

Chemical and Environmental Measurement Information

**Recra LabNet Philadelphia
Analytical Report
REVISION**

Client : TNU-HANFORD B99-078
RFW# : 9909L152
SDG/SAF #: H0537/B99-078

W.O. #: 10985-001-001-9999-00
Date Received: 09-21-99

SEMIVOLATILE

This narrative was corrected to add the TIC search for Tributylphosphate.

RECEIVED
MAR 20 2000

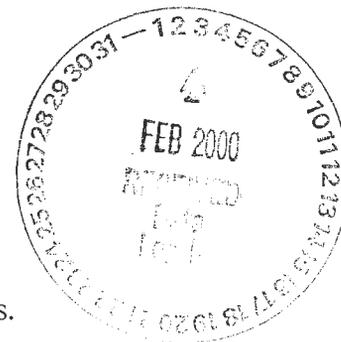
Two (2) soil samples were collected on 09-16,17-99.

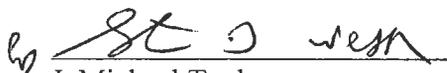
EDMC

The samples and their associated QC samples were extracted on 09-30-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Methods 8270B for TCL Semivolatile target compounds on 10-04-99.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. The required holding times for extraction and analysis were met.
3. Non-target compounds were detected in the samples.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. One (1) of eleven (11) blank spike recoveries was outside EPA QC limits.
7. These samples were spectrally searched for Butylated Hydroxytoluene and Tributylphosphate; however, they were not identified in the samples.




J. Michael Taylor

Vice President
Philadelphia Analytical Laboratory

01-27-00
Date

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The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 11 pages.

GLOSSARY OF BNA DATA

DATA QUALIFIERS

- U** = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
- J** = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B** = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
- E** = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- D** = Identifies all compounds identified in an analysis at a secondary dilution factor.
- I** = Interference.
- NQ** = Result qualitatively confirmed but not able to quantify.
- A** = Indicates that a TIC is a suspected aldol-condensation product.
- N** = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
- X** = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
- Y** = Additional qualifiers used as required are explained in the case narrative.



GLOSSARY OF BNA DATA

ABBREVIATIONS

| | | |
|--------------|---|--|
| BS | = | Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported. |
| BSD | = | Indicates blank spike duplicate. |
| MS | = | Indicates matrix spike. |
| MSD | = | Indicates matrix spike duplicate. |
| DL | = | Suffix added to sample number to indicate that results are from a diluted analysis. |
| NA | = | Not Applicable. |
| DF | = | Dilution Factor. |
| NR | = | Not Required. |
| SP, Z | = | Indicates Spiked Compound. |



Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 10/25/99 18:22

RFW Batch Number: 9909L152

Client: TNU-HANFORD B99-078

Work Order: 10985001001

Page: 1a

| Sample Information | Cust ID: | BOWBR9 | BOWBR9 | BOWBR9 | BOWBTO | SBLKDP | SBLKDP BS |
|---|----------------------|--------|---------|--------|--------------|--------------|-----------|
| RFW#: | 001 | 001 MS | 001 MSD | 002 | 99LE1185-MB1 | 99LE1185-MB1 | |
| Matrix: | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| D.F.: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Units: | UG/KG | UG/KG | UG/KG | UG/KG | UG/KG | UG/KG | UG/KG |
| Surrogate | Nitrobenzene-d5 | 83 % | 79 % | 82 % | 65 % | 89 % | 94 % |
| Recovery | 2-Fluorobiphenyl | 84 % | 79 % | 81 % | 61 % | 88 % | 91 % |
| | Terphenyl-d14 | 92 % | 92 % | 97 % | 77 % | 98 % | 103 % |
| | Phenol-d5 | 89 % | 83 % | 86 % | 68 % | 90 % | 95 % |
| | 2-Fluorophenol | 88 % | 81 % | 84 % | 66 % | 88 % | 92 % |
| | 2,4,6-Tribromophenol | 89 % | 88 % | 89 % | 66 % | 84 % | 96 % |
| -----f1-----f1-----f1-----f1-----f1-----f1-----f1 | | | | | | | |
| Phenol | 350 U | 76 % | 82 % | 410 U | 330 U | 87 % | |
| bis(2-Chloroethyl) ether | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2-Chlorophenol | 350 U | 75 % | 81 % | 410 U | 330 U | 86 % | |
| 1,3-Dichlorobenzene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 1,4-Dichlorobenzene | 350 U | 66 % | 79 % | 410 U | 330 U | 87 % | |
| 1,2-Dichlorobenzene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2-Methylphenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2,2'-oxybis(1-Chloropropane) | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 4-Methylphenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| N-Nitroso-di-n-propylamine | 350 U | 86 % | 91 % | 410 U | 330 U | 102 % | |
| Hexachloroethane | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| Nitrobenzene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| Isophorone | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2-Nitrophenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2,4-Dimethylphenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| bis(2-Chloroethoxy) methane | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2,4-Dichlorophenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 1,2,4-Trichlorobenzene | 350 U | 72 % | 82 % | 410 U | 330 U | 93 % | |
| Naphthalene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 4-Chloroaniline | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| Hexachlorobutadiene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 4-Chloro-3-methylphenol | 350 U | 80 % | 84 % | 410 U | 330 U | 88 % | |
| 2-Methylnaphthalene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| Hexachlorocyclopentadiene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2,4,6-Trichlorophenol | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U | |
| 2,4,5-Trichlorophenol | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U | |

