# Appendix A

*Supporting Waste Characterization Information for Pit 38*

# LOS ALAMOS NATIONAL LABORATORY
# WASTE PROFILE SYSTEM

**WPF #: 23547**



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Generator : | **BOND, ALAN J** | MS : | **E506** | PH : | **74301** | Z#: | **109254** |
| WMC : | **ALEXANDER, RICK** | MS : | **E518** | PH : | **5056657020** | Z#: | **114624** |
| Contact : | | | | | | | |
| RCRA Rev : | **HARRIS JOE G JR** | MS : | **J496** | PH : | **5056670104** | Z#: | **111580** |
| Status : | **VOID** | Activation Date : | **04/12/1996** | | Expiration Date: | | **04/12/1998** |
| Group : | **CST13** | TA : | **50** | Bldg : | **000002** | Room : | **25** |

**You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.**

Waste Accumu : **None of the Above Site ID#**
Method of Char : Analysis/Documents Attached

Waste Type : **Process Waste/Spent Chemical/Other**
Waste Classes: RCA Waste - **Not RCA Waste**
RAD Waste - **Radioactive-LL**

Waste Category: **Not Applicable**

Waste Sources : **Construction/Upgrades**

Waste Matrix : **Solid**

Matrix Type : **Heterogeneous**

Process Desc :
ADDITIONAL SAMPLE # 95.15654, 95.15655, 95.12010, 95.12006, 95.76363, 95.76364 PUMP-SOIL-CEMENT-PPE-ABSORBENT-PLASTIC

Waste Desc : N/A

Ignitability : **Not ignitable**

Corrosivity : **Non-aqueous**

Reactivity : **Non-reactive**

Boiling Point : **Not applicable**

Toxicity Characteristic Metals:

| Contaminant | Method | Limit | Min | Max | Unit |
|---|---|---|---|---|---|
| **ARSENIC** | | **Y** | | | **ppm** |
| **BARIUM** | | **Y** | | | **ppm** |
| **CADMIUM** | | **Y** | | | **ppm** |
| **CHROMIUM** | | **Y** | | | **ppm** |
| **LEAD** | | **Y** | | | **ppm** |
| **MERCURY** | | **Y** | | | **ppm** |
| **SILVER** | | **Y** | | | **ppm** |

Toxicity Characteristic Organic Compounds:

| Contaminant | Method | Limit | Min | Max | Unit |
|---|---|---|---|---|---|
| **HEXACHLOROBUTADIENE** | **TOTA** | | **0** | **1.7** | **PPM** |

Additional Chemical Constituents and Contaminants:

| CAS NO | Constituent | MIN | MAX | UOM |
|---|---|---|---|---|
| | PUMP | 0 | 5 | % |
| | SOIL | 40 | 60 | % |
| | CEMENT | 15 | 25 | % |
| | PPE | 25 | 60 | % |
| | ABSORBENT | 5 | 10 | % |
| | PLASTIC | 10 | 25 | % |
| | ACETONE | .54 | 1 | PPM |
| | 2-BUTANONE | .15 | .27 | PPM |

Radiological Characteristics :

| Radionuclide | Min | Max | Unit |
|---|---|---|---|
| GRALPH | .000000000001 | .00000000006 | CIG |
| GRBETA | .000000000000000[illegible]000000003 | | CIG |
| GAMMA | 0 | .00000000002 | CIG |
| AM241 | 0 | .0000000000157 | CIG |
| PU238 | 0 | .000000000009 | CIG |
| PU239 | 0 | .0000000000157 | CIG |
| U235 | 0 | .0000000000045 | CIG |

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category : **RADIOACTIVE-LL**

RCRA Category : **NON-HAZARDOUS WASTE**

Secondary Info : N/A

Waste Classification : **LOW LEVEL RADIOACTIVE WASTE**

Waste Acceptances :

EPA Hazardous Waste Code : N/A

## GWCP Information

### Section 1 - Waste Prevention/Minimization (answer all questions)

| | | | |
|---|---|---|---|
| Can hazard segregation, elimination, or material substitution be used? | ☐ Yes* | ☐ No | |
| Can any of the materials in the waste stream be recycled or reused | ☐ Yes* | ☐ No | |
| Has waste minimization been incorporated into procedures or other process controls? | ☐ Yes | ☐ No | |
| Can this waste be generated outside a RCA? | ☐ Yes* | ☐ No | ☐ N/A |

*Provide Comment

### Section 6 - Work Control Documentation (answer all questions)

Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (Provide comments)

