START

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B00Y82A-TMA-013

0045412

1 of 2

# CASE NARRATIVE

LABORATORY: TMA/ARLI

CASE: 06-007

CONTRACT ID: WHC- MBH-SVV-069262

SDG RECEIPT DATE: June 4, 1991

## 1.0 DESCRIPTION OF CASE:

Two soil samples were analyzed for Full TCL Organics according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision 2/88.

## 2.0 SAMPLE LIST:

| WESTINGHOUSE ID | LAB ID | ANALYSIS REQUESTED | MATRIX |
|---|---|---|---|
| B00Y82 | A1-06-007-01A | VOA-TCL | SOIL |
| B00Y82 | A1-06-007-01B | S VOA-TCL | SOIL |
| B00Y82 | A1-06-007-01C | PEST/PCB-TCL | SOIL |
| B00Y87 | A1-06-007-02A | VOA-TCL | SOIL |
| B00Y87 | A1-06-007-02B | S VOA-TCL | SOIL |
| B00Y87 | A1-06-007-02C | PEST/PCB-TCL | SOIL |

## 3.0 PROBLEMS:

### 3.1 SHIPPING AND DOCUMENTATION:

All samples were received unbroken and properly documented.

### 3.2 ANALYSIS:

#### 3.2.1 VOLATILE ANALYSIS PROBLEMS:

All QC results were with the limits specified in the USEPA CLP SOW. There were no unusual problems encountered during analysis.

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3.2.2 SEMIVOLATILE ANALYSIS PROBLEMS:

All QC results were within the limits specified in the USEPA CLP SOW except for the MS and MSD results. The sample matrix had a negative effect on chromatography of several peaks. A number of compounds had to be manually integrated. 4-Chloro-3-Methylphenol and 4-Nitrophenol could not be found in either the MS or the MSD.

3.2.3 PESTICIDE ANALYSIS PROBLEMS:

All QC results were within the limits specified in the USEPA CLP SOW.

A series of dilutions were necessary on sample number B00Y87 because of a high level of non-TCL compounds. The results of the dilutions and the original sample have been included in the package.

Even though only PCBs were requested on the COC the full list of the TCL Pesticides were analyzed for, by verbal request from WHC.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this package and on the accompanying data diskette is authorized by the Lab Manager as verified by the following signature.

Dennis D. Wells
Laboratory Manager

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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R07

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 Date Analyzed: 06/04/91

Column: (pack/cap) PACK Dilution Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 50 | |
| 67-64-1 | Acetone | 34 | |
| 75-15-0 | Carbon Disulfide | 5 | U |
| 75-35-4 | 1,1-Dichloroethene | 5 | U |
| 75-34-3 | 1,1-Dichloroethane | 5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5 | U |
| 67-66-3 | Chloroform | 5 | U |
| 107-06-2 | 1,2-Dichloroethane | 5 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5 | U |
| 56-23-5 | Carbon Tetrachloride | 5 | U |
| 108-05-4 | Vinyl Acetate | 10 | U |
| 75-27-4 | Bromodichloromethane | 5 | U |
| 78-87-5 | 1,2-Dichloropropane | 5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5 | U |
| 79-01-6 | Trichloroethene | 5 | U |
| 124-48-1 | Dibromochloromethane | 5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5 | U |
| 71-43-2 | Benzene | 5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5 | U |
| 75-25-2 | Bromoform | 5 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5 | U |
| 108-88-3 | Toluene | 5 | U |
| 108-90-7 | Chlorobenzene | 5 | U |
| 100-41-4 | Ethylbenzene | 5 | U |
| 100-42-5 | Styrene | 5 | U |
| 1330-20-7 | Xylenes (total) | 5 | U |