*= Outside of EPA CLP QC limits.

Cust ID: BOWBR9 BOWBR9 BOWBR9 BOWBTO SBLKDP SBLKDP BS

RFW#: 001 001 MS 001 MSD 002 99LE1185-MB1 99LE1185-MB1

| | | | | | | |
|----------------------------|-------|-------|-------|--------|-------|--------|
| 2-Chloronaphthalene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 2-Nitroaniline | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U |
| Dimethylphthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Acenaphthylene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 2,6-Dinitrotoluene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 3-Nitroaniline | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U |
| Acenaphthene | 350 U | 80 % | 86 % | 410 U | 330 U | 91 % |
| 2,4-Dinitrophenol | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U |
| 4-Nitrophenol | 880 U | 71 % | 76 % | 1000 U | 840 U | 89 % |
| Dibenzofuran | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 2,4-Dinitrotoluene | 350 U | 80 % | 87 % | 410 U | 330 U | 94 * % |
| Diethylphthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 4-Chlorophenyl-phenylether | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Fluorene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 4-Nitroaniline | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U |
| 4,6-Dinitro-2-methylphenol | 880 U | 880 U | 880 U | 1000 U | 840 U | 840 U |
| N-Nitrosodiphenylamine (1) | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 4-Bromophenyl-phenylether | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Hexachlorobenzene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Pentachlorophenol | 880 U | 74 % | 79 % | 1000 U | 840 U | 92 % |
| Phenanthrene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Anthracene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Carbazole | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Di-n-butylphthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Fluoranthene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Pyrene | 350 U | 91 % | 96 % | 410 U | 330 U | 98 % |
| Butylbenzylphthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| 3,3'-Dichlorobenzidine | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Benzo(a)anthracene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Chrysene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| bis(2-Ethylhexyl)phthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Di-n-octyl phthalate | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Benzo(b)fluoranthene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Benzo(k)fluoranthene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Benzo(a)pyrene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Indeno(1,2,3-cd)pyrene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Dibenz(a,h)anthracene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |
| Benzo(g,h,i)perylene | 350 U | 350 U | 350 U | 410 U | 330 U | 330 U |

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOWBR9

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9909L152-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D100413

Level: (low/med) LOW Date Received: 09/21/99

% Moisture: 5 decanted: (Y/N) Date Extracted: 09/30/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/04/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|------------|------------------|------|------------|-----|
| 1. | UNKNOWN | 8.49 | 100 | JB |
| 2. | ALDOL CONDENSATE | 9.03 | 100 | JAB |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOWBTO

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9909L152-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D100416

Level: (low/med) LOW Date Received: 09/21/99

% Moisture: 18 decanted: (Y/N) Date Extracted: 09/30/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|------------|------------------|------|------------|-----|
| 1. | UNKNOWN | 8.48 | 100 | JB |
| 2. | ALDOL CONDENSATE | 9.02 | 100 | JAB |
| 3. | ALDOL CONDENSATE | 9.80 | 100 | JA |

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKDP

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL

Lab Sample ID: 99LE1185-MB1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: D100411

Level: (low/med) LOW

Date Received: 09/30/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 09/30/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:

Number TICs found: 2

(ug/L or ug/Kg) UG/KG

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|------------|------------------|------|------------|----|
| 1. | UNKNOWN | 8.49 | 100 | J |
| 2. | ALDOL CONDENSATE | 9.03 | 80 | JA |

Recra LabNet - Lionville Laboratory
BNA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-078

DATE RECEIVED: 09/21/99

RFW LOT # :9909L152

| CLIENT ID | RFW # | MTX | PREP # | COLLECTION | EXTR/PREP | ANALYSIS |
|-----------|---------|-----|----------|------------|-----------|----------|
| BOWBR9 | 001 | S | 99LE1185 | 09/16/99 | 09/30/99 | 10/04/99 |
| BOWBR9 | 001 MS | S | 99LE1185 | 09/16/99 | 09/30/99 | 10/04/99 |
| BOWBR9 | 001 MSD | S | 99LE1185 | 09/16/99 | 09/30/99 | 10/04/99 |
| BOWBTO | 002 | S | 99LE1185 | 09/17/99 | 09/30/99 | 10/04/99 |

LAB QC:

| | | | | | | |
|--------|--------|---|----------|-----|----------|----------|
| SBLKDP | MB1 | S | 99LE1185 | N/A | 09/30/99 | 10/04/99 |
| SBLKDP | MB1 BS | S | 99LE1185 | N/A | 09/30/99 | 10/04/99 |



9909L152

All FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

⑧ perone wet lab metals

| | |
|--|--|
| Client <u>TNU Hamford</u> <u>B99-078</u> | Refrigerator # <u>16</u> |
| Est. Final Proj. Sampling Date _____ | #/Type Container |
| Project # <u>10485-001-001-9999-00</u> | Liquid _____ |
| Project Contact/Phone # _____ | Solid <u>1ag</u> <u>1ag</u> <u>1ag</u> |
| RECRA Project Manager <u>OJ</u> | Volume |
| QC <u>Spec</u> Del <u>Std</u> TAT <u>30 day</u> | Liquid _____ |
| Date Rec'd <u>9-21-99</u> Date Due <u>10/21/99</u> | Solid <u>60</u> <u>250</u> <u>500</u> |
| Account # _____ | Preservatives _____ |
| | ANALYSES REQUESTED → |
| | ORGANIC |
| | VOA TEL Vol BNA Pest PCB Herb <u>PH</u> |
| | INORG |
| | Metal CN |

| MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish | Lab ID | Client ID/Description | Matrix QC Chosen (S) | | Matrix | Date Collected | Time Collected | RECRA LabNet Use Only | | | | | | | | | | | | | | |
|---|--------|-----------------------|----------------------|-----|--------|----------------|----------------|-----------------------|-------|-------|------|------|---------|------|------|-------|-------|------|-------|-----|------|-------|
| | | | MS | MSD | | | | 0024H | 05CSC | 0025H | OPRO | OPCB | 9/12/99 | ICR6 | Meto | ICNTO | IN3U2 | ISFD | INH3U | IPH | ICEL | ICW03 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | 001 | BOWBR9 | | | S | 9/16/99 | 1320 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | 002 | BOWBT0 | | | L | 9/17/99 | 0935 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

| | | |
|---|--|---|
| Special Instructions: <u>Ref # B99-078</u> COMPOSITE WASTE | DATE/REVISIONS: | RECRA LabNet Use Only |
| | 1. <u>Run matrix qc</u> | Samples were: 1) Shipped <input checked="" type="checkbox"/> or Hand Delivered _____ |
| | 2. <u>meto = as, ba, cd, cr, pb, se, ag.</u> | COC Tape was: 1) Present on Outer Package <input checked="" type="checkbox"/> or N |
| | 3. <u>Be, Cu, Ni, V, Zn, Hg</u> | Airbill # <u>*</u> |
| | 4. <u>tests added per client coc</u> | 2) Ambient or <u>Chilled</u> |
| 5. _____ | 3) Received in Good Condition <input checked="" type="checkbox"/> or N | 2) Unbroken on Outer Package <input checked="" type="checkbox"/> or N |
| 6. _____ | 4) Labels Indicate Properly Preserved <input checked="" type="checkbox"/> or N | 3) Present on Sample <input checked="" type="checkbox"/> or N |
| | | 4) Unbroken on Sample <input checked="" type="checkbox"/> or N |
| | | 5) Received Within Holding Times <input checked="" type="checkbox"/> or N |
| | | COC Record Present Upon Sample Rec't <input checked="" type="checkbox"/> or N |
| | | Cooler Temp. <u>2.5</u> °C |

| | | | | | | | |
|-----------------|------------------|----------------|-------------|-----------------|------------------|------|------|
| Relinquished by | Received by | Date | Time | Relinquished by | Received by | Date | Time |
| <u>YedEx</u> | <u>D. J. ...</u> | <u>9/21/99</u> | <u>0945</u> | | ORIGINAL | | |
| | | | | | REWRITTEN | | |

Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES: * 423579529609

| | | | | | |
|---|--|---|----------------------------------|------------------|----------------------------|
| Collector Bowers/Trice | Company Contact Chris Cearlock | Telephone No. 372-9574 | Project Coordinator TRENT, SJ | Price Code 8N | Data Turnaround 45 Days |
| Project Designation 200 Area Source characterization - 200-CW-1 OU | Sampling Location 200 B pond (B8758) >15' | SAF No. B99-078 | | | |
| Ice Chest No. ERC 99-018 | Field Logbook No. EL-1511 | Method of Shipment Fed Ex | | | |
| Shipped To TMA/RECR B70 AFCRA | Offsite Property No. A990260 | Bill of Lading/Air Bill No. 4235 7952 9609 | | | |
| COA B20CW167/C | | | | | |

| POSSIBLE SAMPLE HAZARDS/REMARKS | Preservation | Cool 4C | Cool 4C | None | Cool 4C | | | | | |
|---------------------------------|---------------------|---|--|---------------------------------------|---------------------------------------|--|---|--|--|--------|
| | Type of Container | aG | aG | aG | aG | | | | | |
| | No. of Container(s) | 1 | 1 | 1 | 1 | | | | | |
| Special Handling and/or Storage | Volume | 60mL | 250mL | 250mL | 500mL | | | | | |
| SAMPLE ANALYSIS | | VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol) | Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082 | See item (1) in Special Instructions. | See item (2) in Special Instructions. | | | | | |
| Sample No. | Matrix * | Sample Date | Sample Time | | | | | | | |
| BOWBT9 | Soil | | | | | | | | | |
| BOWBV0 | Soil | | | | | | | | | |
| BOWBR9 | Soil | 9-16-99 | 1320 | X | X | | X | | | BowCR1 |

| | | | | | | | | | |
|---|-----------------|--|--|--|--|--|--|--|--|
| CHAIN OF POSSESSION | | Sign/Print Names | | SPECIAL INSTRUCTIONS | | | | Matrix * | |
| Relinquished By <i>Daisy Bowers</i> Date/Time <i>9-16-99/1515</i> | | Received By <i>RF 10</i> Date/Time <i>9-16-99/1515</i> | | See chain of custody comments on SAF B99-078. Out of Gamma Spec. bottle also analyze for Np-237, isotopic U, Ni-63, Tech-99, Tritium, . Out of ICP bottle also analyze for NO2/NO3, IC anions, Sulfides, Ammonia, Total Cyanide, and pH. (1) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-155); Gamma Spec - Add-on (Americium-241); Strontium-89,90 -- Total Sr; Total Uranium (Uranium); Isotopic Plutonium; Isotopic Thorium (Thorium-232); Americium-241 (Uranium); Isotopic Plutonium; Isotopic Thorium (Thorium-232); Americium-241 (Uranium); Selenum, Silver); ICP Metals - 6010A (Supertrace Add-On) (Beryllium, Copper, Nickel, Vanadium, Zinc); Mercury - 7471 - (CV); Chromium Hex - 7196 COLLECTOR UNAVAILABLE TO SIGN COA | | | | Soil Water Vapor Other Solid Other Liquid <i>Temp. 2.5"</i> 4235 7952 9609 | |
| Relinquished By <i>Ref IB</i> Date/Time <i>9-20-99 1000</i> | | Received By <i>Chice</i> Date/Time <i>9-20-99 1000</i> | | | | | | | |
| Relinquished By <i>Chice</i> Date/Time <i>9-20-99 1400</i> | | Received By <i>FEDEX</i> Date/Time <i>9-20-99 1400</i> | | | | | | | |
| Relinquished By <i>Geo Ex</i> Date/Time <i>9-21-99/0945</i> | | Received By <i>D. J. [Signature]</i> Date/Time <i>9-21-99/0945</i> | | | | | | | |
| LABORATORY SECTION | Received By | Title | | Date/Time | | | | | |
| FINAL SAMPLE DISPOSITION | Disposal Method | | | Disposed By | | | | Date/Time | |