Do the procedures for this process cover controls to prevent changes to waste constituents and concentrations or addition or removal of waste? ☐ Yes ☐ No (Provide comments)

### Section 7 - Package and Storage Control

Describe how the waste will be packaged in according to the applicable WAC:

Identify the storage management controls that will be used for this waste stream: (check all that apply)

- ☐ Tamper indication devices:
- ☐ Limited use locks with log-in for waste
- ☐ Locked cabinet or building
- ☐ Other (describe)

### Section 8 - Waste Certification Statements (check only one)

- ☐ Waste appears to meet WAC chapter for:
- ☐ Waste needs exception/exemption for treatment, storage, or disposal at:
- ☐ Waste does not meet the criteria for any known TSDF, (DOE approval is required. Contact the Waste Management Program Office for assistance.)

Estimated Annual Volume (m3):

Los Alamos
National Laboratory

# WASTE PROFILE FORM

RECEIVED APR 9 1996

ORIGINAL

Accounting Information: 8313 M359220

For rapid processing, complete all sections in black or blue ink and mail this form to Waste Services Group at MS J579

Reference Number: 23547

| Waste Generator's Name (Print) | Znumber | Waste Management Coordinator's Name (Print) | Znumber |
|---|---|---|---|
| Alan Bond | 109254 | Rick Alexander | 114624 |

| Generator's Group | Generator's Telephone | Generator's Mail Stop | Waste Stream Technical Area | Building | Room |
|---|---|---|---|---|---|
| CST-13 | 7-4301 | E518 | TA-50 | WM-2 | 25K |

**Waste Accumulation** Check as many as apply.

- ☐ Satellite accumulation area --> site no.: _____
- ☐ Less than 90 day accumulation area --> site no.: _____
- ☐ Radioactive Materials Management Area (RMMA) --> site no.: _____
- ☒ None of the above

**Method of Characterization** Check as many as apply.

- ☐ Acceptable Knowledge (AK)
- ☒ Analysis attached --> sample/request no. _____
- ☐ MSDS attached
- ☐ Request for analysis

## Section 1- Chemical and Physical Characteristics

*For help in completing this section of the form, call 5-WAST or 5-4000.*

**Waste Type** Check only one.

- ☐ Unused/unspent chemical — Check Waste Classes and Associated Documentation Only
- ☒ Process waste/spent chemical — Complete all of Section 1.

**Waste Classes** Check as many as apply.

- ☒ On-going generation
- ☐ One-time generation
- ☒ Radioactive (complete Sec. 2)
- ☐ Non-radioactive
- ☐ Wastewater (complete Sec. 3)
- ☐ Classified/Sensitive

**Associated Documentation** Check as many as apply.

- ☐ Process SOP --> no.:
- ☐ ____
- ☐ RMMA OP --> no.:
- ☐ ____
- ☐ WM SOP --> no.:

**Waste Category** Check as many as apply.

- ☐ Solvent
- ☐ Degreaser
- ☐ Dioxin
- ☐ Electroplating
- ☐ Treated hazardous waste residue
- ☐ Explosive process waste
- ☐ Infectious/biological waste
- ☐ Beryllium
- ☐ Asbestos-friable
- ☐ Asbestos-nonfriable
- ☐ Empty containers
- ☐ PCB (<50 ppm)
  - ☐ PCB (50 - 500 ppm)
  - ☐ PCB (> 500 ppm)
  - --> id. no.: _____
- ☒ Not applicable --> describe below

**Waste Sources** Check as many as apply.

- ☐ Research and development
- ☐ Maintenance
- ☒ Construction
- ☐ Material processing
- ☒ Decon/decom
- ☐ Investigation derived
- ☐ Remediation
- ☐ UST - petroleum
- ☐ UST - non-petroleum
- ☐ Generator treatment
- ☐ Interim/permitted treatment
- ☐ Industrial sludge
- ☐ Sanitary sludge
- ☐ Abatement

**Waste Matrix** Check only one.

Gas
- ☐ ≤ 1.5 Atmospheres
- ☐ > 1.5 Atmospheres

Liquid
- ☐ Aqueous
- ☐ Organic
- ☐ Inorganic

Solid
- ☐ Powder/ash
- ☒ Solid
- ☐ Absorbed liquid

**Matrix Type** Check only one.

- ☐ Homogeneous
- ☒ Heterogeneous --> describe below

**Waste/Process Description**

Additional Sample # 95.15654, 95.15655, 95.12010, 95.12006, 95.763163, 95.763164

pump - soil - cement - PPE - absorbent - plastic

## Section 1- Chemical and Physical Characteristics (continued)

**Ignitability (degrees F.)** Check only one.

- ☐ < 73
- ☐ 73-99
- ☐ 100-139
- ☐ 140-200
- ☐ > 200
- ☐ Ignitable solid
- ☐ DOT oxidizer
- ☒ Not ignitable