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R07

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 Date Analyzed: 06/04/91

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R08

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 Date Analyzed: 06/04/91

Column: (pack/cap) PACK Dilution Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 17 | |
| 67-64-1 | Acetone | 64 | |
| 75-15-0 | Carbon Disulfide | 5 | U |
| 75-35-4 | 1,1-Dichloroethene | 5 | U |
| 75-34-3 | 1,1-Dichloroethane | 5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5 | U |
| 67-66-3 | Chloroform | 5 | U |
| 107-06-2 | 1,2-Dichloroethane | 5 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5 | U |
| 56-23-5 | Carbon Tetrachloride | 5 | U |
| 108-05-4 | Vinyl Acetate | 10 | U |
| 75-27-4 | Bromodichloromethane | 5 | U |
| 78-87-5 | 1,2-Dichloropropane | 5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5 | U |
| 79-01-6 | Trichloroethene | 5 | U |
| 124-48-1 | Dibromochloromethane | 5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5 | U |
| 71-43-2 | Benzene | 5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5 | U |
| 75-25-2 | Bromoform | 5 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5 | U |
| 108-88-3 | Toluene | 9 | |
| 108-90-7 | Chlorobenzene | 5 | U |
| 100-41-4 | Ethylbenzene | 5 | U |
| 100-42-5 | Styrene | 5 | U |
| 1330-20-7 | Xylenes (total) | 5 | U |

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1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 4

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R08

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 Date Analyzed: 06/04/91

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 31 | U |
| 62-53-3 | Aniline | 31 | U |
| 111-44-4 | bis(2-Chloroethyl)Ether | 31 | U |
| 95-57-8 | 2-Chlorophenol | 31 | U |
| 541-73-1 | 1,3%Dichlorobenzene | 31 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 31 | U |
| 100-51-6 | Benzyl Alcohol | 31 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 31 | U |
| 95-48-7 | 2-Methylphenol | 31 | U |
| 108-60-1 | bis(2-Chloroisopropyl)Ether | 31 | U |
| 106-44-5 | 4-Methylphenol | 31 | U |
| 621-64-7 | N-Nitroso-Di-n-Propylamine | 31 | U |
| 67-72-1 | Hexachloroethane | 31 | U |
| 98-95-3 | Nitrobenzene | 31 | U |
| 78-59-1 | Isophorone | 31 | U |
| 88-75-5 | 2-Nitrophenol | 31 | U |
| 105-67-9 | 2,4-Dimethylphenol | 31 | U |
| 65-85-0 | Benzoic Acid | 210 | U |
| 111-91-1 | bis(2-Chloroethoxy)Methane | 31 | U |
| 120-83-2 | 2,4-Dichlorophenol | 31 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 31 | U |
| 91-20-3 | Naphthalene | 31 | U |
| 106-47-8 | 4-Chloroaniline | 31 | U |
| 87-68-3 | Hexachlorobutadiene | 31 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 31 | U |
| 91-57-6 | 2-Methylnaphthalene | 31 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 31 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 31 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 31 | U |
| 91-58-7 | 2-Chloronaphthalene | 31 | U |
| 88-74-4 | 2-Nitroaniline | 210 | U |
| 131-11-3 | Dimethyl Phthalate | 31 | U |
| 208-96-8 | Acenaphthylene | 31 | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 210 | U |
| 83-32-9 | Acenaphthene | 31 | U |
| 51-28-5 | 2,4-Dinitrophenol | 210 | U |
| 100-02-7 | 4-Nitrophenol | 210 | U |
| 132-64-9 | Dibenzofuran | 31 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 31 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 31 | U |
| 84-66-2 | Diethylphthalate | 31 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 31 | U |
| 86-73-7 | Fluorene | 31 | U |
| 100-01-6 | 4-Nitroaniline | 210 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 210 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 31 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 31 | U |
| 118-74-1 | Hexachlorobenzene | 31 | U |
| 87-86-5 | Pentachlorophenol | 210 | U |
| 85-01-8 | Phenanthrene | 31 | U |
| 120-12-7 | Anthracene | 31 | U |
| 84-74-2 | Di-n-Butylphthalate | 1400 | B |
| 206-44-0 | Fluoranthene | 31 | U |
| 129-00-0 | Pyrene | 31 | U |
| 85-68-7 | Butylbenzylphthalate | 31 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 62 | U |
| 56-55-3 | Benzo(a)anthracene | 31 | U |
| 117-81-7 | bis(2-Ethylhexyl)Phthalate | 36 | B |
| 218-01-9 | Chrysene | 31 | U |
| 117-84-0 | Di-n-Octyl Phthalate | 31 | U |
| 205-99-2 | Benzo(b)fluoranthene | 31 | U |
| 207-08-9 | Benzo(k)fluoranthene | 31 | U |
| 50-32-8 | Benzo(a)pyrene | 31 | U |
| 193-39-5 | Indeno(1,2,3-cd)Pyrene | 31 | U |
| 53-70-3 | Dibenz(a,h)Anthracene | 31 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 31 | U |