| | | | | | | |
|---|--|---|--|--|----------------------------------|--|
| Bechtel Hanford Inc. | | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | B99-078-124 | Page 1 of 1 |
| Collector Bowers/Trice | | Company Contact Chris Cearlock | | Telephone No. 372-9574 | Project Coordinator TRENT, SJ | Price Code 8N Data Turnaround 45 Days |
| Project Designation 200 Area Source characterization - 200-CW-1 OU | | Sampling Location 200 B pond (B8758) >15' | | SAF No. B99-078 | | |
| Ice Chest No. ERC 99-018 | | Field Logbook No. EL-1511 | | Method of Shipment Fed Ex | | |
| Shipped To FMA/RECA DB9-17-99 RECAA | | Offsite Property No. A990260 | | Bill of Lading/Air Bill No. 4235 7952 9609 COA B20CW1 671C | | |

| | | | | | | | | | | | |
|---------------------------------|---------------------|---------|---------|-------|---------|--|--|--|--|--|--|
| POSSIBLE SAMPLE HAZARDS/REMARKS | Preservation | Cool 4C | Cool 4C | None | Cool 4C | | | | | | |
| | Type of Container | aG | aG | aG | aG | | | | | | |
| | No. of Container(s) | 1 | 1 | 1 | 1 | | | | | | |
| Special Handling and/or Storage | Volume | 60mL | 250mL | 250mL | 500mL | | | | | | |

| SAMPLE ANALYSIS | | | | VOA - 8260A (TCL); VOA - 8260A (Add-On) [1-Propanol, Ethanol] | Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082 | See item (1) in Special Instructions. | See item (2) in Special Instructions. | | | | | |
|-------------------|-----------------|-------------|-------------|---|--|---------------------------------------|---------------------------------------|--|--|--|--|--------|
| Sample No. | Matrix * | Sample Date | Sample Time | | | | | | | | | |
| BOWBT9 | Soil | | | | | | | | | | | |
| BOWBVO | Soil | | | | | | | | | | | |
| BOWBTO | Soil | 9-17-99 | 0935 | X | X | | X | | | | | BowCR1 |

| | | | | | | | | | | | |
|--|-----------------|---|--|--|--|---|--|--|--|---|--|
| CHAIN OF POSSESSION | | Sign/Print Names | | | | SPECIAL INSTRUCTIONS | | | | Matrix * | |
| Relinquished By <i>Daisy Barron</i> Date/Time <i>9-17-99/145</i> | | Received By <i>Ref 1B</i> Date/Time <i>9-17-99/145</i> | | | | See chain of custody comments on SAF B99-078. Out of Gamma Spec. bottle also analyze for Np-237, isotopic U, Ni-63, Tech-99, Tritium, . Out of ICP bottle also analyze for NO2/NO3, IC anions, Sulfides, Ammonia, Total Cyanide, and pH. (1) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-155); Gamma Spec - Add-on (Americium-241); Strontium-89,90 - Total Sr; Total Uranium (Uranium); Isotopic Plutonium; Isotopic Thorium (Thorium-232); Americium-241 (2) ICP Metals - 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals - 6010A (Supertrace Add-On) (Beryllium, Copper, Nickel, Vanadium, Zinc); Mercury - 7471 - (CV); Chromium Hex - 7196 COLLECTOR UNAVAILABLE TO SIGN WOC | | | | Soil Water Vapor Other Solid Other Liquid | |
| Relinquished By <i>Ref 1B</i> Date/Time <i>9-20-99 1000</i> | | Received By <i>Chris</i> Date/Time <i>9-20-99 1000</i> | | | | | | | | | |
| Relinquished By <i>Chris</i> Date/Time <i>9-20-99 1400</i> | | Received By <i>FEDEX</i> Date/Time <i>9-20-99 1900</i> | | | | | | | | | |
| Relinquished By <i>Fed Ex</i> Date/Time <i>9-21-99/0945</i> | | Received By <i>D. Smith</i> Date/Time <i>9-21-99/0945</i> | | | | | | | | | |
| LABORATORY SECTION | Received By | Title | | | | Date/Time | | | | | |
| FINAL SAMPLE DISPOSITION | Disposal Method | Disposed By | | | | Date/Time | | | | | |