**Corrosivity (pH)** Check only one.

- ☐ ≤ 2.0
- ☐ 2.1-4.0
- ☐ 4.1-6.0
- ☐ 6.1-9.0
- ☐ 9.1-12.4
- ☐ ≥ 12.5
- ☐ Liquid corrosive to steel
- ☒ Not aqueous

**Reactivity** Check as many as apply.

- ☐ Unstable
- ☐ Water reactive
- ☐ Pyrophoric
- ☐ Cyanide bearing
- ☐ Sulfide bearing
- ☐ Shock sensitive
- ☐ Explosive - class _____
- ☒ Non-reactive

**Boiling Point (degrees F.)** Check only one.

- ☐ ≤ 95
- ☐ > 95
- ☒ Not applicable

| Identify presence of contaminants. | | | Minimum | Maximum | Unit (ppm or % only) | Analytical method |
|---|---|---|---|---|---|---|
| **Toxicity Characteristic Metals** | | | | | | |
| Arsenic | ☐ None | ☒ < 5.0 ppm | | | | ☐ TCLP ☐ Total |
| Barium | ☐ None | ☒ < 100.0 ppm | | | | ☐ TCLP ☐ Total |
| Cadmium | ☐ None | ☒ < 1.0 ppm | | | | ☐ TCLP ☐ Total |
| Chromium | ☐ None | ☒ < 5.0 ppm | | | | ☐ TCLP ☐ Total |
| Lead | ☐ None | ☒ < 5.0 ppm | | | | ☐ TCLP ☐ Total |
| Mercury | ☐ None | ☒ < 0.2 ppm | | | | ☐ TCLP ☐ Total |
| Selenium | ☒ None | ☐ < 1.0 ppm | | | | ☐ TCLP ☐ Total |
| Silver | ☐ None | ☒ < 5.0 ppm | | | | ☐ TCLP ☐ Total |
| **Toxicity Characteristic Organic Compounds** | | | | | | |
| Benzene | ☒ None | ☐ < 0.5 ppm | | | | ☐ TCLP ☐ Total |
| Carbon tetrachloride | ☒ None | ☐ < 0.5 ppm | | | | ☐ TCLP ☐ Total |
| Chlorobenzene | ☒ None | ☐ < 100.0 ppm | | | | ☐ TCLP ☐ Total |
| Chloroform | ☒ None | ☐ < 6.0 ppm | | | | ☐ TCLP ☐ Total |
| Cresol | ☒ None | ☐ < 200.0 ppm | | | | ☐ TCLP ☐ Total |
| 1,4-dichlorobenzene | ☒ None | ☐ < 7.5 ppm | | | | ☐ TCLP ☐ Total |
| 1,2-Dichloroethane | ☒ None | ☐ < 0.5 ppm | | | | ☐ TCLP ☐ Total |
| 1,1-Dichloroethylene | ☒ None | ☐ < 0.7 ppm | | | | ☐ TCLP ☐ Total |
| 2,4-Dinitrotoluene | ☒ None | ☐ < 0.13 ppm | | | | ☐ TCLP ☐ Total |
| Hexachlorobenzene | ☒ None | ☐ < 0.13 ppm | | | | ☐ TCLP ☐ Total |
| Hexachlorobutadiene | ☐ None | ☐ < 0.5 ppm | 0 | 1.7 | ppm | ☐ TCLP ☐ Total |
| Hexachloroethane | ☒ None | ☐ < 3.0 ppm | | | | ☐ TCLP ☐ Total |
| Methyl ethyl ketone | ☒ None | ☐ < 200.0 ppm | | | | ☐ TCLP ☐ Total |
| Nitrobenzene | ☒ None | ☐ < 2.0 ppm | | | | ☐ TCLP ☐ Total |
| Pentachlorophenol | ☒ None | ☐ < 100.0 ppm | | | | ☐ TCLP ☐ Total |
| Pyridine | ☒ None | ☐ < 5.0 ppm | | | | ☐ TCLP ☐ Total |
| Perchloroethylene or tetrachloroethylene | ☒ None | ☐ < 0.7 ppm | | | | ☐ TCLP ☐ Total |
| Trichloroethylene | ☒ None | ☐ < 0.5 ppm | | | | ☐ TCLP ☐ Total |
| 2,4,5-Trichlorophenol | ☒ None | ☐ < 400.0 ppm | | | | ☐ TCLP ☐ Total |
| 2,4,6-Trichlorophenol | ☒ None | ☐ < 2.0 ppm | | | | ☐ TCLP ☐ Total |
| Vinyl chloride | ☒ None | ☐ < 0.2 ppm | | | | ☐ TCLP ☐ Total |

