54-1113

Sheet2

Sue94.15

# CST-9 Radiochemistry Screening Data
## MRAL IV Gamma Spec TA-59

**Date:** 12/5/95 **Analyst:** DD

| Nuclide | Result | Uncert. | MDA | Units |
|---|---|---|---|---|
| soilstd | | | | |
| AC-228 | 23.51 | 4.44 | 3.05 | pCi/g |
| AM-241 | -1.82 | 0.16 | 0.82 | pCi/g |
| ANN-RAD | 0.07 | 0.04 | 0.8 | pCi/g |
| BA-140 | 13.9 | 1.26 | 3.08 | pCi/g |
| BI-211 | -1.05 | 0.37 | 6.65 | pCi/g |
| BI-212 | 42.57 | 10.03 | 5.62 | pCi/g |
| BI-214 | -1.02 | 0.24 | 1.54 | pCi/g |
| CD-109 | -9.07 | 1.23 | 11.65 | pCi/g |
| CE-139 | -0.87 | 0.1 | 0.65 | pCi/g |
| CE-144 | 2.54 | 0.42 | 5.45 | pCi/g |
| CO-57 | 0.08 | 0.03 | 0.31 | pCi/g |
| CO-60 | -0.03 | 0.05 | 0.34 | pCi/g |
| CS-134 | 0.21 | 0.07 | 0.95 | pCi/g |
| CS-137 | 94.77 | 1.75 | 0.89 | pCi/g |
| EU-152 | -7.94 | 1.45 | 2.5 | pCi/g |
| HG-203 | -2.57 | 0.2 | 0.74 | pCi/g |
| I-129 | 0 | 0.01 | 0.03 | pCi/g |
| K-40 | 5.61 | 1.69 | 4.29 | pCi/g |
| LA-140 | -0.98 | 0.25 | 0.19 | pCi/g |
| MN-54 | 0.63 | 0.14 | 0.8 | pCi/g |
| NA-22 | 0 | 0.05 | 0.4 | pCi/g |
| NP-237 | -3.67 | 0.42 | 3.54 | pCi/g |
| PA-231 | -11.36 | 2.61 | 23.76 | pCi/g |
| PA-233 | -0.62 | 0.16 | 2.1 | pCi/g |
| PA-234m | -88.1 | 24.43 | 87.08 | pCi/g |
| PB-210 | 11.9 | 1.2 | 4.66 | pCi/g |
| PB-211 | 12.27 | 2.68 | 19.19 | pCi/g |
| PB-212 | 1.86 | 0.22 | 1.45 | pCi/g |
| PB-214 | 0.73 | 0.17 | 1.98 | pCi/g |
| RA-223 | 0.45 | 0.26 | 8.84 | pCi/g |
| RA-224 | 9.21 | 1.68 | 15.69 | pCi/g |
| RA-226 | 10.57 | 1.76 | 17.05 | pCi/g |
| RN-219 | -3.02 | 0.91 | 10.03 | pCi/g |
| RU-106 | -12.05 | 1.8 | 5.81 | pCi/g |
| SE-75 | 0.39 | 0.09 | 0.97 | pCi/g |
| SN-113 | 0.84 | 0.15 | 0.98 | pCi/g |
| SR-85 | 0.2 | 0.06 | 0.87 | pCi/g |
| TH-227 | 2.64 | 0.52 | 6.41 | pCi/g |
| TH-234 | 3.89 | 0.73 | 6.57 | pCi/g |
| TL-208 | 0.8 | 0.15 | 0.81 | pCi/g |
| U-235 | -0.94 | 0.13 | 1.05 | pCi/g |
| Y-88 | 0.42 | 0.13 | 0.22 | pCi/g |
| ZN-65 | 9.68 | 0.92 | 1.2 | pCi/g |

| Nuclide | Result | Uncert. | MDA | Units |
|---|---|---|---|---|
| 0554-95-0681 | | | | |
| AC-228 | 23.94 | 4.52 | 1.44 | pCi/g |
| AM-241 | 307.6 | 2.13 | 1.77 | pCi/g |
| ANN-RAD | -0.09 | 0.04 | 0.76 | pCi/g |
| BA-140 | 5.11 | 0.77 | 2.46 | pCi/g |
| BI-211 | 4.64 | 0.77 | 4.68 | pCi/g |
| BI-212 | -14.96 | 5.64 | 13.65 | pCi/g |
| BI-214 | -1.36 | 0.27 | 1.45 | pCi/g |
| CD-109 | -9.41 | 1.27 | 12.47 | pCi/g |
| CE-139 | -0.2 | 0.05 | 0.52 | pCi/g |
| CE-144 | 4.25 | 0.54 | 6.03 | pCi/g |
| CO-57 | 1.38 | 0.11 | 0.88 | pCi/g |
| CO-60 | 2.83 | 0.39 | 0.53 | pCi/g |
| CS-134 | 0.23 | 0.08 | 0.94 | pCi/g |
| CS-137 | 42.67 | 1.18 | 0.67 | pCi/g |
| EU-152 | -0.26 | 0.37 | 2.48 | pCi/g |
| HG-203 | -2.83 | 0.21 | 0.58 | pCi/g |
| I-129 | 0 | 0.01 | 0.03 | pCi/g |
| K-40 | 13.37 | 2.62 | 3.01 | pCi/g |
| LA-140 | 0.13 | 0.09 | 0.11 | pCi/g |
| MN-54 | 0.54 | 0.14 | 0.78 | pCi/g |
| NA-22 | 1.31 | 0.26 | 0.75 | pCi/g |
| NP-237 | 1.29 | 0.25 | 3.78 | pCi/g |
| PA-231 | -21.49 | 3.63 | 16.86 | pCi/g |
| PA-233 | 5.17 | 0.47 | 1.48 | pCi/g |
| PA-234m | 88.1 | 24.43 | 129.06 | pCi/g |
| PB-210 | 8.67 | 1.02 | 15.96 | pCi/g |
| PB-211 | 4.19 | 1.47 | 17.8 | pCi/g |
| PB-212 | 0.54 | 0.12 | 1.18 | pCi/g |
| PB-214 | -2.18 | 0.31 | 1.49 | pCi/g |
| RA-223 | -9.15 | 1.17 | 7.75 | pCi/g |
| RA-224 | 2.72 | 0.91 | 12.56 | pCi/g |
| RA-226 | 83.26 | 4.95 | 16.02 | pCi/g |
| RN-219 | 5.08 | 1.16 | 8.37 | pCi/g |
| RU-106 | -10.33 | 1.67 | 5.54 | pCi/g |
| SE-75 | 0.61 | 0.11 | 0.66 | pCi/g |
| SN-113 | -1.27 | 0.19 | 0.34 | pCi/g |
| SR-85 | -0.04 | 0.04 | 0.82 | pCi/g |
| TH-227 | 0.52 | 0.23 | 5.05 | pCi/g |
| TH-234 | 4.67 | 0.81 | 27.39 | pCi/g |
| TL-208 | 0.54 | 0.13 | 0.72 | pCi/g |
| U-235 | -1.11 | 0.14 | 1.02 | pCi/g |
| Y-88 | 1.27 | 0.22 | 0.21 | pCi/g |
| ZN-65 | -1.18 | 0.33 | 1.95 | pCi/g |

