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# FAX COVER SHEET

Date: May 12, 1999

Page 1 of 5 Pages (Coversheet included)

|   |   |
|---|---|
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| <b>Name:</b><br>Steve Trent               | <b>Name:</b><br>Ruth Esch   |
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| <b>Organization:</b><br>ERC               | <b>Organization:</b><br>Waste Management Hanford<br>222-S Production Management |

## Message

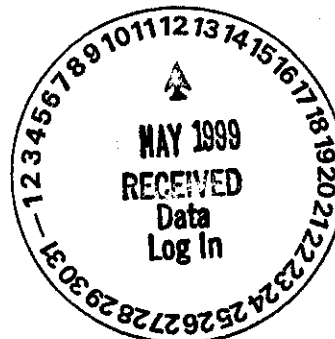
Steve,

The following pages present the Interim Data Report for 233-S SDG2 samples. All analytes except for ICP/MS are included. The actinides by ICP/MS will be reported next week.

Ruth E

**RECEIVED**  
NOV 06 2001

**EDMC**



**PRIORITY**

# INTERIM

Interim Data Report  
233-S PCB1

CORE NUMBER: N/A  
SEGMENT #: BOTM26

SEGMENT PORTION: Sump Solid

| Sample#    | R | As# | Analyte                        | Unit  | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|---|-----|--------------------------------|-------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99M000091 |   |     | pH on SST Samples              | pH    | n/a        | n/a       | 5.220     | n/a       | n/a     | n/a   | n/a       | 1.00e-02  | n/a        |
| S99M000092 |   |     | Aroclor-1016                   | ug/Kg | n/a        | <100.0    | <6.50e+03 | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Aroclor-1221                   | ug/Kg | n/a        | <200.0    | <1.30e+04 | n/a       | n/a     | n/a   | n/a       | 1.30e+04  | n/a        |
| S99M000092 |   |     | Aroclor-1232                   | ug/Kg | n/a        | <100.0    | <6.50e+03 | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Aroclor-1242                   | ug/Kg | n/a        | <100.0    | <6.50e+03 | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Aroclor-1248                   | ug/Kg | n/a        | <100.0    | <6.50e+03 | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Aroclor-1254                   | ug/Kg | 114.2      | <100.0    | 1.12e+04  | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Aroclor-1260                   | ug/Kg | n/a        | <100.0    | <6.50e+03 | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Tetrachloro-m-xylene Surr      | ug/Kg | 92.50      | 90.00     | 6.50e+03  | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000092 |   |     | Decachlorobiphenyl Surr        | ug/Kg | 109.0      | 105.2     | 6.50e+03  | n/a       | n/a     | n/a   | n/a       | 6.50e+03  | n/a        |
| S99M000094 | M |     | Fluoride-IC-Dionex 4000/4500   | ug/g  | 100.2      | <1.20e-02 | 23.30     | n/a       | n/a     | n/a   | n/a       | 23.30     | n/a        |
| S99M000094 | M |     | Chloride-IC-Dionex 4000/4500   | ug/g  | 104.7      | <3.70e-02 | 8.00e+03  | n/a       | n/a     | n/a   | n/a       | 33.10     | n/a        |
| S99M000094 | M |     | Nitrite-IC-Dionex 4000/4500    | ug/g  | 100.0      | <2.40e-02 | <2.10e+02 | n/a       | n/a     | n/a   | n/a       | 210.3     | n/a        |
| S99M000094 | M |     | Nitrate by IC-Dionex 4000/4500 | ug/g  | 97.26      | 1.39e-02  | 7.68e+03  | n/a       | n/a     | n/a   | n/a       | 270.6     | n/a        |
| S99M000094 | M |     | Phosphate-IC-Dionex 4000/4500  | ug/g  | 102.8      | 1.20e-01  | 1.34e+02  | n/a       | n/a     | n/a   | n/a       | 233.6     | n/a        |
| S99M000094 | M |     | Sulfate by IC-Dionex 4000/4500 | ug/g  | 104.5      | <1.00e-01 | 1.02e+03  | n/a       | n/a     | n/a   | n/a       | 268.6     | n/a        |
| S99M000094 | M |     | Oxalate-IC-Dionex 4000/4500    | ug/g  | 101.8      | <1.00e-01 | 1.15e+03  | n/a       | n/a     | n/a   | n/a       | 204.4     | n/a        |
| S99M000095 | A |     | Pu-239/240 by TRU-SPEC Resin   | uCi/g | 100.0      | <5.00e-02 | 2.06e+03  | n/a       | n/a     | n/a   | n/a       | 143.0     | 2.10E+00   |
| S99M000095 | A |     | Pu-238 by Ion Exchange         | uCi/g | n/a        | <5.00e-02 | 6.18e+02  | n/a       | n/a     | n/a   | n/a       | 143.0     | 2.94E+00   |
| S99M000095 | A |     | Mp237 by TTA Extraction        | uCi/g | 100.15     | 1.70e-04  | 5.88e-01  | n/a       | n/a     | n/a   | n/a       | 9.53e-04  | 1.43E+00   |
| S99M000095 | A |     | Neptunium-237 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Plutonium-239 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Plutonium-240 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Plutonium-242 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Pu/Am-241 by ICP/MS            | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Am-243/Cm-243 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Pu-244/Cm-244 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000095 | A |     | Cobalt-60 by GEA               | uCi/g | 107.4      | <1.27e-03 | <1.62e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99M000095 | A |     | Cesium-137 by GEA              | uCi/g | 99.68      | <2.20e-03 | 7.19e-03  | n/a       | n/a     | n/a   | n/a       | n/a       | 37.1       |
| S99M000095 | A |     | Europium-152 by GEA            | uCi/g | n/a        | <3.14e-03 | <1.28e-02 | n/a       | n/a     | n/a   | n/a       | 1.30e-02  | n/a        |
| S99M000095 | A |     | Europium-154 by GEA            | uCi/g | n/a        | <5.08e-03 | <4.54e-03 | n/a       | n/a     | n/a   | n/a       | 5.00e-03  | n/a        |
| S99M000095 | A |     | Europium-155 by GEA            | uCi/g | n/a        | <3.84e-03 | <4.46e-02 | n/a       | n/a     | n/a   | n/a       | 4.50e-02  | n/a        |
| S99M000095 | A |     | Radium-226 by GEA              | uCi/g | n/a        | <2.67e-02 | <5.05e-02 | n/a       | n/a     | n/a   | n/a       | 5.00e-02  | n/a        |
| S99M000095 | A |     | Americium-241 by GEA           | uCi/g | n/a        | <8.48e-03 | 1.17e+03  | n/a       | n/a     | n/a   | n/a       | n/a       | 0.0700     |
| S99M000095 | A |     | Am-241 by Extraction           | uCi/g | 100.0      | <66.90    | 1.30e+03  | n/a       | n/a     | n/a   | n/a       | 142.0     | 2.42E+00   |
| S99M000095 | A |     | Cm-243/244 by Extraction       | uCi/g | n/a        | <66.90    | <1.42e+02 | n/a       | n/a     | n/a   | n/a       | 142.0     | 1.00E+02   |
| S99M000095 | A |     | Alpha of Digested Solid        | uCi/g | 91.19      | <6.25e-01 | 3.37e+03  | n/a       | n/a     | n/a   | n/a       | 7.42e-01  | 7.12E-01   |
| S99M000095 | A |     | Beta of Solid Sample           | uCi/g | 103.1      | 3.960     | 6.63e+02  | n/a       | n/a     | n/a   | n/a       | 2.090     | 1.28E+00   |
| S99M000097 | T |     | Mercury by CYAA (PE) with FIAS | ug/mL | 1.82       | <1.40e-03 | 2.78e-02  | n/a       | n/a     | n/a   | n/a       | 1.00e-03  | n/a        |
| S99M000099 | C |     | Silver -ICP-TCLP Digest-Liquid | ug/mL | 81.00      | <1.00e-02 | 4.89e-02  | n/a       | n/a     | n/a   | n/a       | 2.50e-02  | n/a        |
| S99M000099 | C |     | Arsenic -ICP-TCLP Digest-Liq   | ug/mL | 90.20      | <1.00e-01 | <2.50e-01 | n/a       | n/a     | n/a   | n/a       | 2.50e-01  | n/a        |
| S99M000099 | C |     | Barium -ICP-TCLP Digest-Liquid | ug/mL | 57.61      | <5.00e-02 | 1.79e-01  | n/a       | n/a     | n/a   | n/a       | 1.25e-01  | n/a        |
| S99M000099 | C |     | Bismuth -ICP-TCLP Digest-Liq   | ug/mL | 88.70      | <5.00e-03 | 3.46e-01  | n/a       | n/a     | n/a   | n/a       | 1.30e-02  | n/a        |
| S99M000099 | C |     | Chromium -ICP-TCLP Digest-Liq  | ug/mL | 37.93      | <1.00e-02 | 7.040     | n/a       | n/a     | n/a   | n/a       | 2.50e-02  | n/a        |