**Additional Chemical Constituents and Contaminants (for hazardous constituents, see AR 10-3, Appendix A)**
List all other constituents (including inerts) not identified above and attach any applicable analyses.

| Name of constituent | Cas no.(optional) | Minimum | Maximum | Unit (ppm or % only) |
|---|---|---|---|---|
| Pump | | 0 | 5 | % |
| Soil | | 40 | 60 | % |
| Cement | | 15 | 25 | % |
| PPE | | 25 | 60 | % |
| Absorbent | | 5 | 10 | % |
| Plastic | | 10 | 25 | % |
| Acetone | | .54 | 1 | ppm |
| 2-Butanone | | .15 | .27 | ppm |
| | | | | |

## Section 2- Radiological Characteristics

*For help in completing this section of the form, call 5-WAST or 5-4000.*

| | Range minimum | Range maximum | Unit (Ci/g or Ci/l) |
|---|---|---|---|
| **General** | | | |
| ☒ Alpha | 1.0 -12 | 60 -12 | Ci/g |
| ☒ Beta | 3.7 -14 | 30 3.7 -12 | Ci/g |
| ☒ Gamma | 0 | to 20 +8 -12 | Ci/g |
| **TRU radionuclides** | | | |
| ☒ None present | | | |
| ☐ Am-241 | | to | |
| ☐ Am-243 | | to | |
| ☐ Cf-249 | | to | |
| ☐ Cf-251 | | to | |
| ☐ Cm-243 | | to | |
| ☐ Cm-245 | | to | |
| ☐ Cm-247 | | to | |
| ☐ Pu-238 | | to | |
| ☐ Pu-239 | | to | |
| ☐ Pu-240 | | to | |
| ☐ Pu-242 | | to | |
| **Fission products** | | | |
| ☒ None present | | | |
| ☐ Ba-140 | | to | |
| ☐ Ce-144 | | to | |
| ☐ Cs-134 | | to | |
| ☐ Cs-137 | | to | |
| ☐ I-129 | | to | |
| ☐ I-133 | | to | |
| ☐ Kr-85 | | to | |
| ☐ Nb-95 | | to | |
| ☐ Ru-106 | | to | |
| ☐ Sb-125 | | to | |
| ☐ Sr-90 | | to | |
| ☐ Tc-99 | | to | |
| ☐ Zr-93 | | to | |
| ☐ Zr-95 | | to | |
| **Activation products** | | | |
| ☒ None present | | | |
| ☐ As -74 | | to | |
| ☐ Be-7 | | to | |
| ☐ C-14 | | to | |
| ☐ Co-56 | | to | |
| ☐ Co-57 | | to | |
| ☐ Co-58 | | to | |
| ☐ Co-60 | | to | |
| ☐ Cr-51 | | to | |
| ☐ Eu-152 | | to | |
| ☐ Mn-52 | | to | |
| ☐ Mn-54 | | to | |
| ☐ Nb-94 | | to | |
| ☐ Ni-59 | | to | |
| ☐ Ni-63 | | to | |
| ☐ Rb-83 | | to | |
| ☐ Rb-84 | | to | |
| ☐ Se-75 | | to | |
| ☐ Sr-82 | | to | |
| ☐ Sr-85 | | to | |
| ☐ V-48 | | to | |
| ☐ Y-88 | | to | |
| ☐ Zn-65 | | to | |
| ☐ Zr-88 | | to | |

KA 4/11/96 per WMC

| | Range minimum | Range maximum | Unit (Ci/g or Ci/l) |
|---|---|---|---|
| **Other** | | | |
| ☒ None present | | | |
| ☐ Am-242 | | to | |
| ☐ Bi-207 | | to | |
| ☐ Bi-210 | | to | |
| ☐ Cf-250 | | to | |
| ☐ Cf-252 | | to | |
| ☐ Cm-244 | | to | |
| ☐ H-3 | | to | |
| ☐ Pa-231 | | to | |
| ☐ Pb-210 | | to | |
| ☐ Po-210 | | to | |
| ☐ Pu-236 | | to | |
| ☐ Pu-241 | | to | |
| ☐ Ra-226 | | to | |
| ☐ Ra-228 | | to | |
| ☐ Th-230 | | to | |
| ☐ Th-232 | | to | |
| ☐ U-232 | | to | |
| ☐ U-233 | | to | |
| ☐ U-234 | | to | |
| ☐ U-235 | | to | |
| ☐ U-238 | | to | |
| ☐ U-238 | | to | |
| **Add'l radionuclides** | | | |
| ☒ No additional radionuclides present | | | |
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**Contamination Type:** *Check as many as apply.*