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN HYDROCARBON | 2.23 | 1000 | J |
| 2. | UNKNOWN ALKANE | 2.33 | 650 | J |
| 3. | UNKNOWN HYDROCARBON | 2.92 | 190000 | J |
| 4. | UNKNOWN HYDROCARBON | 3.00 | 6100 | J |
| 5. 2216-34-4 | OCTANE, 4-METHYL- | 3.12 | 5100 | J |
| 6. 2216-33-3 | OCTANE, 3-METHYL- | 3.25 | 3600 | BJ |
| 7. | UNKNOWN HYDROCARBON | 4.27 | 4200 | J |
| 8. | UNKNOWN KETONE | 4.63 | 1200 | J |
| 9. 124-18-5 | DECANE | 5.75 | 1500 | J |
| 10. | UNKNOWN ALKANE | 6.25 | 720 | J |
| 11. | UNKNOWN KETONE | 6.80 | 650 | J |
| 12. | UNKNOWN KETONE | 7.15 | 1800 | J |
| 13. | UNKNOWN ALKANE | 12.24 | 550 | J |
| 14. | UNKNOWN ALKANE | 12.65 | 450 | J |
| 15. | UNKNOWN HYDROCARBON | 13.64 | 410 | J |
| 16. | UNKNOWN ALKANE | 13.80 | 480 | J |
| 17. | UNKNOWN ALKANE | 14.25 | 790 | J |
| 18. | UNKNOWN HYDROCARBON | 14.60 | 690 | J |
| 19. | UNKNOWN ALKANE | 15.45 | 450 | J |
| 20. | UNKNOWN HYDROCARBON | 25.37 | 550 | J |

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 30 | U |
| 62-53-3 | Aniline | 30 | U |
| 111-44-4 | bis(2-Chloroethyl)Ether | 30 | U |
| 95-57-8 | 2-Chlorophenol | 30 | U |
| 541-73-1 | 1,3%Dichlorobenzene | 30 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | U |
| 100-51-6 | Benzyl Alcohol | 30 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 30 | U |
| 95-48-7 | 2-Methylphenol | 30 | U |
| 108-60-1 | bis(2-Chloroisopropyl)Ether | 30 | U |
| 106-44-5 | 4-Methylphenol | 30 | U |
| 621-64-7 | N-Nitroso-Di-n-Propylamine | 30 | U |
| 67-72-1 | Hexachloroethane | 30 | U |
| 98-95-3 | Nitrobenzene | 30 | U |
| 78-59-1 | Isophorone | 30 | U |
| 88-75-5 | 2-Nitrophenol | 30 | U |
| 105-67-9 | 2,4-Dimethylphenol | 30 | U |
| 65-85-0 | Benzoic Acid | 200 | U |
| 111-91-1 | bis(2-Chloroethoxy)Methane | 30 | U |
| 120-83-2 | 2,4-Dichlorophenol | 30 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 30 | U |
| 91-20-3 | Naphthalene | 30 | U |
| 106-47-8 | 4-Chloroaniline | 30 | U |
| 87-68-3 | Hexachlorobutadiene | 150 | |
| 59-50-7 | 4-Chloro-3-methylphenol | 30 | U |
| 91-57-6 | 2-Methylnaphthalene | 30 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 30 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 30 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 30 | U |
| 91-58-7 | 2-Chloronaphthalene | 30 | U |
| 88-74-4 | 2-Nitroaniline | 200 | U |
| 131-11-3 | Dimethyl Phthalate | 30 | U |
| 208-96-8 | Acenaphthylene | 30 | U |

