 1997. In August 1996, the Integrated Environmental Monitoring Plan (IEMP) was transmitted to the U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA) for approval. The IEMP recommended monitoring the RCRA Boundary Wells:

- Annually for 27 of the 50 Fernald Environmental Management Project (FEMP) constituents for which Final Remediation Levels (FRLs) were developed. These 27 constituents are the constituents of concern that have been identified as exceeding groundwater FRLs at the FEMP.
- Quarterly for nine of the 27 constituents. These nine constituents are the constituents of concern that have been identified as exceeding groundwater FRLs at the FEMP, and are considered to be mobile and/or persistent.
- Every five years for all 50 FRL constituents.

For the January 1997 sampling round, the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) requests to monitor the RCRA Boundary Wells for the above described list of 27 constituents.

The enclosed Table 1 identifies those constituents that are currently included in the RCRA Boundary Well Program, and the enclosed Table 2 identifies those constituents with FRLs that are not currently part of the RCRA Program. The *italicized* constituents identified in Table 1, plus the 13 constituents listed in Table 2, comprise the 50 FRL constituents. The

proposed 27 constituent analyte list for the January 1997 sampling round is comprised of those constituents highlighted in Table 1 and Table 2. Also highlighted in Table 1 are the field parameters that will be monitored.

As preparations for the January 1997 sampling round are currently in progress, it is necessary to obtain your concurrence in an expeditious manner. Your prompt attention to this matter is appreciated. If you have any questions regarding the information provided, please contact Kathi Nickel at (513) 648-3166.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Nickel

Enclosures: As Stated

cc w/encs:

S. Fauver, EM-42/CLOV  
L. Griffin, EM-42/CLOV  
G. Jablonowski, USEPA-V, 5HRE-8J  
J. Saric, USEPA-V, 5HSF-5J  
R. Beaumier, TPSS/DERR, OEPA-Columbus  
M. Rochotte, OEPA-Columbus  
F. Bell, ATSDR  
D. S Ward, GeoTrans  
R. Vandegrift, ODOH  
S. McLellan, PRC  
D. Carr, FDF/9  
T. Hagen, FDF/65-2  
J. Harmon, FDF/90  
AR Coordinator/78

cc w/o encs:

C. Little, FDF/2  
EDC, FDF/52-7

TABLE 1  
TARGET ANALYTE LIST OF THE ROUTINE MONITORING PROGRAM

|                             |                              |   |
|-----------------------------|------------------------------|---|
| <b>Inorganics:</b>          |                              |   |
| Aluminum                    | <i>Antimony</i>              | <i>Arsenic</i>                          |
| <i>Barium</i>               | <i>Beryllium</i>             | <i>Cadmium</i>                          |
| Calcium                     | <i>Chromium<sup>a</sup></i>  | <i>Cobalt</i>                           |
| <i>Copper</i>               | Cyanide                      | Iron                                    |
| <i>Lead</i>                 | Magnesium                    | <i>Manganese</i>                        |
| <i>Mercury</i>              | <i>Nickel</i>                | Potassium                               |
| <i>Selenium</i>             | <i>Silver</i>                | Sodium                                  |
| Thallium                    | <i>Vanadium</i>              | <i>Zinc</i>                             |
| <br>                        |                              |   |
| <b>General Chemistry:</b>   |                              |   |
| Alkalinity                  | Ammonia                      | Chloride                                |
| <i>Fluoride</i>             | <i>Nitrate<sup>b</sup></i>   | pH <sup>c</sup>                         |
| Phenols                     | Phosphorus (total)           | <i>Specific conductance<sup>c</sup></i> |
| Sulfate                     | Temperature <sup>c</sup>     | Total organic carbon (TOC)              |
| Total organic halogen (TOX) | Total organic nitrogen (TON) |   |
| <br>                        |                              |   |
| <b>Volatile Organics:</b>   |                              |   |
| <i>1,1-Dichloroethene</i>   | <i>1,1-Dichloroethane</i>    | 1,1,1-Trichloroethane                   |
| 1,1,2-Trichloroethane       | 1,1,2,2-Tetrachloroethane    | <i>1,2-Dichloroethane</i>               |
| 1,2-Dichloroethene (Total)  | 1,2-Dichloropropane          | 2-Butanone                              |
| 2-Hexanone                  | 4-Methyl-2-Pentanone         | Acetone                                 |
| <i>Benzene</i>              | <i>Bromodichloromethane</i>  | Bromoform                               |
| <i>Bromomethane</i>         | <i>Carbon disulfide</i>      | Carbon tetrachloride                    |
| Chlorobenzene               | Chloromethane                | <i>Chloroform</i>                       |
| <i>Chloroethane</i>         | cis-1,3-Dichloropropene      | Dibromochloromethane                    |
| Ethylbenzene                | <i>Methylene chloride</i>    | Styrene                                 |
| Tetrachloroethene           | Toluene                      | Total xylenes                           |
| trans-1,3-Dichloropropene   | <i>Trichloroethene</i>       | Vinyl acetate                           |
| <i>Vinyl chloride</i>       |                              |   |
| <br>                        |                              |   |
| <b>Radiological:</b>        |                              |   |
| Gross alpha                 | Gross beta                   | <i>Radium-226</i>                       |
| <i>Radium-228</i>           | <i>Technetium-99</i>         | <i>Thorium-228</i>                      |
| <i>Thorium-230</i>          | <i>Thorium-232</i>           | Total thorium <sup>d</sup>              |
| <i>Total uranium</i>        | Uranium-234                  | Uranium-235/236                         |
| Uranium-238                 |                              |   |

<sup>a</sup>For this table, chromium is total chromium (which includes both trivalent and hexavalent), whereas Table G.1-1 (final remediation levels) includes only hexavalent chromium (chromium VI).

<sup>b</sup>Nitrate/nitrite is analyzed instead of nitrate, because of holding time considerations.

<sup>c</sup>Field parameter proposed for IEMP monitoring. Other proposed field parameters not listed include dissolved oxygen and turbidity.

<sup>d</sup>Total thorium calculated from isotopic thorium

Note: *Italicized* parameters have been identified through the Operable Unit 5 RI/FS process as being constituents of concern for the Great Miami Aquifer and therefore have had FRLs established.

Note: **Highlighted** parameters are proposed IEMP constituents.

TABLE 2  
CONSTITUENTS WITH FINAL REMEDIATION LEVELS NOT ON  
THE ROUTINE MONITORING PROGRAM TARGET ANALYTE LIST

---

Neptunium-237

Strontium-90

alpha-Chlordane

Aroclor-1254

bis(2-Chloroisopropyl)ether

bis(2-Ethylhexyl)phthalate

Boron

Carbazole

4-Methylphenol

Molybdenum

4-Nitrophenol

Octachlorodibenzo-p-dioxin

2,3,7,8-Tetrachlorodibenzo-p-dioxin

---

Note: Highlighted parameters are proposed IEMP constituents.