☑ Volume Contamination

☑ Surface Contamination

KA 4/11/96 per WMC

## Section 3 - Wastewater Characteristics

*For help in completing this section of the form, call 7-4301.*

| Identify presence of contaminants | | | Minimum | Maximum | Unit (ppm or % only) | Analytical method |
|---|---|---|---|---|---|---|
| Aluminum | ☐ None | ☐ < 5.0 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |
| Boron | ☐ None | ☐ < 5.0 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |
| Cobalt | ☐ None | ☐ < 1.0 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |
| Copper | ☐ None | ☐ < 1.0 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |
| Vanadium | ☐ None | ☐ < 0.10 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |
| Zinc | ☐ None | ☐ < 95.4 ppm | _____ to | _____ | _____ | ☐ TCLP ☐ Total |

Maximum daily flow when discharge occurs: _____ ☐ Gallon ☐ Liters

Average daily flow when discharge occurs: _____ ☐ Gallon ☐ Liters

Estimated number of days per year that discharge will occur: _____

Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50-1: _____ ☐ Gallon ☐ Liters

For TA-55 use only. Wastewater will be discharged through one of the following:

☐ Acid line ☐ Caustic line ☐ Industrial waste line

## Section 4 - Additional Information

*If additional information is available on the chemical, physical, or radiological character of the waste not covered on this form, provide it below:*

**WASTE GENERATOR CERTIFICATION:** *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Signature: Alan Bond

Date: 4-8-96

# Los Alamos
NATIONAL LABORATORY

## NOTIFICATION CHECKLIST

### GENERAL

| Date | Time | Location | Source(s) or nuclide(s) |
|---|---|---|---|
| 7-27-95 | 1000 | TA-50 South Side WM2 | |

Description: Water Pump Found While Digging On South Side of WM2. Plastic Found In Same Area Also Contaminated. Alpha 1680 dpm and Beta 189.8 dpm Removable

| Reported by | Group | RCT | Method of detection |
|---|---|---|---|
| Dominic Martinez | JC1 | Harold Martinez | Direct Frisk/Smear |

### PERSONNEL INVOLVED

*INSTRUCTIONS:*
1. *All readings in dpm should be reported per 100 square centimeters except for nose swipes.*
2. *For nose swipes, show values for each nostril.*
3. *Check the boxes in the column headings to indicate units used and radiation type (alpha or beta-gamma).*
4. *Show nuclides above in "GENERAL."*

| | NAME | Z NUMBER | GROUP | CONTAMINATION ☐α or ☐β–γ | | | | | | | EXTERNAL EXPOSURE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Facial ☐dpm or ☐mrem/hr | Nose swipe (dpm) | Wound count (nCi) | Skin ☐dpm or ☐mrem/hr | Personal/company clothing ☐dpm or ☐mrem/hr | Protective clothing ☐dpm or ☐mrem/hr | Tritium bioassay (μCi/L) | Deep (mrem) | Shallow (mrem) | Neutron (mrem) | Extremity (mrem) |
| 1. | Roger N Montoya | 092712 | JC1 | NDA | NDA | N/A | NDA | NDA | N/A | N/A | N/A | → | | N/A |
| 2. | Dominic F Martinez | 108632 | JC1 | NDA | NDA | N/A | NDA | NDA | N/A | N/A | N/A | → | | N/A |
| 3. | | | | | / | | | | | | | | | |
| 4. | | | | | / | | | | | | | | | |
| 5. | | | | | / | | | | | | | | | |
| 6. | | | | | / | | | | | | | | | |

### AIRBORNE RADIOACTIVITY

☐False CAM alarm ☐True CAM alarm; results:_____ μCi/ml ☐Fixed Air Sample results:_____ μCi/ml ☐Atmospheric release results:_____ μCi/ml

### AREA CONTAMINATION

Direct survey results:_____ ☐dpm/100 cm² ☐α or ☐β–γ ;or ☐mrem/hr Smear survey results:_____ dpm/100 cm² · ☐tritium, ☒α, or ☐β–γ