Uncert. = 1 Sigma Counting Uncertainty

11529

54-1113

RVE33995.S54

# CST-9 Radiochemistry Screening Results
## MRAL IV TA-54

**Date :** 12/5/95 **Analyst :** DD

### Gross Gamma Screening Results

| Sample # | Result | Uncertainty | MDA | Units |
|---|---|---|---|---|
| 0554-95-0681 | 5.59 | 0.34 | 2.97 | pCi/g |
| 0554-95-0682 | 5.70 | 0.34 | 2.97 | pCi/g |
| 0554-95-0683 | 4.18 | 0.29 | 2.97 | pCi/g |
| 0554-95-0684 | 58.41 | 1.09 | 2.97 | pCi/g |

### Gross Alpha, Beta Screening Results

| Sample # | Alpha | Uncertainty | MDA | Beta | Uncertainty | MDA | Units |
|---|---|---|---|---|---|---|---|
| 0554-95-0681 | 24.82 | 52.65 | 99.50 | -24.53 | 19.04 | 28.00 | pCi/g |
| 0554-95-0682 | 24.82 | 52.65 | 99.50 | 0.11 | 1.26 | 28.00 | pCi/g |
| 0554-95-0683 | 0.00 | 37.23 | 99.50 | -9.03 | 11.55 | 28.00 | pCi/g |
| 0554-95-0684 | 2121.96 | 486.81 | 99.50 | 199.24 | 54.26 | 28.00 | pCi/g |

### Tritium and Moisture Screening Results

| Sample # | Tritium | Uncertainty | MDA | Units | Moisture | Uncertainty | Units |
|---|---|---|---|---|---|---|---|
| 0554-95-0681 | 0.00 | 0.00 | 0.30 | pCi/g | 8.33 | 1.00 | % |
| 0554-95-0682 | 0.00 | 0.00 | 0.30 | pCi/g | 10.20 | 1.00 | % |
| 0554-95-0683 | 0.00 | 0.00 | 0.30 | pCi/g | 11.45 | 1.00 | % |
| 0554-95-0684 | 2429.75 | 4.50 | 0.30 | pCi/g | 20.14 | 1.00 | % |

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

FIELD SCREENING LOG per LANL-ER-SOP-12.01, R1.

TA/OU 54/1148 Borehole ID 54-1112 Checked By JRM Date 12/8/97 Page 1 of 4

A = 1st Field Screening VOCs = 5.9 ppm total VOCs α = 1,000 dpm/100cm²

B = 2nd Field Screening H³ = β/γ = 100,000 dpm/100cm²

| Run No. | Run Interval | Hazard | Screening Method | | Reading | | Acceptance Criteria BELOW | Acceptance Criteria ABOVE | Technician's Certification |
|---|---|---|---|---|---|---|---|---|---|
| A | 0-2' 1 | VOC | HNu | | 0 | | X | | DR |
| A | | Rad | α | β/γ | 0 | 230 | Y Y | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | H³ | HE | Spot Test | 0 | | X | | RW |
| A | 1-2 | VOC | HNu | | 0 | | X | | DR |
| A | | Rad | α | β/γ | 1 | 250 | X X | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | H³ | HE | Spot Test | 0 | | X | | DR |
| A | 2-3 | VOC | HNu | | 0 | | X | | DR |
| A | | Rad | α | β/γ | 0 | 250 | X X | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | H³ | HE | Spot Test | 0 | | X | | DR |
| A | 3-4 | VOC | HNu | | 0 | | X | | DR |
| A | | Rad | α | β/γ | 1 | 270 | X X | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | H³ | HE | Spot Test | 0 | | X | | DR |
| A | 4-5 | VOC | HNu | | 0 | | | | |
| A | | Rad | α | β/γ | 0 | 250 | X X | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | H³ | HE | Spot Test | 0 | | X | | DR |
| A | 5-6 | VOC | HNu | | 0 | | X | | DR |
| A | | Rad | α | β/γ | 1 | 230 | X X | | DR |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

FIELD SCREENING LOG per LANL-ER-SOP 12.01, R1..