PRIORITY

# INTERIM

| Sample#    | R | A# | Analyte                       | Unit  | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|---|----|-------------------------------|-------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99W000099 | C |    | Lead -ICP-TCLP Digest-Liquid  | ug/mL | 79.11      | <1.00e-01 | <2.50e-01 | n/a       | n/a     | n/a   | n/a       | 2.50e-01  | n/a        |
| S99W000099 | C |    | Selenium -ICP-TCLP Digest-Liq | ug/mL | 94.80      | <1.00e-01 | <2.50e-01 | n/a       | n/a     | n/a   | n/a       | 2.50e-01  | n/a        |

# INTERIM

**PRIORITY**

# INTERIM

Interim Data Report  
233-S PCB1

CORE NUMBER: N/A  
SEGMENT #: Composite BOTM25/28

SEGMENT PORTION: Composite BOTM25/28

| Sample#    | R A# | Analyte                        | Unit  | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|------|--------------------------------|-------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99M000093 |      | Aroclor-1016                   | ug/Kg | n/a        | <100.0    | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Aroclor-1221                   | ug/Kg | n/a        | <200.0    | <1.18e+04 | n/a       | n/a     | n/a   | n/a       | 1.18e+04  | n/a        |
| S99M000093 |      | Aroclor-1232                   | ug/Kg | n/a        | <100.0    | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Aroclor-1242                   | ug/Kg | n/a        | <100.0    | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Aroclor-1248                   | ug/Kg | n/a        | <100.0    | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Aroclor-1254                   | ug/Kg | 114.2      | <100.0    | 4.50e+04  | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Aroclor-1260                   | ug/Kg | n/a        | <100.0    | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Tetrachloro-m-xylene Surr      | ug/Kg | 92.50      | 90.00     | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000093 |      | Decachlorobiphenyl Surr        | ug/Kg | 109.0      | 105.2     | <5.88e+03 | n/a       | n/a     | n/a   | n/a       | 5.88e+03  | n/a        |
| S99M000096 | A    | Pu-239/240 by TRU-SPEC Resin   | uCi/g | 110.3      | <55.00    | 55.00     | n/a       | n/a     | n/a   | n/a       | 3.330     | 1.97E+00   |
| S99M000096 | A    | Pu-238 by Ion Exchange         | uCi/g | n/a        | <55.00    | 3.330     | n/a       | n/a     | n/a   | n/a       | 3.330     | 5.80E+00   |
| S99M000096 | A    | Neptunium-237 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Plutonium-239 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Plutonium-240 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Plutonium-242 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Pu/Am-241 by ICP/MS            | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Am-243/Cm-243 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Pu-244/Cm-244 by ICP/MS        | ug/g  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99M000096 | A    | Cobalt-60 by GEA               | uCi/g | 107.4      | <1.27e-03 | <8.04e-04 | n/a       | n/a     | n/a   | n/a       | 8.04e-04  | n/a        |
| S99M000096 | A    | Cesium-137 by GEA              | uCi/g | 106.8      | <2.0e-03  | <1.18e-03 | n/a       | n/a     | n/a   | n/a       | 1.00e-03  | n/a        |
| S99M000096 | A    | Europium-152 by GEA            | uCi/g | 106.8      | <3.14e-03 | <1.80e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99M000096 | A    | Europium-154 by GEA            | uCi/g | n/a        | <5.08e-03 | <1.99e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99M000096 | A    | Europium-155 by GEA            | uCi/g | n/a        | <3.84e-03 | 3.96e-03  | n/a       | n/a     | n/a   | n/a       | n/a       | 38.3       |
| S99M000096 | A    | Radium-226 by GEA              | uCi/g | n/a        | <2.67e-02 | <1.46e-02 | n/a       | n/a     | n/a   | n/a       | 1.50e-02  | n/a        |
| S99M000096 | A    | Americium-241 by GEA           | uCi/g | n/a        | <8.48e-03 | 10.84     | n/a       | n/a     | n/a   | n/a       | n/a       | 0.590      |
| S99M000096 | A    | Am-241 by Extraction           | uCi/g | 100.0      | <66.90    | 12.40     | n/a       | n/a     | n/a   | n/a       | 2.310     | 2.93E+00   |
| S99M000096 | A    | Cm-243/244 by Extraction       | uCi/g | n/a        | <66.90    | < 2.310   | n/a       | n/a     | n/a   | n/a       | 2.310     | 1.00E+02   |
| S99M000096 | A    | Alpha of Digest Solid          | uCi/g | 91.19      | <6.25e-01 | 55.40     | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 5.61E-01   |
| S99M000096 | A    | Beta of Solid Sample           | uCi/g | 103.1      | 3.960     | 8.690     | n/a       | n/a     | n/a   | n/a       | 2.10e-02  | 1.12E+00   |
| S99M000098 | T    | Mercury by CVAA (Pb) with MS   | ug/ml | 1.82       | <1.40e-03 | 1.46e-02  | n/a       | n/a     | n/a   | n/a       | 1.00e-03  | n/a        |
| S99M000100 | C    | Silver -ICP-TCLP Digest-Liquid | ug/ml | 81.00      | <1.00e-02 | <5.00e-02 | n/a       | n/a     | n/a   | n/a       | 5.00e-02  | n/a        |
| S99M000100 | C    | Arsenic -ICP-TCLP Digest-Liq   | ug/ml | 90.20      | <1.00e-01 | <5.00e-01 | n/a       | n/a     | n/a   | n/a       | 5.00e-01  | n/a        |
| S99M000100 | C    | Barium -ICP-TCLP Digest-Liquid | ug/ml | 57.61      | <5.00e-02 | 3.39e-01  | n/a       | n/a     | n/a   | n/a       | 2.50e-01  | n/a        |
| S99M000100 | C    | Cadmium -ICP-TCLP Digest-Liq   | ug/ml | 88.70      | <5.00e-03 | 2.43e-01  | n/a       | n/a     | n/a   | n/a       | 2.50e-02  | n/a        |
| S99M000100 | C    | Chromium -ICP-TCLP Digest-Liq  | ug/ml | 37.93      | <1.00e-02 | 6.20e-01  | n/a       | n/a     | n/a   | n/a       | 5.00e-02  | n/a        |
| S99M000100 | C    | Lead -ICP-TCLP Digest-Liquid   | ug/ml | 79.11      | <1.00e-01 | <5.00e-01 | n/a       | n/a     | n/a   | n/a       | 5.00e-01  | n/a        |
| S99M000100 | C    | Selenium -ICP-TCLP Digest-Liq  | ug/ml | 94.80      | <1.00e-01 | <5.00e-01 | n/a       | n/a     | n/a   | n/a       | 5.00e-01  | n/a        |

PRIORITY

# INTERIM

Interim Data Report  
233-S

CORE NUMBER: n/a  
SEGMENT #: BOTV29

SEGMENT PORTION: Pipe Leachate

| Sample#   | R# | Analyte                      | Unit   | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|-----------|----|------------------------------|--------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99000083 |    | Pu-239/240 by TRU-SPEC Resin | UCI/mL | 109.5      | <2.63e-03 | 1.87e-01  | n/a       | n/a     | n/a   | n/a       | 1.10e-02  | 1.89E+00   |
| S99000083 |    | Pu-238 by Ion Exchange       | UCI/mL | n/a        | <2.63e-03 | 3.01e-02  | n/a       | n/a     | n/a   | n/a       | 1.10e-02  | 2.98E+00   |
| S99000083 |    | Mp237 by TIA Extraction      | UCI/mL | 89.18      | <1.98e-05 | <1.98e-05 | n/a       | n/a     | n/a   | n/a       | 4.15e-05  | 2.45E+02   |
| S99000083 | A  | Neptunium-237 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Plutonium-239 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Plutonium-240 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Plutonium-242 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Pu/Am-241 by ICP/MS          | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Am-243/Cm-243 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 | A  | Pu-244/Cm-244 by ICP/MS      | ug/mL  | n/a        | n/a       | n/a       | n/a       | n/a     | n/a   | n/a       | 5.00e-05  | n/a        |
| S99000083 |    | Cobalt-60 by GEA             | UCI/mL | 107.2      | <9.29e-05 | 4.30e-02  | n/a       | n/a     | n/a   | n/a       | 1.00e-05  | n/a        |
| S99000083 |    | Cesium-137 by GEA            | UCI/mL | 103.9      | <1.33e-05 | 1.33e-05  | n/a       | n/a     | n/a   | n/a       | 1.59e-05  | 8.09       |
| S99000083 |    | Europium-152 by GEA          | UCI/mL | n/a        | 7.56e-05  | <1.33e-05 | n/a       | n/a     | n/a   | n/a       | 1.59e-05  | n/a        |
| S99000083 |    | Europium-154 by GEA          | UCI/mL | n/a        | 1.85e-05  | <2.88e-05 | n/a       | n/a     | n/a   | n/a       | 2.88e-05  | n/a        |
| S99000083 |    | Europium-155 by GEA          | UCI/mL | n/a        | 1.85e-05  | <2.88e-05 | n/a       | n/a     | n/a   | n/a       | 2.88e-05  | n/a        |
| S99000083 |    | Radium-226 by GEA            | UCI/mL | n/a        | <1.33e-04 | 4.30e-04  | n/a       | n/a     | n/a   | n/a       | 1.51e-04  | n/a        |
| S99000083 |    | Americium-241 by GEA         | UCI/mL | n/a        | <1.33e-05 | 7.91e-02  | n/a       | n/a     | n/a   | n/a       | 1.51e-04  | n/a        |
| S99000083 |    | Am-241 by Extraction         | UCI/mL | 98.00      | <3.19e-03 | 7.84e-02  | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 2.33E+00   |
| S99000083 |    | Cm-243/244 by Extraction     | UCI/mL | n/a        | <3.19e-03 | <6.93e-03 | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 1.00E+02   |
| S99000083 |    | Alpha in Liquid Samples      | UCI/mL | 0.02       | <2.26e-05 | 2.59e-01  | n/a       | n/a     | n/a   | n/a       | 6.72e-05  | 9.19E-01   |
| S99000083 |    | Beta in Liquid Samples       | ug/mL  | 0.02       | <2.26e-04 | 1.82e-02  | n/a       | n/a     | n/a   | n/a       | 2.49e-04  | 2.82E+00   |

PRIORITY

S0013  
B99-024

# FAX COVER SHEET

Date: April 29, 1999

Page 1 of 4 Pages (Coversheet included)

|   |   |
|---|---|
| <b>Fax Number To:</b><br>372-9292         | <b>Fax Number From:</b><br>(509)372-1878  |
| <b>Name:</b><br>Steve Trent               | <b>Name:</b><br>Ruth Esch   |
| <b>Phone Number/Location:</b><br>372-9651 | <b>Phone Number/Location:</b><br>373-4314                                       |
| <b>Organization:</b><br>ERC               | <b>Organization:</b><br>Waste Management Hanford<br>222-S Analytical Production |

## Message

Steve,

The four pages attached present results completed to date for the second SDG from 233-S. The Np-237 analysis is in progress and the ICP/MS is under repair. The PCB extracts have just been completed and we expect to send them to WSCF tomorrow for analysis on Monday. TCLP extraction will begin next week.

Ruth E



## QUICK TURN DATA

FAX DATE is date of record *Daynes*  
5/4/99

# INTERIM

Interim Results Report  
233-S PCB1

CORE NUMBER: N/A  
SEGMENT #: Composite B0TW25/28

SEGMENT PORTION: Composite B0TW25/28

| Sample#    | R A# | Analyte                      | Unit  | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|------|------------------------------|-------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99W000096 | A    | Pu-239/240 by TRU-SPEC Resin | uCi/g | 110.3      | <55.00    | 55.60     | n/a       | n/a     | n/a   | n/a       | 3.330     | 1.97E+00   |
| S99W000096 | A    | Pu-238 by Ion Exchange       | uCi/g | n/a        | <55.00    | < 3.330   | n/a       | n/a     | n/a   | n/a       | 3.330     | 5.80E+00   |
| S99W000096 | A    | Cobalt-60 by GEA             | uCi/g | 107.4      | <1.27e-03 | <8.04e-04 | n/a       | n/a     | n/a   | n/a       | 8.04e-04  | n/a        |
| S99W000096 | A    | Antimony-125 by GEA          | uCi/g | n/a        | <4.08e-03 | <2.00e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99W000096 | A    | Cesium-134 by GEA            | uCi/g | n/a        | <1.46e-03 | <6.98e-04 | n/a       | n/a     | n/a   | n/a       | 6.98e-04  | n/a        |
| S99W000096 | A    | Cesium-137 by GEA            | uCi/g | 99.68      | <2.20e-03 | <1.18e-03 | n/a       | n/a     | n/a   | n/a       | 1.00e-03  | n/a        |
| S99W000096 | A    | Europium-152 by GEA          | uCi/g | n/a        | <3.14e-03 | <1.80e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99W000096 | A    | Europium-154 by GEA          | uCi/g | n/a        | <5.08e-03 | <1.97e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99W000096 | A    | Europium-155 by GEA          | uCi/g | n/a        | <3.84e-03 | <1.96e-03 | n/a       | n/a     | n/a   | n/a       | n/a       | 38.3       |
| S99W000096 | A    | Radium-226 by GEA            | uCi/g | n/a        | <2.67e-02 | <1.46e-02 | n/a       | n/a     | n/a   | n/a       | 1.50e-02  | n/a        |
| S99W000096 | A    | Actinium-228 by GEA          | uCi/g | n/a        | <7.41e-03 | <3.92e-03 | n/a       | n/a     | n/a   | n/a       | 4.00e-03  | n/a        |
| S99W000096 | A    | Americium-241 by GEA         | uCi/g | n/a        | <6.67e-03 | <3.84e-03 | n/a       | n/a     | n/a   | n/a       | n/a       | 0.590      |
| S99W000096 | A    | Am-241 by Extraction         | uCi/g | 100.0      | <66.7     | 2.40      | n/a       | n/a     | n/a   | n/a       | 2.310     | 2.93E+00   |
| S99W000096 | A    | Cm-243/244 by Extraction     | uCi/g | n/a        | <66.7     | 2.310     | n/a       | n/a     | n/a   | n/a       | 2.310     | 1.00E+02   |
| S99W000096 | A    | Alpha of Digested solid      | uCi/g | 19         | <2.00e-01 | 55.40     | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 5.61E-01   |
| S99W000096 | A    | Beta of Solid Sample         | uCi/g | 103.1      | <960      | 8.690     | n/a       | n/a     | n/a   | n/a       | 2.10e-02  | 1.12E+00   |

QUICK TURN DATA

INTERIM

# INTERIM

Interim Results Report  
233-S PCB1

CORE NUMBER: N/A  
SEGMENT #: 80TW26

SEGMENT PORTION: Sump Solid

| Sample#    | R | Analyte                      | Unit  | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|---|------------------------------|-------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99M000095 | A | Pu-239/240 by TRU-SPEC Resin | uCi/g | 110.3      | <55.00    | 2.06e+03  | n/a       | n/a     | n/a   | n/a       | 143.0     | 2.10E+00   |
| S99M000095 | A | Pu-238 by Ion Exchange       | uCi/g | n/a        | <55.00    | 6.18e+02  | n/a       | n/a     | n/a   | n/a       | 143.0     | 2.94E+00   |
| S99M000095 | A | Cobalt-60 by GEA             | uCi/g | 107.4      | <1.27e-03 | <1.62e-03 | n/a       | n/a     | n/a   | n/a       | 2.00e-03  | n/a        |
| S99M000095 | A | Antimony-125 by GEA          | uCi/g | n/a        | <4.08e-03 | <4.75e-03 | n/a       | n/a     | n/a   | n/a       | 5.00e-03  | n/a        |
| S99M000095 | A | Cesium-134 by GEA            | uCi/g | n/a        | <1.46e-03 | <1.49e-03 | n/a       | n/a     | n/a   | n/a       | 1.00e-03  | n/a        |
| S99M000095 | A | Cesium-137 by GEA            | uCi/g | 99.68      | <2.20e-03 | 7.19e-03  | n/a       | n/a     | n/a   | n/a       | n/a       | 37.1       |
| S99M000095 | A | Europium-152 by GEA          | uCi/g | n/a        | <3.14e-03 | <1.28e-03 | n/a       | n/a     | n/a   | n/a       | 1.30e-02  | n/a        |
| S99M000095 | A | Europium-154 by GEA          | uCi/g | n/a        | <5.08e-03 | <4.90e-03 | n/a       | n/a     | n/a   | n/a       | 5.00e-03  | n/a        |
| S99M000095 | A | Europium-155 by GEA          | uCi/g | n/a        | <3.84e-03 | <4.46e-03 | n/a       | n/a     | n/a   | n/a       | 4.50e-02  | n/a        |
| S99M000095 | A | Radium-226 by GEA            | uCi/g | n/a        | <2.67e-02 | <2.05e-02 | n/a       | n/a     | n/a   | n/a       | 5.00e-02  | n/a        |
| S99M000095 | A | Actinium-228 by GEA          | uCi/g | n/a        | <7.41e-03 | <6.46e-03 | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | n/a        |
| S99M000095 | A | Americium-241 by GEA         | uCi/g | n/a        | <66.00    | 1.30e+03  | n/a       | n/a     | n/a   | n/a       | n/a       | 0.0700     |
| S99M000095 | A | Am-241 by Extraction         | uCi/g | 100.0      | <66.00    | 1.30e+03  | n/a       | n/a     | n/a   | n/a       | 142.0     | 2.42E+00   |
| S99M000095 | A | Ce-243/244 by Extraction     | uCi/g | n/a        | <66.00    | <1.42e+02 | n/a       | n/a     | n/a   | n/a       | 142.0     | 1.00E+02   |
| S99M000095 | A | Alpha of Digested Solid      | uCi/g | 119        | <1.00e-01 | <3.7e-03  | n/a       | n/a     | n/a   | n/a       | 7.42e-01  | 7.12E-01   |
| S99M000095 | A | Beta of Solid Sample         | uCi/g | 103.1      | <960      | <2.03e+02 | n/a       | n/a     | n/a   | n/a       | 2.090     | 1.28E+00   |

INTERIM

QUICK TURN DATA

04/29/99 10:57 509 372 1878 ANALYTICAL PROD.



# INTERIM

Interim Results Report  
233-S

CORE NUMBER: n/a  
SEGMENT #: BOTW29

SEGMENT PORTION: Pipe Leachate

| Sample#    | R A# | Analyte                      | Unit   | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|------|------------------------------|--------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99N000083 |      | Pu-239/240 by TRU-SPEC Resin | UCI/mL | 109.5      | <2.63e-03 | 1.87e-01  | n/a       | n/a     | n/a   | n/a       | 1.10e-02  | 1.89E+00   |
| S99N000083 |      | Pu-238 by Ion Exchange       | UCI/mL | n/a        | <2.63e-03 | 3.01e-02  | n/a       | n/a     | n/a   | n/a       | 1.10e-02  | 2.98E+00   |
| S99N000083 |      | Cobalt-60 by GEA             | UCI/mL | 107.2      | <9.29e-06 | <1.00e-05 | n/a       | n/a     | n/a   | n/a       | 1.00e-05  | n/a        |
| S99N000083 |      | Antimony-125 by GEA          | UCI/mL | n/a        | <2.46e-05 | <2.53e-05 | n/a       | n/a     | n/a   | n/a       | 2.53e-05  | n/a        |
| S99N000083 |      | Cesium-134 by GEA            | UCI/mL | n/a        | <8.34e-06 | <8.74e-06 | n/a       | n/a     | n/a   | n/a       | 8.74e-06  | n/a        |
| S99N000083 |      | Cesium-137 by GEA            | UCI/mL | 103.9      | <1.32e-05 | 1.73e-04  | n/a       | n/a     | n/a   | n/a       | n/a       | 8.09       |
| S99N000083 |      | Europium-152 by GEA          | UCI/mL | n/a        | <1.56e-05 | <1.59e-05 | n/a       | n/a     | n/a   | n/a       | 1.59e-05  | n/a        |
| S99N000083 |      | Europium-154 by GEA          | UCI/mL | n/a        | <2.85e-05 | <2.86e-05 | n/a       | n/a     | n/a   | n/a       | 2.88e-05  | n/a        |
| S99N000083 |      | Europium-155 by GEA          | UCI/mL | n/a        | <2.08e-05 | <2.26e-05 | n/a       | n/a     | n/a   | n/a       | 2.26e-05  | n/a        |
| S99N000083 |      | Radium-226 by GEA            | UCI/mL | n/a        | <1.43e-04 | <1.51e-04 | n/a       | n/a     | n/a   | n/a       | 1.51e-04  | n/a        |
| S99N000083 |      | Actinium-228 by GEA          | UCI/mL | n/a        | <5.11e-05 | <5.26e-05 | n/a       | n/a     | n/a   | n/a       | 4.94e-05  | n/a        |
| S99N000083 |      | Americium-241 by GEA         | UCI/mL | n/a        | <7.01e-05 | <7.01e-05 | n/a       | n/a     | n/a   | n/a       | n/a       | 0.540      |
| S99N000083 |      | Am-241 by Extraction         | UCI/mL | 99.06      | <2.19e-03 | 7.81e-02  | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 2.33E+00   |
| S99N000083 |      | Ce-243/244 by Extraction     | UCI/mL | n/a        | <3.19e-03 | <6.93e-03 | n/a       | n/a     | n/a   | n/a       | 7.00e-03  | 1.00E+02   |
| S99N000083 |      | Alpha in Liquid Samples      | UCI/mL | 100.2      | <2.52e-05 | <2.59e-05 | n/a       | n/a     | n/a   | n/a       | 6.72e-05  | 9.19E-01   |
| S99N000083 |      | Beta in Liquid Samples       | UCI/mL | 100.7      | <2.52e-04 | <2.52e-02 | n/a       | n/a     | n/a   | n/a       | 2.49e-04  | 2.82E+00   |

INTERIM

QUICK TURN DATA

# INTERIM

Interim Results Report  
233-S

CORE NUMBER: n/a  
SEGMENT #: BOTW23

SEGMENT PORTION: Coupon Acid Leachate

| Sample#    | R | A# | Analyte                 | Unit   | Standard % | Blank     | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|---|----|-------------------------|--------|------------|-----------|--------|-----------|---------|-------|-----------|-----------|------------|
| S99N000082 | G |    | Cobalt-60 by GEA        | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Antimony-125 by GEA     | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Cesium-134 by GEA       | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Cesium-137 by GEA       | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Europium-152 by GEA     | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Europium-154 by GEA     | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Europium-155 by GEA     | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Radium-226 by GEA       | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Actinium-228 by GEA     | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Americium-241 by GEA    | UCi/mL | n/a        | n/a       |        | n/a       | n/a     | n/a   | n/a       | n/a       | n/a        |
| S99N000082 | G |    | Alpha in Liquid Samples | UCi/mL | 92.34      | <2.18E-03 | 13.18  | n/a       | n/a     | n/a   | n/a       | 3.00e-03  | 8.68E-01   |
| S99N000082 | G |    | Beta in Liquid Samples  | UCi/mL | 103.5      | <1.55E-02 | 5.530  | n/a       | n/a     | n/a   | n/a       | 1.20e-02  | 2.05E+00   |