### NOTIFICATIONS (Complete the appropriate boxes for each organization for INITIAL and FOLLOW-UP notifications)

| | Initial date | Time | Person notified | Follow-up date | Time | Person notified |
|---|---|---|---|---|---|---|
| Line or Facility Mgr Phone:_____ FAX: | 7-27-95 | 1000 | Alan Bond | | | |
| ESH-1 Group Office Phone: 7-7171 FAX: 7-6116 | 7-7137 | 1120 | Kathy | | | |
| ESH-7 Group Office Phone: 5-0033 FAX: 5-6977 | | | | | | |
| ESH-12 Dose Assess. Phone:7-5296 FAX: 7-9726 | | | | | | |

Notifications completed by (print name): Signature: Date:

Form 1555 (5/25/94) THIS FORM CONTAINS PERSONAL INFORMATION

REPORT NUMBER: 37705

********** CST ANALYTICAL REPORT **********

Prepared by: BRL on 18-Aug-1995

REQUEST NUMBER: 22294 MATRIX: C ANALYST: AAS PROGRAM CODE: M371

OWNER: Dave Salazar GROUP: CST-12 MAIL-STOP: E518 PHONE: 7-6904

NOTEBOOK: CST9002 PAGE: 68

CUSTOMER SAMPLES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| WM-29507.10 | 95.12010 | AS | ETVAA | 5. | 1. | UG/G | 8/18/95 | |
| WM-29507.10 | 95.12010 | HG | CVAA | 21. | 2. | UG/G | 7/20/95 | |
| WM-29507.10 | 95.12010 | SE | ETVAA | < 0.5 | | UG/G | 8/18/95 | |

CUSTOMER SAMPLE DUPLICATES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| WM-29507.10 | 95.12010 | AS | ETVAA | 5. | 1. | UG/G | 8/18/95 | |
| WM-29507.10 | 95.12010 | HG | CVAA | 45. | 5. | UG/G | 7/20/95 | |
| WM-29507.10 | 95.12010 | HG | CVAA | 20. | 2. | UG/G | 7/20/95 | |
| WM-29507.10 | 95.12010 | SE | ETVAA | < 0.5 | | UG/G | 8/18/95 | |

MATRIX SPIKES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | AMOUNT SPIKED | AMOUNT RECOVERED | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| WM-29507.10 | 95.12010 | AS | ETVAA | 6. | 1. | UG/G | 8/18/95 | |
| WM-29507.10 | 95.12010 | SE | ETVAA | < 0.5 | | UG/G | 8/18/95 | |

**********

REPORT NUMBER: 37706 (continued)

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********** CST QUALITY ASSURANCE REPORT *********

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Prepared by: BRL on 18-Aug-1995

REQUEST NUMBER: 22294 MATRIX: ANALYST: AAS PROGRAM CODE:

OWNER: GROUP: MAIL-STOP: PHONE:

NOTEBOOK: PAGE:

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QC SAMPLES RUN WITH THIS BATCH

SUMMARY OF CONTROL STATUS OF BLIND QC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

___ Only qualitative data requested

___ Only Open (non-blind) QC samples run with this sample batch.

___ No QC samples run with this sample batch.

___ No QC samples for this constituent and matrix type available within CST

| REPORT NUMBER: 37706 | Analyst | Reviewer | Team Leader | QA Officer |
|---|---|---|---|---|
| | BRL | BRL | [signature] | mag |
| | 8/18/95 | 8/18/95 | 9/8/95 | 9/11/95 |
| | Date | Date | Date | Date |

No Sample Discrepancies Noted by Sample Management Section

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1992,' LA-12790-MS, Vol. I, pp. 19-20.

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# Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

**memorandum**

To: Dave Salazar

Date: November 29, 1995

From: Martin Koby, CST-9

Mail Stop/Phone: E518/7-9996

Subject: Trace metal results - Request Number 22678

This analytical request consisted of two samples from TA-50, WM-2. One sample was aqueous while the other was described as a miscellaneous solid. Both samples were analyzed in duplicate as well as spiked with known concentrations of target analytes. Duplicate analyses were generally in close agreement with the exception of chromium and lead. Chromium results for the solid sample, 95.15655, exhibited the greatest level of variability; note the spike recovery data.

You should also observe that two QC results have been flagged as out of control limits. The cause for this can be attributed to aged standard reference materials. No additional anomalies were observed.

Do not hesitate to contact me if you have questions regarding these results.