TA/OU 54/1148 Borehole ID 54-1112 Checked By [illegible] Date 12/8/95 Page 2 of 4

A = 1st Field Screening VOCs = 5.9 ppm total VOCs α = 1,000 dpm/100cm²

B = 2nd Field Screening H³ = β/γ = 100,000 dpm/100cm²

| Run No. | Run Interval 12/6/95 | Hazard | Screening Method | Reading | Acceptance Criteria BELOW | Acceptance Criteria ABOVE | Technician's Certification |
|---|---|---|---|---|---|---|---|
| A | 6-7 | VOC | HNu | 0 | Y | | RW |
| A | | Rad | α β/γ | 1 270 | Y Y | | RW |
| B | Max | VOC | HNu | | | | |
| B | Max | Rad | α β/γ | | | | |
| | | H³ HE | Spot Test | 0 | Y | | RW |
| A | 7-8 | VOC | HNu | 0 | Y | | RW |
| A | | Rad | α β/γ | 0 250 | Y Y | | RW |
| B | Max | VOC | HNu | | | | |
| B | Max | Rad | α β/γ | | | | |
| | | H³ HE | Spot Test | 0 | Y | | RW |
| A | 8-9 | VOC | HNu | 0 | X | | RW |
| A | | Rad | α β/γ | 1 270 | Y Y | | RW |
| B | Max | VOC | HNu | | | | |
| B | Max | Rad | α β/γ | | | | |
| | | H³ HE | Spot Test | 0 | | | RW |
| A | 9-10 | VOC | HNu | 0 | X | | RW |
| A | | Rad | α β/γ | 0 250 | Y Y | | RW |
| B | Max | VOC | HNu | | | | |
| B | Max | Rad | α β/γ | | | | |
| | 12-7-95 | H³ HE | Spot Test | 0 | X | | RW |
| A | 8.5-13.5 | VOC | HNu | 0 | X | | RW |
| A | | Rad | α β/γ | 0 210 | Y Y | | RW |
| B | Max | VOC | HNu | 0 | X | | RW |
| B | Max | Rad | α β/γ | 1 210 | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | Y | | RW |
| A | 13.5-17.5 | VOC | HNu | 0 | Y | | RW |
| A | | Rad | α β/γ | 0 200 | Y Y | | RW |
| B | Max | VOC | HNu | 0 | Y | | RW |
| B | Max | Rad | α β/γ | 1 220 | Y Y | | RW |

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

FIELD SCREENING LOG per LANL-ER-SOP-12.01, R1.

TA/OU 54/1148 Borehole ID 54-1112 Checked By [illegible] Date 12/8/95 Page 1 of 4

A = 1st Field Screening VOCs = 5.9 ppm total VOCs α = 1,000 dpm/100cm²

B = 2nd Field Screening H³ = β/γ = 100,000 dpm/100cm²

| Run No. | Interval 11-7-95 | Hazard | Screening Method | Reading | | Acceptance Criteria BELOW | ABOVE | Technician's Certification |
|---|---|---|---|---|---|---|---|---|
| A | 0937 17.5-22.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 1 | 20c | Y Y | | RW |
| B | Max | VOC | HNu | 0 | | Y | | RW |
| B | Max | Rad | α β/γ | 1 | 24c | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | | Y | | RW |
| A | 22.5-27.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 0 | 21c | Y Y | | RW |
| B | Max | VOC | HNu | 0 | | Y | | RW |
| B | Max | Rad | α β/γ | 2 | 20c | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | | Y | | RW |
| A | ~~22.5~~ 27.5-31.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 0 | 200 | Y Y | | RW |
| B | Max | VOC | HNu | 0 | | Y | | RW |
| B | Max | Rad | α β/γ | 0 | 170 | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | | Y | | RW |
| A | 31.5-35.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 0 | 220 | Y Y | | RW |
| B | Max | VOC | HNu | 3 | | X | | RW |
| B | Max | Rad | α β/γ | 0 | 220 | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | | Y | | RW |
| A | 35.5-38.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 0 | 200 | Y Y | | RW |
| B | Max | VOC | HNu | 0.5 | | Y | | RW |
| B | Max | Rad | α β/γ | 0 | 220 | Y Y | | RW |
| | | H³ HE | Spot Test | 0 | | Y | | RW |
| A | 38.5-43.5 | VOC | HNu | 0 | | Y | | RW |
| A | | Rad | α β/γ | 0 | 200 | Y Y | | RW |
| B | Max | VOC | HNu | 0.5 | | X | | RW |
| B | Max | Rad | α β/γ | 0 | 200 | Y Y | | RW |
| | | H³ | | 0 | | Y | | RW |

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

**FIELD SCREENING LOG** per LANL-ER-SOP 12.01, R1.

TA/OU 54/1148 Borehole ID 54-1112 Checked By [illegible] Date 14 8/95 Page 4 of 4

A = 1st Field Screening
B = 2nd Field Screening

VOCs = 5.9 ppm total VOCs
$H^3$ =

α = 1,000 dpm/100cm²
β/γ = 100,000 dpm/100cm²

| Run No. | Run Interval 12-7445 | Hazard | Screening Method | | Reading | | Acceptance Criteria BELOW | Acceptance Criteria ABOVE | Technician's Certification |
|---|---|---|---|---|---|---|---|---|---|
| A | 43.5-48.5 | VOC | HNu | | 0 | | ✓ | | RGL |
| A | | Rad | α | β/γ | 0 | 210 | ✓ ✓ | | RGL |
| B | Max | VOC | HNu | | 0 | | ✓ | | RGL |
| B | Max | Rad | α | β/γ | 0 | 220 | ✓ ✓ | | RGL |
| | | $H^3$ HE | | Spot Test | 0 | | ✓ | | RGL |
| A | 48.5-53.5 | VOC | HNu | | 0 | | ✓ | | RGL |
| A | | Rad | α | β/γ | 0 | 220 | ✓ ✓ | | RGL |
| B | Max | VOC | HNu | | 0 | | ✓ | | RGL |
| B | Max | Rad | α | β/γ | 0 | 230 | ✓ ✗ | | RGL |
| | | $H^3$ HE | | Spot Test | 0 | | ✓ | | RGL |
| A | 53.5-58.5 | VOC | HNu | | 0 | | ✓ | | RGL |
| A | | Rad | α | β/γ | 0 | 240 | ✓ ✓ | | RGL |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | $H^3$ HE | | Spot Test | | | | | |
| A | | VOC | HNu | | | | | | |
| A | | Rad | α | β/γ | | | | | |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | $H^3$ HE | | Spot Test | | | | | |
| A | | VOC | HNu | | | | | | |
| A | | Rad | α | β/γ | | | | | |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |
| | | $H^3$ HE | | Spot Test | | | | | |
| A | | VOC | HNu | | | | | | |
| A | | Rad | α | β/γ | | | | | |
| B | Max | VOC | HNu | | | | | | |
| B | Max | Rad | α | β/γ | | | | | |

# MEMORANDUM

ERM/GOLDER Los Alamos Project Team

**To:** Bret Lockhart CST-9

**From:** Ken Kisiel KK

**Date:** February 29, 1996

**Regarding:** MISLABELED RADVAN SAMPLE

The sample 0554-95-0541 (COC #1148-95-0174) collected at TA-54, MDA G borehole 54-1128 was mislabeled. The sample ID should be changed to 0554-95-0900 in all documents and electronic analytical reports. Attached are copies of the corrected chain of custody and sample collection log. Please correct this situation at your earliest convenience and mailstop the new report to Jon Marin M327.

cc: Project File 19574 9.1.1
Jon Marin

KFI - Data

54-1115



Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| Technical Area | 54 | Send Lab Report to | Don Krier D462 | Field Unit Leader | Cheryl Rofer ()667-2988 |
| Operable Unit | 1148 | | | | |
| Date | 10/30/95 | LANL Destination | SMO | Turnaround | 45 days |
| OU Contact | Don Krier | LANL Contact | John Miglio | Lab Report Required | 12/14/95 |
| Contact Phone No | () 665-7834 | LANL Mail Stop | | Charge Code | MA51-3000-000S |

| Field Unique Sample #/ID | Cont ID | Date & Time Collected | Sample Container Volume/Material | Matrix | Preserv | ANALYSIS REQUESTED: (SMO Order Codes) | REMARKS (Conditions of receipt, etc.) |
|---|---|---|---|---|---|---|---|
| 0554-95-0519 | 01 | 10/30/95 1200 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0520 | 05 | 10/30/95 1215 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0521 | 01 | 10/30/95 1215 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0522 | 01 | 10/30/95 1240 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0523 | 01 | 10/30/95 1300 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0524 | 01 | 10/30/95 1415 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0525 | 05 | 10/30/95 1440 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0526 | 01 | 10/30/95 1440 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0527 | 01 | 10/30/95 1500 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0528 | 01 | 10/30/95 1515 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0529 | 01 | 10/30/95 1520 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0530 | 05 | 10/30/95 1540 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0531 | 01 | 10/30/95 1540 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0532 | 01 | 10/30/95 1600 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0533 | 01 | 10/30/95 1610 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0534 | 01 | 10/30/95 1620 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0535 | 05 | 10/30/95 1640 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0536 | 01 | 10/30/95 1640 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0537 | 01 | 10/31/95 0845 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0538 | 01 | 10/31/95 0900 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0539 | 01 | 10/31/95 0915 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| 0554-95-0540 | 05 | 10/31/95 0915 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |
| ~~0554-95-0541~~ LL 2/24/96 | 01 | 10/31/95 | Reseatable Poly Bag | Soil | None | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | |

0900

Original - LANL Destination  Yellow - RPF  Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0554-95-~~0541~~ 0100 2/26/96

Date 11/2/95 Time 0840 Sample Type Core - obtained by drilling (soil)

Technical Area 54 Operable Unit 1148 Sample Location Borehole 54-1128, 30 deg, near pit 1

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Ken Kistel

Composite Type: None Signature

Grabs:

| | Location ID | Start Depth | End Depth | Units |
|---|---|---|---|---|
| 1 | 54-1128 | 4.0 | 4.10 | ft |

These Samples were collected using LANL ER SOP 04.01

| ID | Analysis | Container | Preservative | C of C Control No. |
|---|---|---|---|---|
| 01 | RVGROSSAB+RVGROSSG+RVH2O+RVH3 | Resealable Poly Bag | None | 1148-95-0176 |

Weather Cloudy 40°

Sample Description CRUSHED TUFF

Field Screening

| Loc ID | Depth | | Screening Method | Result | Units | Comments |
|---|---|---|---|---|---|---|
| 54-1128 | 0 to | 0 ft | Field Rad (alpha) | 1 | cpm | |
| 54-1128 | 0 to | 0 ft | Field Rad (beta/gam) | 400 | cpm | |
| 54-1128 | 0 to | 0 ft | PID | 0 | ppm | |

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments:

N/A

**ERM Program Management Company**

2237 Trinity Drive, Bldg. 2
Los Alamos, NM 87544
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(505) 662-1398 (fax) or
(505) 661-9699 (fax)

ERM.

# FACSIMILE COVER PAGE

**Date:** 11/25/96

**To:** Tim Cash

**Phone Number:** 667-4127

**Fax Number:** 665-5290

**From:** Jan Marin

**Number of Pages (including cover page):** 4

---

Tim:

Clorita Trujillo send me these swipe results of the drill pipe at MDA G that we want to decon at TA-50. Please review and call me at 662-1353. Thanks.

Jan Marin

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Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

*Industrial Hygiene and Safety Group*
*ESH-5, Mail Stop K486*
*Confirmation/Phone #: (505) 667-5231*
*Fax #: (505) 665-2192*

# ESH-5

## FAX TRANSMITTAL SHEET

**DATE:** November 25, 1996

**To:** John Marin **Fax #:** 662-1398

**Organization:** ERM-Golder **Phone #:** 662 3700

**From:** Chantel R. Trujillo **Phone #:** 667-3979

**Fax #:** 7 77576

**Number of Pages to Follow (excluding coversheet):** 2

**Message:**

# ESH-1 SMEAR SURVEY FORM

## SAMPLE DESCRIPTION

Sample Date/Time: [illegible] No. Of Samples: 10

TA: 54 Bldg: Area G

RCT: [illegible] Z Number: [illegible]

Phone/Fax: [illegible]

## SAMPLE TRACKING NUMBER

ESH-1 SAMPLE TRACKING

*96005070*

## PURPOSE OF SURVEY

☐ ROUTINE ☐ PRE-JOB ☐ POST-JOB ☐ HOT-JOB

☑ ITEM RELEASE ☐ OFFSITE SHIPMENT ☐ ONSITE SHIPMENT

☐ NON-ROUTINE/OTHER: To TA-50 To Myrna

For Decon

## INSTRUMENTATION

| TYPE | HSE No. | CAL DUE | % EFF | BKG |
|---|---|---|---|---|
| ESP-1 | 9430 | 1-18-97 | 50% | 175 |
| Mod 139 | 7617 | 1-16-97 | 50% | 0 |
| | | | | |
| | | | | |
| | | | | |

## ADDITIONAL INFORMATION

☐ Occurrence No.:

☐ Incident No.:

☐ RWP No.:

| Smear No. | Location | Alpha* | Beta* | Gamma* |
|---|---|---|---|---|
| 1 | Auger End | | | |
| 2 | Middle | | | |
| 3 | ↓ | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | End with Cover | | | |
| 10 | Floor | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |

| Smear No. | Location | Alpha* | Beta* | Gamma* |
|---|---|---|---|---|
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |
| 26 | | | | |
| 27 | | | | |
| 28 | | | | |
| 29 | | | | |
| 30 | | | | |

* dpm/100 cm2

# NPAL ANALYSIS REPORT FORM

FILE: 96008070

**SAMPLE DESCRIPTION**

Sample Date: 11/18/96
TA: 54
BLDG: AREA-G

**ANALYSIS REQUESTED**

Bethold LB770 at TA-35
Nucon Smear

Analyst: David Barnes

**RCT**

Name: C. Trujillo
TA: 59
MS: K487

| Sample ID # | Alpha Activity dpm | 2*sigma dpm | Alpha MDA dpm | Beta Activity dpm | 2*sigma dpm | Beta MDA dpm |
|---|---|---|---|---|---|---|
| 1 | NDA | NDA | 5.6 | NDA | NDA | 8.5 |
| 2 | NDA | NDA | 5.9 | NDA | NDA | 7.8 |
| 3 | NDA | NDA | 5.3 | NDA | NDA | 7.9 |
| 4 | NDA | NDA | 5.2 | NDA | NDA | 7.8 |
| 5 | NDA | NDA | 4.5 | NDA | NDA | 8.4 |
| 6 | NDA | NDA | 5.3 | NDA | NDA | 8.4 |
| 7 | NDA | NDA | 5.2 | NDA | NDA | 7.6 |
| 8 | 31.6 | 6.2 | 5.0 | NDA | NDA | 7.8 |
| 9 | NDA | NDA | 4.9 | NDA | NDA | 8.2 |
| 10 | 543.6 | 27.7 | 5.6 | 25.9 | 8.7 | 12.0 |

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# FACSIMILE COVER PAGE

**Date:** 11/18/96

**To:** Tim Cash

**Phone Number:** 667-4127

**Fax Number:** 665-5290

**From:** Jon Marin

**Number of Pages (including cover page):**

---

Tim:

As discussed on the telephone, these are isotopic results from sample collected by the drill pipe at MDA G. Please review and advise best way to move the drill pipe to TA-50 for decon. Thanks

Jon Marin
662 1353

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Grand Junction Projects Office Analytical Laboratory

J1.01

ANALYTICAL RESULTS

Customer ID: 0554-95-0664 C2
Ticket ID:

Date: January 19, 1996
Lab ID: 233962

Requestor: LANL 1677
Sample Matrix: MILLED SOIL
Project Number: 6LA414471

Case: 14471
Date Received: Dec 18, 1995
Date Collected: Dec 5, 1995

| ANALYSIS REQUESTED | RESULTS | QUALI's | ERROR | UNITS | DATE ANALYZED | METHOD OF ANALYSIS |
|---|---|---|---|---|---|---|
| Americium-241 | 808 | | 109 | PCI/G | 01/05/96 | RC-19 R03 |
| Actinium-228 | 1.91 | | .6 | pCi/g | 12/20/95 | GS-1 R02 |
| Americium-241 | 1039.8 | | 78.8 | pCi/g | 12/20/95 | GS-1 R02 |
| Bismuth-211 | <1.76 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Bismuth-212 | <3.27 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Bismuth-214 | 2.95 | | .9 | pCi/g | 12/20/95 | GS-1 R02 |
| Cobalt-57 | <0.13 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Cobalt-60 | 2.05 | | .2 | pCi/g | 12/20/95 | GS-1 R02 |
| Cesium-134 | <0.22 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Cesium-137 | 68.77 | | 5.3 | pCi/g | 12/20/95 | GS-1 R02 |
| Potassium-40 | 30.36 | | 3.7 | pCi/g | 12/20/95 | GS-1 R02 |
| Manganese-54 | <0.11 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Sodium-22 | <0.11 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Protactinium-231 | <6.34 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Protactinium-234 (meta) | <17.00 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Lead-210 | <48.50 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Lead-211 | <6.26 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Lead-212 | 3.06 | | .4 | pCi/g | 12/20/95 | GS-1 R02 |
| Lead-214 | 1.63 | | .3 | pCi/g | 12/20/95 | GS-1 R02 |
| Radium-223 | <2.31 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Radium-224 | <4.28 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Radium-226 | <7.02 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Radon-219 | <3.69 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Ruthenium-106 | <1.44 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Thorium-227 | <2.56 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Thorium-234 | 23.07 | | 7.1 | pCi/g | 12/20/95 | GS-1 R02 |
| Thallium-208 | 0.96 | | .2 | pCi/g | 12/20/95 | GS-1 R02 |
| Uranium-235 | 2.89 | | .3 | pCi/g | 12/20/95 | GS-1 R02 |
| Annihilation Radiation | <0.27 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Barium-140 | <0.65 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Cadmium-109 | <13.20 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Cerium-139 | <0.16 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Cerium-144 | <0.94 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Europium-152 | <0.50 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Mercury-203 | <0.21 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Iodine-129 | <9.48 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Lanthanum-140 | <0.06 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Neptunium-237 | <3.88 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Protactinium-233 | <0.41 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Selenium-75 | <0.18 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Tin-113 | <0.36 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |

AJ 1-31-96

Grand Junction Projects Office Analytical Laboratory

71.01

ANALYTICAL RESULTS
(continued)

Customer ID: 0554-95-0684 02
Ticket ID:

Requestor: LANL 1677
Sample Matrix: MILLED SOIL
Project Number: 6LA414471

Date: January 19, 1996
Lab ID: 233962

Case: 14471
Date Received: Dec 18, 1995
Date Collected: Dec 5, 1995

| ANALYSIS REQUESTED | RESULTS | QUALI's | ERROR | UNITS | DATE ANALYZED | METHOD OF ANALYSIS |
|---|---|---|---|---|---|---|
| Strontium-85 | <0.20 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Yttrium-88 | <0.03 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Zinc-65 | <0.17 | U | NA | pCi/g | 12/20/95 | GS-1 R02 |
| Loss On Drying | 26.8 | | | % | 12/20/95 | SP-5 R00 |
| Lead-210 | 2.4 | J | 0.9 | pCi/G | 01/10/96 | RC-6 R04 RT |
| Plutonium-239+240 | 2514 | | 257 | PCI/G | 01/08/96 | RC-19 R03 |
| Plutonium-238 | 6929 | | 631 | PCI/G | 01/08/96 | RC-19 R03 |
| Strontium-90 | 137.3 | | 15.1 | PCI/G | 01/16/96 | RC-12 R04 |
| Technetium-99 | <0.40 | U | | pCi/G | 01/12/96 | AS-16 R01 |
| Thorium-232 | 1.85 | PM | 0.32 | PCI/G | 01/06/96 | RC-1 R08 |
| Thorium-230 | 1.97 | | 0.33 | PCI/G | 01/06/96 | RC-1 R08 |
| Thorium-228 | 3.03 | PM | 0.43 | PCI/G | 01/06/96 | RC-1 R08 |
| Uranium-238 | 11.91 | | 1.38 | PCI/G | 01/06/96 | RC-1 R08 |
| Uranium-235 | 1.85 | | 0.29 | PCI/G | 01/06/96 | RC-1 R08 |
| Uranium-234 | 56.06 | | 6.12 | PCI/G | 01/06/96 | RC-1 R08 |
| Yttrium-90 | 137.3 | | 15.1 | PCI/G | 01/16/96 | RC-12 R04 |

RT
1-31-96

To: George H. Brooks, Jr . CST-9, MS K484

From: Bob Gilkeson, ERM PMC, MS M327

Date: April 20, 1995

Subject: Schedule for submittal of core samples to the MRAL for drilling at TA-54, MDA G, proposed expansion area

Field Unit 5 will be drilling an extraction well (54-1017) and a monitor well (54-1018) for pilot extraction studies on the efficiency of removing volatile organic compounds (VOCs) from the subsurface. The two boreholes are located in a region that has not received disposal of radioactive waste. However, small concentrations of tritium may be present.

No core samples will be collected from drilling of the extraction well. Approximately twenty samples of borehole cuttings collected during drilling the extraction well will be submitted to the MRAL for gross alpha, beta, and gamma radiation and tritium concentration. These analyses will be conducted to enable disposal of the borehole cuttings.

Continuous core will be collected from drilling the monitor well. The planned depth of this borehole is 300 feet. Core samples will be submitted to the MRAL at a five foot depth interval for gross alpha, beta, and gamma radiation, gamma spectroscopy, gravimetric moisture content, and tritium concentration. The maximum number of core samples submitted per day to the MRAL from drilling 54-1018 is estimated to be 25.

Core samples will be submitted to the MRAL from a previously drilled test hole (54-1001) located in the proposed expansion area of MDA G. The core for this test hole will be analyzed to determine background activity of natural radioactivity in the volcanic tuff. The core from 54-1001 shall be analyzed for gross alpha, beta, and gamma radiation and gamma spectroscopy.

The MRAL shall also conduct gross alpha and beta radiation analysis on previously prepared planchets of channel sediment samples that were initially analyzed in the MRAL in July 1994 The AAB numbers to identify the channel sediment samples are attached.

Please contact Don Krier, the Field Unit 5 Field Team Manager, concerning the program code to cover the MRAL costs for this activity. The estimated schedule for submittal of samples to the MRAL is a seven work day period from Thursday, April 20, 1995 to Friday, April 28, 1995

cc: Don Krier, EES-1, MS D462 Cheryl Rofer, EES-1, MS D462

| SAMPLE LOCATION | AAB NUMBER | LOCATION ID | SAMPLE TYPE | |
|---|---|---|---|---|
| G1-1 | AAB3290 | 54-5011 | | |
| G1-2 | AAB3289 | 54-5012 | | |
| G1-3 | AAB3288 | 54-5013 | | |
| G1-4 | AAB3287 | 54-5014 | | |
| G1-4 | AAB3286 | 54-5014 | | DUP |
| G1-5 | AAB3143 | 54-5015 | FULL | |
| G1-6 | AAB3160 | 54-5016 | FULL | |
| G1-7 | AAB3150 | 54-5017 | FULL | |
| G1-8 | AAB3141 | 54-5018 | FULL | PUEBLO |
| G1-8 | AAB3139 | 54-5018 | FULL | |
| | | | | |
| G2-1 | AAB3190 | 54-5019 | FULL | |
| G2-2 | AAB3207 | 54-5020 | FULL | |
| G2-3 | AAB3260 | 54-5021 | | |
| G2-4 | AAB3187 | 54-5022 | FULL | |
| G2-5 | AAB3261 | 54-5023 | | |
| G2-6 | AAB3263 | 54-5024 | | |
| G2-7 | AAB3262 | 54-5025 | | |
| G2-8 | AAB3195 | 54-5026 | FULL | |
| | | | | |
| G3-1 | AAB3122 | 54-5027 | FULL | |
| G3-2 | AAB3284 | 54-5028 | | |
| G3-2 | AAB3285 | 54-5028 | | DUP |
| G3-3 | AAB3120 | 54-5029 | FULL | |
| G3-4 | AAB3283 | 54-5030 | | |
| G3-5 | AAB3123 | 54-5031 | FULL | |
| G3-6 | AAB3282 | 54-5032 | | |
| G3-7 | AAB3280 | 54-5033 | | |
| G3-7 | AAB3281 | 54-5033 | | DUP |
| G3-8 | AAB3126 | 54-5034 | FULL | |
| | | | | |
| G4-1 | AAB3194 | 54-5035 | FULL | |
| G4-2 | AAB3255 | 54-5036 | | |
| G4-3 | AAB3208 | 54-5037 | FULL | |
| G4-4 | AAB3213 | 54-5038 | FULL | |
| G4-5 | AAB3253 | 54-5039 | | |
| G4-6 | AAB3254 | 54-5040 | | |
| G4-7 | AAB3252 | 54-5041 | | |
| G4-8 | AAB3204 | 54-5042 | FULL | |
| | | | | |
| G5-1 | AAB3191 | 54-5043 | FULL | |
| G5-2 | AAB3256 | 54-5044 | | |
| G5-3 | AAB3196 | 54-5045 | FULL | |
| G5-4 | AAB3257 | 54-5046 | | |
| G5-5 | AAB3259 | 54-5047 | | |
| G5-6 | AAB3192 | 54-5048 | FULL | |
| G5-7 | AAB3258 | 54-5049 | | |
| G5-8 | AAB3132 | 54-5050 | FULL | |
| | | | | |
| G6-1 | AAB3273 | 54-5051 | | |