INTERIM

QUICK TURN DATA

04/29/99 10:59 0309 3/2 18/8

# INTERIM

Interim Results for ICP/MS Actinides  
233-S PCB1

21-May-1999 16:04:59  
03:10  
0002-1

CORE NUMBER: N/A  
SEGMENT #: B01U26

SEGMENT PORTION: Sump Solid

| Sample ID  | RM | Analyte                    | Unit | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err% |
|------------|----|----------------------------|------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|------------|
| S99H000095 | A  | Protactinium-231 by ICP/MS | ug/g | N/A        | <2.86e-04 | <2.97e+02 | N/A       | N/A     | N/A   | N/A       | 266.9     | N/A        |
| S99H000095 | A  | Thorium-230 by ICP/MS      | ug/g | N/A        | <3.39e-04 | <3.51e+02 | N/A       | N/A     | N/A   | N/A       | 351.4     | N/A        |
| S99H000095 | A  | Thorium-230 by ICP/MS      | ug/g | N/A        | <2.75e-04 | <2.85e+02 | N/A       | N/A     | N/A   | N/A       | 283.3     | N/A        |
| S99H000095 | A  | Thorium-232 by ICP/MS      | ug/g | 101.0      | <2.34e-04 | <2.42e+02 | N/A       | N/A     | N/A   | N/A       | 242.2     | N/A        |
| S99H000095 | A  | Radium-226 by ICP/MS       | ug/g | 131.1      | <1.23e-04 | 6.36e+02  | N/A       | N/A     | N/A   | N/A       | 127.7     | N/A        |
| S99H000095 | A  | Plutonium-239 by ICP/MS    | ug/g | 124.5      | <1.39e-04 | 2.49e+06  | N/A       | N/A     | N/A   | N/A       | 144.3     | N/A        |
| S99H000095 | A  | Plutonium-239 by ICP/MS    | ug/g | N/A        | <1.11e-04 | 2.87e+06  | N/A       | N/A     | N/A   | N/A       | 114.9     | N/A        |
| S99H000095 | A  | Plutonium-240 by ICP/MS    | ug/g | N/A        | <1.02e-04 | 1.87e+06  | N/A       | N/A     | N/A   | N/A       | 105.5     | N/A        |
| S99H000095 | A  | Plutonium-242 by ICP/MS    | ug/g | 135.5      | <2.26e-05 | 3.91e+06  | N/A       | N/A     | N/A   | N/A       | 75.24     | N/A        |
| S99H000095 | A  | Pu/Am-241 by ICP/MS        | ug/g | N/A        | <5.27e-05 | 54.79     | N/A       | N/A     | N/A   | N/A       | 54.68     | N/A        |
| S99H000095 | A  | Am-243/Am-244 by ICP/MS    | ug/g | N/A        | <1.12e-04 | 1.6e+06   | N/A       | N/A     | N/A   | N/A       | 116.5     | N/A        |
| S99H000095 | A  | Pu-244/Am-244 by ICP/MS    | ug/g | N/A        | <1.12e-04 | 1.6e+06   | N/A       | N/A     | N/A   | N/A       | 116.5     | N/A        |

INTERIM

\$0013  
B99-024

OCIONE NUMBER: N/A  
 SEGMENT #: BOTU29

**INTERIM**  
 Interim Results for ICP/MS Actinides  
 233-S

DISCREPANT PORTION: Pipe Leachate

| Sampled    | RAI | Analyte                    | Unit | Standard % | Blank     | Result    | Duplicate | Average | RPD % | Spk Rec % | Del Limit | Count | Err% |
|------------|-----|----------------------------|------|------------|-----------|-----------|-----------|---------|-------|-----------|-----------|-------|------|
| SP9M000003 | A   | Protactinium-231 by ICP/MS | ug/L | N/A        | <8.04e-06 | 8.12e-04  | N/A       | N/A     | N/A   | N/A       | 8.12e-04  | N/A   | N/A  |
| SP9M000003 | A   | Thorium-230 by ICP/MS      | ug/L | N/A        | <2.98e-05 | <3.01e-03 | N/A       | N/A     | N/A   | N/A       | 3.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Thorium-230 by ICP/MS      | ug/L | N/A        | <2.99e-05 | <3.02e-03 | N/A       | N/A     | N/A   | N/A       | 3.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Thorium-232 by ICP/MS      | ug/L | 100.0      | <2.97e-05 | <3.00e-03 | N/A       | N/A     | N/A   | N/A       | 3.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Uranium-235 by ICP/MS      | ug/L | 133.1      | <2.34e-05 | 3.90e-03  | N/A       | N/A     | N/A   | N/A       | 2.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Uranium-235 by ICP/MS      | ug/L | 129.5      | <2.69e-05 | 2.70e-03  | N/A       | N/A     | N/A   | N/A       | 3.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Plutonium-239 by ICP/MS    | ug/L | N/A        | <1.50e-05 | 1.60e-03  | N/A       | N/A     | N/A   | N/A       | 2.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Plutonium-240 by ICP/MS    | ug/L | N/A        | <1.01e-05 | 1.00e-03  | N/A       | N/A     | N/A   | N/A       | 1.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Plutonium-242 by ICP/MS    | ug/L | 146.2      | <2.07e-05 | 2.00e-03  | N/A       | N/A     | N/A   | N/A       | 2.00e-03  | N/A   | N/A  |
| SP9M000003 | A   | Pu/Am-241 by ICP/MS        | ug/L | N/A        | <5.43e-06 | 5.48e-04  | N/A       | N/A     | N/A   | N/A       | 5.48e-04  | N/A   | N/A  |
| SP9M000003 | A   | Am-243/Am-243 by ICP/MS    | ug/L | N/A        | <2.12e-05 | 2.00e-03  | N/A       | N/A     | N/A   | N/A       | 2.00e-03  | N/A   | N/A  |

**INTERIM**

QUICK TURN DATA

# INTERIM

Interim Results for ICP/MS Actinides  
233-S PCB1

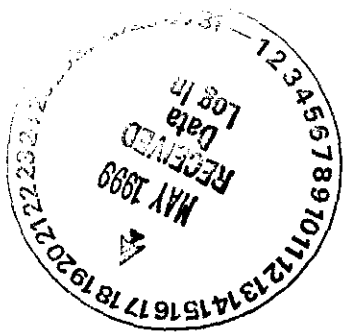
23-may-1999 16:05:11  
00002-1

SCORE NUMBER: N/A  
SEGMENT #: Composite BOTM25/2A

SEGMENT PORTION: Composite BOTM25/2A

| Sampled    | Eluate Analyte               | Unit | Standard % | Blank      | Result   | Duplicate | Average | RPD % Spk Rec % | Det Limit | Count Err% |
|------------|------------------------------|------|------------|------------|----------|-----------|---------|-----------------|-----------|------------|
| S99M000096 | A Protactinium-231 by ICP/MS | ug/g | N/A        | < 8.0e-04  | 5.04e-07 | N/A       | N/A     | N/A             | 5.04e-01  | N/A        |
| S99M000096 | A Thorium-229 by ICP/MS      | ug/g | N/A        | < 3.9e-04  | 5.97e-01 | N/A       | N/A     | N/A             | 5.97e-01  | N/A        |
| S99M000096 | A Thorium-230 by ICP/MS      | ug/g | N/A        | < 7.5e-04  | 4.84e-01 | N/A       | N/A     | N/A             | 4.84e-01  | N/A        |
| S99M000096 | A Thorium-232 by ICP/MS      | ug/g | 101.0      | < 3.4e-04  | 9.08e-01 | N/A       | N/A     | N/A             | 6.11e-01  | N/A        |
| S99M000096 | A Radium-226 by ICP/MS       | ug/g | 131.1      | < 2.3e-04  | 12.27    | N/A       | N/A     | N/A             | 2.17e-01  | N/A        |
| S99M000096 | A Plutonium-239 by ICP/MS    | ug/g | 124.5      | < 3.9e-04  | 8.81e-02 | N/A       | N/A     | N/A             | 2.45e-01  | N/A        |
| S99M000096 | A Plutonium-240 by ICP/MS    | ug/g | N/A        | < 1.11e-04 | 4.97e-01 | N/A       | N/A     | N/A             | 1.95e-01  | N/A        |
| S99M000096 | A Plutonium-242 by ICP/MS    | ug/g | N/A        | < 1.02e-04 | 3.97e-01 | N/A       | N/A     | N/A             | 1.79e-01  | N/A        |
| S99M000096 | A Pu/Am-241 by ICP/MS        | ug/g | 135.5      | < 2.0e-05  | 5.12e-01 | N/A       | N/A     | N/A             | 1.20e-01  | N/A        |
| S99M000096 | A Am-243/Am-243 by ICP/MS    | ug/g | N/A        | < 2.7e-05  | 6.20e-01 | N/A       | N/A     | N/A             | 9.30e-02  | N/A        |
| S99M000096 | A Pu-244/Am-244 by ICP/MS    | ug/g | N/A        | < 1.25e-04 | 1.00e-01 | N/A       | N/A     | N/A             | 1.90e-01  | N/A        |

# INTERIM



## QUICK TURN DATA

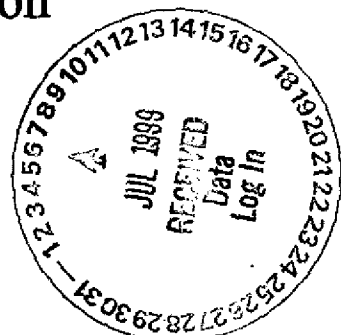
S0013  
B99-024

~~ATTN:~~ STEVE TRENT  
372-9487

QUICK TURN DATA

# 233-S Pu Concentration Facility Samples - SDG3

East Duct Coupon  
B0TW23



S99M000080

Leach with  
Nitric Acid:  
GFAA digest

Leach with  
Nitric and  
Hydrochloric Acid:  
ICP digest



S99M000082

Total Alpha  
Total Beta

Combine  
leachates for  
full analysis



S99M000217

Total Alpha  
Total Beta  
GEA: Am-241, Sb-125,  
Co-60, Cs-134,  
Cs-137, Eu-152,  
Eu-154, Eu-155,  
Ra-226, Ac-228

Np-237

Pu-239

Pu-240

Pu/Am-241

Pu-242

cm - 243

cm 244

SAMPLE INQUIRY

Company Name: Bechtel

Project Code: 233-S  
Group #: 99000075

Sample ID: 233-S ~~XXXXXX~~ ACID LEACH (ICP)

Sample #: S99M000217

| Parameter                      | Rep | Result      | Unit        | Date     | Analyst |
|--------------------------------|-----|-------------|-------------|----------|---------|
| Alpha in Liquid Samples        | 0   | 1.23E+01    | uCi/mL      | 06/24/99 | sc1     |
| Alpha Liq.- Rel. % Count Error | 0   | 1.34E+00    | % Ct. Error | 06/24/99 | sc1     |
| Beta in Liquid Samples         | 0   | 7.21E-01    | uCi/mL      | 06/24/99 | sc1     |
| Beta Liq.- Rel. % Count Error  | 0   | 5.54E+00    | % Ct. Error | 06/24/99 | sc1     |
| Sodium-22 by GEA               | 0   | < 4.381e-05 | uCi/mL      | 06/30/99 | g11     |
| Na-22 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Sodium-24 by GEA               | 0   | < 4.276e-05 | uCi/mL      | 06/30/99 | g11     |
| Na-24 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Potassium-40 by GEA            | 0   | < 1.781e-03 | uCi/mL      | 06/30/99 | g11     |
| K-40 GEA Rel. % Count Error    | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cobalt-56 by GEA               | 0   | < 4.290e-05 | uCi/mL      | 06/30/99 | g11     |
| Co-56 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cobalt-57 by GEA               | 0   | < 2.934e-05 | uCi/mL      | 06/30/99 | g11     |
| Co-57 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cobalt-60 by GEA               | 0   | < 4.162e-05 | uCi/mL      | 06/30/99 | g11     |
| Co-60 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Selenium-75 by GEA             | 0   | < 4.948e-05 | uCi/mL      | 06/30/99 | g11     |
| Se-75 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Strontium-85 by GEA            | 0   | < 4.560e-05 | uCi/mL      | 06/30/99 | g11     |
| Sr-85 GEA Rel. % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Yttrium-88 by GEA              | 0   | < 3.758e-05 | uCi/mL      | 06/30/99 | g11     |
| Y-88 GEA Rel. % Count Error    | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Niobium-94 by GEA              | 0   | < 4.153e-05 | uCi/mL      | 06/30/99 | g11     |
| Nb-94 GEA Rel % Counting Error | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Zr/Nb-95 by GEA                | 0   | < 1.780e-04 | uCi/mL      | 06/30/99 | g11     |
| Zr/Nb-95 GEA Rel % Count. Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Ruthenium-103 by GEA           | 0   | < 4.068e-05 | uCi/mL      | 06/30/99 | g11     |
| Ru-103 GEA Rel % Count Error   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Ru/Rh-106 by GEA               | 0   | < 7.663e-04 | uCi/mL      | 06/30/99 | g11     |
| Ru/Rh-106 GEA Rel. % Count Err | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cadmium-109 by GEA             | 0   | < 1.191e-03 | uCi/mL      | 06/30/99 | g11     |
| Cd-109 GEA Rel % Counting Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Tin-113 by GEA                 | 0   | < 5.613e-05 | uCi/mL      | 06/30/99 | g11     |
| Sn-113 GEA Rel % Counting Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Antimony-125 by GEA            | 0   | < 1.236e-04 | uCi/mL      | 06/30/99 | g11     |
| Sb-125 GEA Rel % Counting Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Iodine-131 by GEA              | 0   | < 4.027e-05 | uCi/mL      | 06/30/99 | g11     |
| I-131 GEA Rel % Counting Err   | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cesium-134 by GEA              | 0   | < 3.895e-05 | uCi/mL      | 06/30/99 | g11     |
| Cs-134 GEA Rel. % Count Error  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Cesium-137 by GEA              | 0   | 2.120e-03   | uCi/mL      | 06/30/99 | g11     |
| Cs-137 GEA Rel. % Count Error  | 0   | 4.15        | % Ct. Error | 06/30/99 | g11     |
| Ce/Pr-144 by GEA               | 0   | < 3.970e-04 | uCi/mL      | 06/30/99 | g11     |
| Ce/Pr-144 GEA Rel % Count Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Europium-152 by GEA            | 0   | < 8.774e-05 | uCi/mL      | 06/30/99 | g11     |
| Eu-152 GEA Rel % Counting Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |
| Europium-154 by GEA            | 0   | < 1.272e-04 | uCi/mL      | 06/30/99 | g11     |
| Eu-154 GEA Rel % Counting Err  | 0   | n/a         | % Ct. Error | 06/30/99 | g11     |