REPORT NUMBER: 38685

********** CST ANALYTICAL REPORT **********

Prepared by: PEC on 16-Oct-1995

REQUEST NUMBER: 22678 MATRIX: W ANALYST: AAS PROGRAM CODE: C63P

OWNER: Dave Salazar GROUP: CST-12 MAIL-STOP: E518 PHONE: 7-6904

NOTEBOOK: CST9002 PAGE: 82

CUSTOMER SAMPLES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 | AS | ETVAA | 32. | 6. | UG/L | 10/12/95 | |
| 95-76428 | 95.15654 | HG | CVAA | 21. | 2. | UG/L | 10/16/95 | |
| 95-76428 | 95.15654 | SE | ETVAA | < 2. | | UG/L | 10/12/95 | |
| 95-76408 | 95.15655 | AS | ETVAA | 2. | 0.5 | UG/G | 10/12/95 | |
| 95-76408 | 95.15655 | HG | CVAA | 0.04 | 0.01 | UG/G | 10/12/95 | |
| 95-76408 | 95.15655 | SE | ETVAA | < 0.1 | | UG/G | 10/12/95 | |

CUSTOMER SAMPLE DUPLICATES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 | AS | ETVAA | 33. | 7. | UG/L | 10/12/95 | |
| 95-76428 | 95.15654 | HG | CVAA | 23. | 2. | UG/L | 10/16/95 | |
| 95-76428 | 95.15654 | SE | ETVAA | < 2. | | UG/L | 10/12/95 | |
| 95-76408 | 95.15655 | AS | ETVAA | 2. | 0.5 | UG/G | 10/12/95 | |
| 95-76408 | 95.15655 | HG | CVAA | 0.01 | 0.01 | UG/G | 10/16/95 | |
| 95-76408 | 95.15655 | HG | CVAA | < 0.01 | | UG/G | 10/16/95 | |
| 95-76408 | 95.15655 | SE | ETVAA | < 0.1 | | UG/G | 10/12/95 | |

MATRIX SPIKES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | AMOUNT SPIKED | AMOUNT RECOVERED | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76408 | 95.15655 | AS | ETVAA | 10. | | UG/G | 10/12/95 | |
| 95-76408 | 95.15655 | SE | ETVAA | 10. | 1.4 | UG/G | 10/12/95 | |

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REPORT NUMBER: 38685 (continued)

********** CST QUALITY ASSURANCE REPORT *********

Prepared by: PEC on 16-Oct-1995

REQUEST NUMBER: 22678 MATRIX: W ANALYST: AAS PROGRAM CODE: C63P

OWNER: Dave Salazar GROUP: CST-12 MAIL-STOP: E518 PHONE: 7-6904

NOTEBOOK: CST9002 PAGE: 82

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QC SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

___ Only qualitative data requested

___ Only Blind QC samples run with this sample batch.

✓ No QC samples run with this sample batch.

___ No QC samples for this constituent and matrix type available within CST

SUMMARY OF CONTROL STATUS OF BLIND QC SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

___ Only qualitative data requested

___ Only Open (non-blind) QC samples run with this sample batch.

✓ No QC samples run with this sample batch.

___ No QC samples for this constituent and matrix type available within CST

| REPORT NUMBER: 38685 | PEC | PEC | K L Boom | mag |
|---|---|---|---|---|
| | Analyst | Reviewer | Team Leader | QA Officer |
| | 10/16/95 | 10/16/95 | 11/29/95 | 11/30/95 |
| | Date | Date | Date | Date |

REPORT NUMBER: 39101

********** CST ANALYTICAL REPORT **********

Prepared by: MKOBY on 28-Nov-1995

REQUEST NUMBER: 22678 MATRIX: W ANALYST: OES PROGRAM CODE: C63P

OWNER: Dave Salazar GROUP: CST-12 MAIL-STOP: E518 PHONE: 7-6904

NOTEBOOK: Y3725 PAGE: 221

CUSTOMER SAMPLES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 | AG | ICPES | 0.019 | 0.015 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | BA | ICPES | 1. | 0.15 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | CD | ICPES | 0.012 | 0.002 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | CR | ICPES | 0.3 | 0.04 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | PB | ICPES | 0.98 | 0.16 | MG/L | 11/27/95 | |
| 95-76408 | 95.15655 | AG | ICPES | 0.9 | 0.2 | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | BA | ICPES | 110. | 10. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | CD | ICPES | 0.56 | 0.25 | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | CR | ICPES | 46. | 4. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | PB | ICPES | 4. | 1. | UG/G | 11/28/95 | |