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 200 | U |
| 83-32-9 | Acenaphthene | 30 | U |
| 51-28-5 | 2,4-Dinitrophenol | 200 | U |
| 100-02-7 | 4-Nitrophenol | 200 | U |
| 132-64-9 | Dibenzofuran | 30 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 30 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 30 | U |
| 84-66-2 | Diethylphthalate | 30 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 30 | U |
| 86-73-7 | Fluorene | 30 | U |
| 100-01-6 | 4-Nitroaniline | 200 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 200 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 30 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 30 | U |
| 118-74-1 | Hexachlorobenzene | 30 | U |
| 87-86-5 | Pentachlorophenol | 200 | U |
| 85-01-8 | Phenanthrene | 30 | U |
| 120-12-7 | Anthracene | 30 | U |
| 84-74-2 | Di-n-Butylphthalate | 1100 | B |
| 206-44-0 | Fluoranthene | 30 | U |
| 129-00-0 | Pyrene | 30 | U |
| 85-68-7 | Butylbenzylphthalate | 30 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 61 | U |
| 56-55-3 | Benzo(a)anthracene | 30 | U |
| 117-81-7 | bis(2-Ethylhexyl)Phthalate | 54 | B |
| 218-01-9 | Chrysene | 30 | U |
| 117-84-0 | Di-n-Octyl Phthalate | 30 | U |
| 205-99-2 | Benzo(b)fluoranthene | 30 | U |
| 207-08-9 | Benzo(k)fluoranthene | 30 | U |
| 50-32-8 | Benzo(a)pyrene | 30 | U |
| 193-39-5 | Indeno(1,2,3-cd)Pyrene | 30 | U |
| 53-70-3 | Dibenz(a,h)Anthracene | 30 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 30 | U |

(1) - Cannot be separated from Diphenylamine

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1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN HYDROCARBON | 2.97 | 190000 | J |
| 2. | UNKNOWN ALKANE | 3.13 | 980 | J |
| 3. | UNKNOWN ALKANE | 3.25 | 870 | J |
| 4. | UNKNOWN KETONE | 4.70 | 3600 | J |
| 5. | UNKNOWN HYDROCARBON | 5.60 | 2600 | J |
| 6. | UNKNOWN HYDROCARBON | 6.07 | 770 | J |
| 7. | UNKNOWN HYDROCARBON | 6.13 | 710 | J |
| 8. | UNKNOWN ALKANE | 13.80 | 400 | J |
| 9. | UNKNOWN HYDROCARBON | 17.34 | 500 | J |
| 10. | UNKNOWN | 19.25 | 170000 | J |
| 11. | UNKNOWN HYDROCARBON | 21.10 | 570 | J |
| 12. | UNKNOWN HYDROCARBON | 21.95 | 67000 | J |
| 13. | UNKNOWN HYDROCARBON | 23.00 | 8700 | J |
| 14. | UNKNOWN HYDROCARBON | 23.40 | 440 | J |
| 15. | UNKNOWN HYDROCARBON | 23.65 | 670 | J |
| 16. | UNKNOWN HYDROCARBON | 24.05 | 2500 | J |
| 17. | UNKNOWN HYDROCARBON | 24.44 | 3500 | J |
| 18. | UNKNOWN HYDROCARBON | 25.61 | 1100 | J |
| 19. | UNKNOWN CARBOXYLIC ACID | 26.81 | 370 | J |
| 20. | UNKNOWN HYDROCARBON | 34.41 | 1300 | J |

9613491.2941

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01CR

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

Level: (low/med) LOW Date Received: 05/31/91

% Moisture: not dec. 3 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 8.2 | U |
| 319-85-7 | beta-BHC | 8.2 | U |
| 319-86-8 | delta-BHC | 8.2 | U |
| 58-89-9 | gamma-BHC (Lindane) | 8.2 | U |
| 76-44-8 | Heptachlor | 8.2 | U |
| 309-00-2 | Aldrin | 8.2 | U |
| 1024-57-3 | Heptachlor epoxide | 8.2 | U |
| 959-98-8 | Endosulfan I | 8.2 | U |
| 60-57-1 | Dieldrin | 16 | U |
| 72-55-9 | 4,4'-DDE | 16 | U |
| 72-20-8 | Endrin | 16 | U |
| 33213-65-9 | Endosulfan II | 16 | U |
| 72-54-8 | 4,4'-DDD | 16 | U |
| 1031-07-8 | Endosulfan sulfate | 16 | U |
| 50-29-3 | 4,4'-DDT | 16 | U |
| 72-43-5 | Methoxychlor | 82 | U |
| 53494-70-5 | Endrin ketone | 16 | U |
| 5103-71-9 | alpha-Chlordane | 82 | U |
| 5103-74-2 | gamma-Chlordane | 82 | U |
| 8001-35-2 | Toxaphene | 160 | U |
| 12674-11-2 | Aroclor-1016 | 82 | U |
| 11104-28-2 | Aroclor-1221 | 82 | U |
| 11141-16-5 | Aroclor-1232 | 82 | U |
| 53469-21-9 | Aroclor-1242 | 82 | U |
| 12672-29-6 | Aroclor-1248 | 82 | U |
| 11097-69-1 | Aroclor-1254 | 160 | U |
| 11096-82-5 | Aroclor-1260 | 160 | U |

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1D

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02C

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 8.1 | U |
| 319-85-7 | beta-BHC | 8.1 | U |
| 319-86-8 | delta-BHC | 8.1 | U |
| 58-89-9 | gamma-BHC (Lindane) | 8.1 | U |
| 76-44-8 | Heptachlor | 8.1 | U |
| 309-00-2 | Aldrin | 390 | |
| 1024-57-3 | Heptachlor epoxide | 44 | |
| 959-98-8 | Endosulfan I | 8.1 | U |
| 60-57-1 | Dieldrin | 16 | U |
| 72-55-9 | 4,4'-DDE | 16 | U |
| 72-20-8 | Endrin | 16 | U |
| 33213-65-9 | Endosulfan II | 16 | U |
| 72-54-8 | 4,4'-DDD | 16 | U |
| 1031-07-8 | Endosulfan sulfate | 16 | U |
| 50-29-3 | 4,4'-DDT | 16 | U |
| 72-43-5 | Methoxychlor | 81 | U |
| 53494-70-5 | Endrin ketone | 16 | U |
| 5103-71-9 | alpha-Chlordane | 81 | U |
| 5103-74-2 | gamma-Chlordane | 69 | JX |
| 8001-35-2 | Toxaphene | 160 | U |
| 12674-11-2 | Aroclor-1016 | 81 | U |
| 11104-28-2 | Aroclor-1221 | 81 | U |
| 11141-16-5 | Aroclor-1232 | 81 | U |
| 53469-21-9 | Aroclor-1242 | 81 | U |
| 12672-29-6 | Aroclor-1248 | 81 | U |
| 11097-69-1 | Aroclor-1254 | 160 | U |
| 11096-82-5 | Aroclor-1260 | 160 | U |