*EAST DUCT  
COUPON*



SAMPLE INQUIRY

Company Name: Bechtel

*BOTW23*

Project Code: 233-S  
Group #: 99000075

|                                |   |             |             |          |     |
|--------------------------------|---|-------------|-------------|----------|-----|
| Europium-155 by GEA            | 0 | < 1.402e-04 | uCi/mL      | 06/30/99 | g11 |
| Eu-155 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Mercury-203 by GEA             | 0 | < 3.695e-05 | uCi/mL      | 06/30/99 | g11 |
| Hg-203 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Thallium-208 by GEA            | 0 | < 4.639e-04 | uCi/mL      | 06/30/99 | g11 |
| Tl-208 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Bismuth-212 by GEA             | 0 | < 6.313e-04 | uCi/mL      | 06/30/99 | g11 |
| Bi-212 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Lead-212 by GEA                | 0 | < 7.247e-05 | uCi/mL      | 06/30/99 | g11 |
| Pb-212 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Bismuth-214 by GEA             | 0 | < 1.218e-04 | uCi/mL      | 06/30/99 | g11 |
| Bi-214 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Lead-214 by GEA                | 0 | < 4.333e-04 | uCi/mL      | 06/30/99 | g11 |
| Pb-214 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Radium-224 by GEA              | 0 | < 7.579e-04 | uCi/mL      | 06/30/99 | g11 |
| Ra-224 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Radium-226 by GEA              | 0 | < 7.477e-04 | uCi/mL      | 06/30/99 | g11 |
| Ra-226 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Actinium-228 by GEA            | 0 | < 2.314e-04 | uCi/mL      | 06/30/99 | g11 |
| Ac-228 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Thorium-228 by GEA             | 0 | < 3.691e-03 | uCi/mL      | 06/30/99 | g11 |
| Th-228 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Thorium-229 by GEA             | 0 | < 1.691e-04 | uCi/mL      | 06/30/99 | g11 |
| Th-229 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Uranium/Thorium-233 by GEA     | 0 | < 2.527e-02 | uCi/mL      | 06/30/99 | g11 |
| U/Th-233 GEA Rel % Count Err   | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Protactinium-233 by GEA        | 0 | 2.340e-04   | uCi/mL      | 06/30/99 | g11 |
| Pa-233 GEA Rel % Counting Err  | 0 | 32.2        | % Ct. Error | 06/30/99 | g11 |
| Protactinium-234m by GEA       | 0 | < 6.876e-03 | uCi/mL      | 06/30/99 | g11 |
| Pa-234m GEA Rel % Counting Err | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Thorium-234 by GEA             | 0 | < 2.927e-03 | uCi/mL      | 06/30/99 | g11 |
| Th-234 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Uranium-235 by GEA             | 0 | < 4.561e-05 | uCi/mL      | 06/30/99 | g11 |
| U-235 GEA Rel % Counting Err   | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Neptunium-237 by GEA           | 0 | < 3.720e-04 | uCi/mL      | 06/30/99 | g11 |
| Np-237 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Neptunium-239 by GEA           | 0 | < 1.303e-04 | uCi/mL      | 06/30/99 | g11 |
| Np-239 GEA Rel % Counting Err  | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Plutonium-239 by GEA           | 0 | 9.240e+00   | uCi/mL      | 06/30/99 | g11 |
| Pu-239 GEA Rel % Counting Err  | 0 | 4.60        | % Ct. Error | 06/30/99 | g11 |
| Americium-241 by GEA           | 0 | 1.990e+00   | uCi/mL      | 06/30/99 | g11 |
| Am-241 GEA Rel % Count Error   | 0 | 0.230       | % Ct. Error | 06/30/99 | g11 |
| Americium-243 by GEA           | 0 | < 1.043e-04 | uCi/mL      | 06/30/99 | g11 |
| Am-243 GEA Rel % Count Error   | 0 | n/a         | % Ct. Error | 06/30/99 | g11 |
| Protactinium-231 by ICP/MS     | 0 |             | ug/mL       |          | xxx |
| Thorium-229 by ICP/MS          | 0 |             | ug/mL       |          | xxx |
| Thorium-230 by ICP/MS          | 0 |             | ug/mL       |          | xxx |
| Thorium-232 by ICP/MS          | 0 |             | ug/mL       |          | xxx |
| Neptunium-237 by ICP/MS        | 0 |             | ug/mL       |          | xxx |
| Plutonium-239 by ICP/MS        | 0 |             | ug/mL       |          | xxx |
| Plutonium-240 by ICP/MS        | 0 |             | ug/mL       |          | xxx |
| Plutonium-242 by ICP/MS        | 0 |             | ug/mL       |          | xxx |
| Pu/Am-241 by ICP/MS            | 0 |             | ug/mL       |          | xxx |

SAMPLE INQUIRY

Company Name: Bechtel BOTW23

Project Code: 233-S  
Group # : 99000075

Am 243/Cm 243 by ICP/MS 0  
Pu 244/Cm 244 by ICP/MS 0  
Acid Dig. ICP/AA/Radchem Aliq. 0 100  
Dose Rate(samp prep) in mrad/hr 0 <0.5

ug/mL xxx  
ug/mL xxx  
DF 05/27/99 tam2  
mrad/hour 05/27/99 tam2