CUSTOMER SAMPLE DUPLICATES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | ANALYTICAL RESULT | ANALYTICAL UNCERTAINTY | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 | AG | ICPES | 0.017 | 0.015 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | BA | ICPES | 1. | 0.15 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | CD | ICPES | 0.013 | 0.002 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | CR | ICPES | 0.3 | 0.04 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | PB | ICPES | 0.99 | 0.16 | MG/L | 11/27/95 | |
| 95-76408 | 95.15655 | AG | ICPES | 1.1 | 0.1 | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | BA | ICPES | 110. | 10. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | CD | ICPES | 0.83 | 0.25 | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | CR | ICPES | 180. | 20. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 | PB | ICPES | 24. | 4. | UG/G | 11/28/95 | |

MATRIX SPIKES:

| CUSTOMER NUM | SAMPLE NUM | ANALYSIS | ANALYTICAL TECHNIQUE | AMOUNT SPIKED | AMOUNT RECOVERED | UNITS | COMPLETION DATE | COMMENT |
|---|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 | AG | ICPES | 1. | 0.23 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | BA | ICPES | 4. | 3.4 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 | CD | ICPES | 4. | 3.7 | MG/L | 11/27/95 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 95-76428 | 95.15654 CR | ICPES | 4. | 3.5 | MG/L | 11/27/95 | |
| 95-76428 | 95.15654 PB | ICPES | 0.8 | 0.32 | MG/L | 11/27/95 | |
| 95-76408 | 95.15655 AG | ICPES | 97. | 81. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 BA | ICPES | 777. | 770. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 CD | ICPES | 777. | 710. | UG/G | 11/28/95 | |
| 95-76408 | 95.15655 CR | ICPES | 777. | 2454. | UG/G | 11/28/95 | HETEROGENEITY |
| 95-76408 | 95.15655 PB | ICPES | 78. | 73.5 | UG/G | 11/28/95 | |

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# LOS ALAMOS NATIONAL LABORATORY
# WASTE PROFILE SYSTEM

**WPF #: 23547**



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Generator : | **BOND, ALAN J** | MS : | **E506** | PH : | **74301** | Z#: | **109254** |
| WMC : | **ALEXANDER, RICK** | MS : | **E518** | PH : | **5056657020** | Z#: | **114624** |
| Contact : | | | | | | | |
| RCRA Rev : | **HARRIS JOE G JR** | MS : | **J496** | PH : | **5056670104** | Z#: | **111580** |
| Status : | **VOID** | Activation Date : | **04/12/1996** | | Expiration Date: | | **04/12/1998** |
| Group : | **CST13** | TA : | **50** | Bldg : | **000002** | Room : | **25** |

**You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same. Should your waste change, please submit a new WPF to Waste Acceptance Group.**

Waste Accumu : **None of the Above Site ID#**
Method of Char : Analysis/Documents Attached

Waste Type : **Process Waste/Spent Chemical/Other**
Waste Classes: RCA Waste - **Not RCA Waste**
RAD Waste - **Radioactive-LL**

Waste Category: **Not Applicable**

Waste Sources : **Construction/Upgrades**

Waste Matrix : **Solid**

Matrix Type : **Heterogeneous**

Process Desc :

ADDITIONAL SAMPLE # 95.15654, 95.15655, 95.12010, 95.12006, 95.76363, 95.76364 PUMP-SOIL-CEMENT-PPE-ABSORBENT-PLASTIC

Waste Desc : N/A

Ignitability : **Not ignitable**

Corrosivity : **Non-aqueous**

Reactivity : **Non-reactive**

Boiling Point : **Not applicable**

Toxicity Characteristic Metals:

| Contaminant | Method | Limit | Min | Max | Unit |
|---|---|---|---|---|---|
| **ARSENIC** | | **Y** | | | **ppm** |
| **BARIUM** | | **Y** | | | **ppm** |
| **CADMIUM** | | **Y** | | | **ppm** |
| **CHROMIUM** | | **Y** | | | **ppm** |
| **LEAD** | | **Y** | | | **ppm** |
| **MERCURY** | | **Y** | | | **ppm** |
| **SILVER** | | **Y** | | | **ppm** |

Toxicity Characteristic Organic Compounds:

| Contaminant | Method | Limit | Min | Max | Unit |
|---|---|---|---|---|---|
| **HEXACHLOROBUTADIENE** | **TOTA** | | **0** | **1.7** | **PPM** |

Additional Chemical Constituents and Contaminants: