

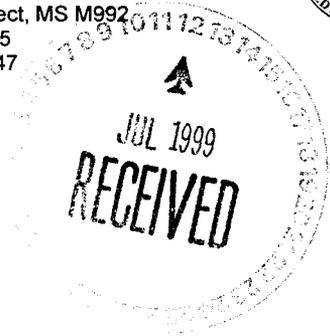
3/10/82/16 / 16-021(c)  
HsuWA LANL



University of California  
Environmental Restoration Project, MS M992  
Los Alamos, New Mexico 87545  
505-667-0808/FAX 505-665-4747



U.S. Department of Energy  
Los Alamos Area Office, MS A316  
Environmental Restoration Program  
Los Alamos, New Mexico 87544  
505-667-7203/FAX 505-665-4504



Date: July 2, 1999  
Refer to: EM/ER:99-171



Mr. James Bearzi  
NMED-HRMB  
P.O. Box 26110  
Santa Fe, NM 87502

**SUBJECT: REPLACEMENT PAGES TO RSI RESPONSE FOR CMS PLAN AND RFI REPORT FOR PRS 16-021(C)**

Dear Mr. Bearzi:

Enclosed are the replacement pages for the Request for Supplemental Information (RSI) Response (EM/ER:99-092) associated with the Corrective Measures Study (CMS) Plan and Resource Conservation and Recovery Act Facility Investigation (RFI) Report for Potential Release Site (PRS) 16-021(c). The CMS Plan and RFI Report for PRS 16-021(c), the 260 Outfall, are referenced by LA-UR-98-3918 and LA-UR-98-4104, respectively. These replacement pages for the RSI Response were requested by Ms. Kim Hill and consist of Tables 2.4-16, 6.1-1C, and 6.1-1D, which have been corrected for typographical errors.

If you have any questions or concerns, please feel free to call Dave McInroy at (505) 667-0819 or Joe Mose at (505) 667-5808.

Sincerely,

Julie A. Canepa, Program Manager  
LANL/ER Project

Sincerely,

Theodore J. Taylor, Program Manager  
DOE/LAEO

Enclosure: Replacement Pages to RSI Response for CMS Plan and RFI Report for PRS 16-021(c)

JC/TT/ ey



Mr. James Bearzi  
EM/ER:99-171

-2-

July 2, 1999

Cy (w/enc.):

M. Buksa, EM/ER, MS M992  
D. Hickmott, EM/ER, MS M992  
J. Mose, LAAO, MS A316  
W. Neff, CST-7, MS M992  
T. Taylor, LAAO, MS A316  
J. Kieling, NMED-HRMB  
S. Yanicak, NMED-AIP, MS J993  
EM/ER (CT# C668), MS M992  
RPF, MS M707

Cy (w/o enc.):

J. Canepa, EM/ER, MS M992  
M. Kirsch, EM/ER, MS M992  
D. McInroy, EM/ER, MS M992  
V. Rhodes, EM/ER, MS M992  
EM/ER File, MS M992  
Tracker RM 604, MS M992

Note: This page originally appeared as page 2-68 in the "RFI Report for TA-16, PRS 16-021(c)" dated September 29, 1998. This replacement page modifies Table 2.4-16 to include surge as a media for HMX, RDX, and TNT.

**Table 2.4-16**

**Results of HE Data Review in Phase II BHs**

| <b>Analyte</b>               | <b>Media</b>  | <b>Result</b> | <b>Rationale for Retaining as a COPC</b>  |
|------------------------------|---------------|---------------|---|
| Amino-2,6-dinitrotoluene[4-] | Tuff          | Retained      | Detected only in two soil/tuff interface samples in the drainage, up to 3 mg/kg.  |
| Amino-4,6-dinitrotoluene[2-] | Tuff          | Retained      | Detected in five samples to a depth of 16 ft, up to 1.45 mg/kg.   |
| Dinitrotoluene[2,4-]         | Tuff          | Retained      | Detected in two samples to a depth of 16 ft, up to 0.225 mg/kg.   |
| HMX                          | Tuff<br>Surge | Retained      | Detected in 12 upper Qbt4 samples at up to 315 mg/kg; at 1700 mg/kg in the surge sample; and in two lower Qbt4 samples, to a depth of 39 ft, at up to 1.46 mg/kg. |
| Nitrotoluene[3-]             | Tuff          | Retained      | Detected only in one soil/tuff interface sample in the drainage at 0.228 mg/kg.   |
| RDX                          | Tuff<br>Surge | Retained      | Detected in 9 upper Qbt4 samples at up to 908 mg/kg; at 4500 mg/kg in the surge sample; and in seven lower Qbt4 samples, to a depth of 69 ft, at up to 3.6 mg/kg. |
| Trinitrobenzene[1,3,5-]      | Tuff          | Retained      | Detected in 12 tuff samples at depths up to 69 ft, and in concentrations up to 6.5 mg/kg.   |
| Trinitrotoluene[2,4,6-]      | Tuff<br>Surge | Retained      | Detected in seven upper Qbt4 samples at up to 424 mg/kg, and at 3500 mg/kg in the surge sample.   |

**2.4.3.2.3 Evaluation of Organic Chemicals**

Complete analytical data for other organic chemical analyses of source area samples are provided in Tables I-2.0-7 and I-2-8 of Appendix I. Validation results for these data are summarized in Appendix C, Tables C-5.0-1 and C-5.0-2. Overall, the quality of the other organic chemical data for the 48 samples from the BHs that are discussed in this section is satisfactory.