| | | | | |
|---|---|---|---|---|
| G6-2 | AAB3272 | 54-5052 | | |
| G6-3 | AAB3173 | 54-5053 | FULL | |
| G6-4 | AAB3271 | 54-5054 | | |
| G6-4 | AAB3270 | 54-5054 | | DUP |
| G6-5 | AAB3133 | 54-5055 | FULL | |
| G6-5 | AAB3202 | 54-5055 | FULL | DUP |
| G6-6 | AAB3267 | 54-5056 | | |
| G6-7 | AAB3266 | 54-5057 | | |
| G6-8 | AAB3147 | 54-5058 | FULL | |
| G6-9 | AAB3268 | 54-5059 | | |
| G6-9 | AAB3269 | 54-5059 | | DUP |
| G6-10 | AAB3180 | 54-5060 | FULL | |
| G6-10 | AAB3189 | 54-5060 | FULL | PUEBLO |
| | | | | |
| G8-1 | AAB3128 | 54-5061 | FULL | |
| G8-2 | AAB3248 | 54-5062 | | |
| G8-3 | AAB3124 | 54-5063 | FULL | |
| G8-4 | AAB3249 | 54-5064 | | |
| G8-5 | AAB3250 | 54-5065 | | |
| G8-6 | AAB3121 | 54-5066 | FULL | |
| G8-7 | AAB3251 | 54-5067 | | |
| G8-8 | AAB3118 | 54-5068 | FULL | |
| | | | | |
| G9-1 | AAB3107 | 54-5069 | FULL | |
| G9-2 | AAB3244 | 54-5070 | | |
| G9-3 | AAB3245 | 54-5071 | | |
| G9-4 | AAB3114 | 54-5072 | FULL | |
| G9-5 | AAB3246 | 54-5073 | | |
| G9-6 | AAB3108 | 54-5074 | FULL | |
| G9-7 | AAB3247 | 54-5075 | | |
| G9-8 | AAB3106 | 54-5076 | FULL | |
| | | | | |
| G10-1 | AAB3170 | 54-5077 | FULL | |
| G10-2 | AAB3172 | 54-5078 | FULL | |
| G10-3 | AAB3217 | 54-5079 | | |
| G10-4 | AAB3177 | 54-5080 | FULL | |
| G10-5 | AAB3218 | 54-5081 | | |
| G10-6 | AAB3171 | 54-5082 | FULL | |
| G10-7 | AAB3219 | 54-5083 | | |
| | | | | |
| G11-1 | AAB3158 | 54-5085 | FULL | |
| G11-1 | AAB3166 | 54-5085 | FULL | DUP |
| G11-2 | AAB3165 | 54-5086 | FULL | PUEBLO |
| G11-2 | AAB3155 | 54-5086 | FULL | |
| G11-3 | AAB3224 | 54-5087 | | |
| G11-4 | AAB3156 | 54-5088 | FULL | |
| G11-5 | AAB3225 | 54-5089 | | |
| G11-6 | AAB3154 | 54-5090 | FULL | |
| G11-7 | AAB3226 | 54-5091 | | |
| G11-8 | AAB3227 | 54-5092 | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| G12-1 | AAB3159 | 54-5093 | FULL | |
| G12-2 | AAB3161 | 54-5094 | FULL | |
| G12-3 | AAB3157 | 54-5095 | FULL | |
| G12-4 | AAB3164 | 54-5096 | FULL | |
| G12-5 | AAB3220 | 54-5097 | | |
| G12-6 | AAB3221 | 54-5098 | | |
| G12-7 | AAB3222 | 54-5099 | | |
| | | | | |
| G13-1 | AAB3178 | 54-5101 | FULL | |
| G13-1 | AAB3176 | 54-5101 | FULL | PUEBLO |
| G13-2 | AAB3168 | 54-5102 | FULL | |
| G13-3 | AAB3163 | 54-5103 | FULL | |
| G13-4 | AAB3169 | 54-5104 | FULL | |
| G13-5 | AAB3223 | 54-5105 | | |
| G13-6 | AAB3228 | 54-5106 | | |
| G13-7 | AAB3229 | 54-5107 | | |
| | | | | |
| G14-1 | AAB3115 | 54-5108 | FULL | PUEBLO |
| G14-1 | AAB3117 | 54-5108 | FULL | |
| G14-2 | AAB3230 | 54-5109 | | |
| G14-3 | AAB3127 | 54-5110 | FULL | |
| G14-4 | AAB3116 | 54-5111 | FULL | |
| G14-5 | AAB3231 | 54-5112 | | |
| G14-6 | AAB3167 | 54-5113 | FULL | |
| G14-7 | AAB3232 | 54-5114 | | |
| G14-8 | AAB3233 | 54-5115 | | |
| | | | | |
| G15-1 | AAB3241 | 54-5116 | | |
| G15-2 | AAB3109 | 54-5117 | FULL | |
| G15-2 | AAB3119 | 54-5117 | FULL | PUEBLO |
| G15-3 | AAB3111 | 54-5118 | FULL | |
| G15-4 | AAB3242 | 54-5119 | | |
| G15-5 | AAB3243 | 54-5120 | | |
| G15-6 | AAB3240 | 54-5121 | | |
| G15-7 | AAB3112 | 54-5122 | FULL | |
| G15-7 | AAB3110 | 54-5122 | FULL | DUP |
| G15-8 | AAB3239 | 54-5123 | | |
| G15-9 | AAB3238 | 54-5124 | | |
| G15-10 | AAB3113 | 54-5125 | FULL | |
| | | | | |
| SH-1 | AAB3142 | 54-5126 | FULL | |
| SH-2 | AAB3275 | 54-5127 | | |
| SH-2 | AAB3274 | 54-5127 | | DUP |
| SH-3 | AAB3276 | 54-5129 | | |
| SH-4 | AAB3129 | 54-5130 | FULL | |
| SH-5 | AAB3175 | 54-5131 | FULL | |
| SH-5 | AAB3125 | 54-5131 | FULL | PUEBLO |
| SH-6 | AAB3131 | 54-5132 | FULL | |
| SH-7 | AAB3279 | 54-5133 | | |
| SH-7 | AAB3277 | 54-5133 | | |
| SH-8 | AAB3278 | 54-5134 | | |

| | | | | |
|---|---|---|---|---|
| SJ-1 | AAB3291 | 54-5135 | | |
| SJ-2 | AAB3151 | 54-5136 | FULL | |
| SJ-3 | AAB3292 | 54-5137 | | |
| SJ-4 | AAB3174 | 54-5138 | FULL | |
| SJ-6 | AAB5354 | 54-5139 | | |
| SJ-7 | AAB5355 | 54-5140 | | |
| SJ-11 | AAB3130 | 54-5141 | FULL | |
| SJ-12 | AAB3162 | 54-5142 | FULL | |
| | | | | |
| SL-1 | AAB3134 | 54-5143 | FULL | |
| SL-2 | AAB3236 | 54-5144 | | |
| SL-3 | AAB3179 | 54-5145 | FULL | |
| SL-4 | AAB3235 | 54-5146 | | |
| SL-5 | AAB3149 | 54-5147 | FULL | |
| SL-6 | AAB3138 | 54-5148 | FULL | |
| SL-7 | AAB3237 | 54-5149 | | |
| SL-8 | AAB3234 | 54-5150 | | |

Background Samples

| | |
|---|---|
| B-1 | AAB2725 |
| B-2 | AAB2726 |
| B-3 | AAB2727 |
| B-4 | AAB2728 |
| B-5 | AAB2729 |
| B-6 | AAB2730 |
| B-7 | AAB2731 |
| B-7 Dup. | AAB3105 |
| B-8 | AAB2732 |
| B-9 | AAB3093 |
| B-10 | AAB3094 |