Table 2.4-17 summarizes the frequency of detected organic chemicals, excluding HE. All results above the DLs are shown in Tables 2.4-18 (VOCs) and 2.4-19 (SVOCs). Figure 2.4-5 identifies the locations of detected results for the principal organic contaminants.

Table 2.4-20 summarizes the evidence for a release of those organic chemicals that appear in Tables 2.4-18 and 2.4-19. All are carried forward as COPCs to Sections 5 and 6 for assessment, although several are detected in only one sample.

**2.4.4 Data Summary and Interpretation**

This section provides additional graphical and summary information to place the results presented in Section 2.4.3 into context for the development of the site conceptual model in Section 5 and the recommendations in Section 7.

Note: This page originally appeared as page 30 in the "RSI Response for PRS 16-021(c)-Revised Tables" dated April 21, 1999.

**TABLE 6.1-1C**  
**SUMMARY OF CONSTITUENTS RETAINED AS COPCs FOR**  
**FURTHER SCREENING**

| <i>Medium: Cañon de Valle Sediment</i>  |                     |
|---|---------------------|
| Analyte                                 | Human Health Effect |
| Benzyl Alcohol                          | nc                  |
| Bis(2-ethylhexyl)phthalate              | c                   |
| Dichlorodifluoromethane                 | nc                  |
| Diethylphthalate                        | nc                  |
| Di-n-butylphthalate                     | nc                  |
| Dinitrobenzene[1,3]                     | nc                  |
| Fluoranthene                            | nc                  |
| Isopropyltoluene [4-]                   | na                  |
| Phenol                                  | nc                  |
| Pyrene                                  | nc                  |
| Toluene                                 | nc                  |
| Trichloro-1,2,2-trifluoroethane[1,1,2-] | nc                  |
| Trichlorofluoromethane                  | nc                  |

nc = noncarcinogenic  
c = carcinogenic  
na = not available

Note: This page originally appeared as page 31 in the "RSI Response for PRS 16-021(c)- Revised Tables" dated April 21, 1999.

**TABLE 6.1-1D  
SUMMARY OF CONSTITUENTS RETAINED AS COPCs FOR  
FURTHER SCREENING**

| <b>Medium: Tuff</b>                |                            |
|------------------------------------|----------------------------|
| <b>Analyte</b>                     | <b>Human Health Effect</b> |
| <b><i>Inorganics</i></b>           |                            |
| Antimony                           | nc                         |
| Arsenic                            | c                          |
| Barium                             | nc                         |
| Cadmium                            | nc                         |
| Chromium                           | c                          |
| Copper                             | nc                         |
| Cyanide, total                     | nc                         |
| Lead                               | nc                         |
| Mercury                            | nc                         |
| Nickel                             | nc                         |
| Selenium                           | nc                         |
| Silver                             | nc                         |
| Thallium                           | nc                         |
| Zinc                               | nc                         |
| <b><i>Radionuclides — None</i></b> |                            |
| <b><i>HE</i></b>                   |                            |
| Amino-2,6-dinitrotoluene[4-]       | nc                         |
| Amino-4,6-dinitrotoluene[2-]       | nc                         |
| Dinitrotoluene[2,4-]               | nc                         |
| HMX                                | nc                         |
| Nitrotoluene[3-]                   | nc                         |
| RDX                                | c                          |
| Trinitrobenzene[1,3,5-]            | nc                         |
| Trinitrotoluene[2,4,6-]            | c                          |
| <b><i>Organics</i></b>             |                            |
| Acetone                            | nc                         |
| Anthracene                         | nc                         |
| Benzo(k)fluoranthene               | c                          |
| Bis(2-ethylhexyl)phthalate         | c                          |
| Butanone[2-]                       | nc                         |
| Butylbenzylphthalate               | nc                         |
| Chlorobenzene                      | nc                         |
| Chloromethane                      | c                          |
| Dichlorobenzene[1,4-]              | c                          |
| Dichloroethane[1,2-]               | c                          |
| Diethylphthalate                   | nc                         |

Note: This page originally appeared as page 32 in the "RSI Response for PRS 16-021(c)-  
Revised Tables" dated April 21, 1999.

**TABLE 6.1-1D**  
**SUMMARY OF CONSTITUENTS RETAINED AS COPCs FOR**  
**FURTHER SCREENING**

| <i>Medium: Tuff</i>      |                     |
|--------------------------|---------------------|
| Analyte                  | Human Health Effect |
| Di-n-butylphthalate      | nc                  |
| Dinitrotoluene[2,4-]     | nc                  |
| Methylene Chloride       | c                   |
| Styrene                  | nc                  |
| Tetrachloroethene        | c                   |
| Toluene                  | nc                  |
| Trichlorofluoromethane   | nc                  |
| Trimethylbenzene[1,3,5-] | nc                  |

nc = noncarcinogenic  
c = carcinogenic  
na = not available