9613491.2943

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87DL5

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02CD

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 5.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 40 | U |
| 319-85-7 | beta-BHC | 40 | U |
| 319-86-8 | delta-BHC | 40 | U |
| 58-89-9 | gamma-BHC (Lindane) | 40 | U |
| 76-44-8 | Heptachlor | 40 | U |
| 309-00-2 | Aldrin | 740 | D |
| 1024-57-3 | Heptachlor epoxide | 42 | D |
| 959-98-8 | Endosulfan I | 40 | U |
| 60-57-1 | Dieldrin | 81 | U |
| 72-55-9 | 4,4'-DDE | 81 | U |
| 72-20-8 | Endrin | 81 | U |
| 33213-65-9 | Endosulfan II | 81 | U |
| 72-54-8 | 4,4'-DDD | 81 | U |
| 1031-07-8 | Endosulfan sulfate | 81 | U |
| 50-29-3 | 4,4'-DDT | 81 | U |
| 72-43-5 | Methoxychlor | 400 | U |
| 53494-70-5 | Endrin ketone | 81 | U |
| 5103-71-9 | alpha-Chlordane | 400 | U |
| 5103-74-2 | gamma-Chlordane | 53 | DJX |
| 8001-35-2 | Toxaphene | 810 | U |
| 12674-11-2 | Aroclor-1016 | 400 | U |
| 11104-28-2 | Aroclor-1221 | 400 | U |
| 11141-16-5 | Aroclor-1232 | 400 | U |
| 53469-21-9 | Aroclor-1242 | 400 | U |
| 12672-29-6 | Aroclor-1248 | 400 | U |
| 11097-69-1 | Aroclor-1254 | 810 | U |
| 11096-82-5 | Aroclor-1260 | 810 | U |

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87DL10

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02CD

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/07/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 10.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 81 | U |
| 319-85-7 | beta-BHC | 81 | U |
| 319-86-8 | delta-BHC | 81 | U |
| 58-89-9 | gamma-BHC (Lindane) | 81 | U |
| 76-44-8 | Heptachlor | 81 | U |
| 309-00-2 | Aldrin | 770 | DX |
| 1024-57-3 | Heptachlor epoxide | 40 | DJX |
| 959-98-8 | Endosulfan I | 81 | U |
| 60-57-1 | Dieldrin | 160 | U |
| 72-55-9 | 4,4'-DDE | 160 | U |
| 72-20-8 | Endrin | 160 | U |
| 33213-65-9 | Endosulfan II | 160 | U |
| 72-54-8 | 4,4'-DDD | 160 | U |
| 1031-07-8 | Endosulfan sulfate | 160 | U |
| 50-29-3 | 4,4'-DDT | 160 | U |
| 72-43-5 | Methoxychlor | 810 | U |
| 53494-70-5 | Endrin ketone | 160 | U |
| 5103-71-9 | alpha-Chlordane | 810 | U |
| 5103-74-2 | gamma-Chlordane | 52 | DJX |
| 8001-35-2 | Toxaphene | 1600 | U |
| 12674-11-2 | Aroclor-1016 | 810 | U |
| 11104-28-2 | Aroclor-1221 | 810 | U |
| 11141-16-5 | Aroclor-1232 | 810 | U |
| 53469-21-9 | Aroclor-1242 | 810 | U |
| 12672-29-6 | Aroclor-1248 | 810 | U |
| 11097-69-1 | Aroclor-1254 | 1600 | U |
| 11096-82-5 | Aroclor-1260 | 1600 | U |

Westinghouse Hanford Company

# SAMPLE ANALYSIS REQUEST

## PART I: FIELD SECTION

Collector C. Kramer Date Sampled 5/28/91 Time 0910 hours

Company Contact Ron Mitchell. Telephone (506) 376-5122

| Sample Number | Number and Type of Sample Containers | Type of Sample* | Analysis Requested |
|---|---|---|---|
| B00YB7 | (2) 120 ml glass jar | Soil | VOA's (CLP) (2) 180ml glass jars |
| | (2) 250 ml glass jar | | Semivolatiles (CLP) (1) 250 ml glass jar |
| | (2) 250 ml plastic jar | | Metals (CLP) } ICP |
| | | | PCB's (CLP) } (1) 250 ml glass jar |
| | | | Gamma Scan |
| | | | Total Uranium } (2) 250 ml plastic |
| | | | *Isotopic Uranium } jars |
| | *Isotopic Uranium is only to be completed when the total uranium analysis results are greater than detection limits. | | |

Field Information** —

Special Handling and/or Storage —

Possible Sample Hazards N/A

## PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (03/

| ...tor Westinghouse Hanford Co. | OFF-SITE PROPERTY CONTROL | CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) [illegible] |
|---|---|---|

**PART I – TO BE COMPLETED BY ORIGINATOR**

| | | |
|---|---|---|
| Department: Env. Engineering | Section: Technical Baseline | Unit: |
| The following items are to be shipped from | ☒ Contractor | ☐ Vendor |
| Routing: Every | ☒ Contractor | ☐ Vendor |

| Shipped to | Off-site Custodian |
|---|---|
| Inertec Analytical, Inc.<br>2030 Wright Ave.<br>Richmond, CA 94804 | Attn: Robert Fox |
| | Full Title: Project Coordinator |

| Quantity | Description (Include Serial and any Government Tag Numbers) | Original Cost |
|---|---|---|
| 1 | Poly Ice Chest<br>- Glass jars of soil packed in vermiculite and dryice.<br>- Samplers. [illegible] YE7 [illegible] DM #38<br>(2 lbs) | |

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Property is not available on site.
Bill of Lading # [illegible] T

*CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.*

| | | |
|---|---|---|
| RM Clearance for Public Release | RM Survey No | Date |
| Location of Property (Area & Bldg.): 618-9 burial ground | Contact: Ron Mitchell | Phone: (509) 376-51[illegible] |
| Date Ready for Shipment: [illegible] | Cost Code to be Charged: [illegible] EN52E | Approximate Date This Property will be Returned |
| Originated By: Ron Mitchell | Date: [illegible] | Authorized By: [illegible] / Date |
| Signature and Name of Property Control | Custodian Date | Property Management Approval / Date: [illegible] |

**PART II – TO BE COMPLETED BY SHIPPING**

| Signature of Recipient | Return Order No | Date Issued | Purchase Order No. | Date Issued |
|---|---|---|---|---|
| Date: [illegible] | | | | |

**DISTRIBUTION**

| By Originator | Shipping Operation – Sign all Copies and Forward to: |
|---|---|
| White, Green, Yellow, Pink – Property Management<br>Goldenrod – Retain | White – Property Management<br>Yellow – Retain<br>Green – Property Control Custodian (Issuing Office)<br>Pink – Originator |

54 3000-479 (09/8[illegible])

| Westinghouse Hanford Company | CHAIN OF CUSTODY |
|---|---|

Custody Form Initiator C.E. Heiden

Company Contact Ron Mitchell Telephone 376-5122

Project Designation/Sampling Locations 618-9 Burial Ground Trench Collection Date 5/22/91

Ice Chest No. #36 Field Logbook No. —

Bill of Lading/Airbill No. 247424947 0 Offsite Property No. W91-0372

Method of Shipment Emery

Shipped to Thermo Analytical, Inc. Richmond, CA

Possible Sample Hazards/Remarks N/A

Sample Identification

B00Y82 - Soil (2) 120ml glass jars
(2) 250ml glass jars
(2) 250 plastic jars

| ☐ Field Transfer of Custody | CHAIN OF POSSESSION | (Sign and Print Names) |
|---|---|---|
| Relinquished by: C.E. Heiden C.E. Heiden | Received by: J. Demarest J. Demarest | Date/Time: 5/23/91 1315 |
| Relinquished by: J. DEMAREST J. Demarest | Received by: | Date/Time: |
| Relinquished by: | Received by: | Date/Time: |
| Relinquished by: | Received by: | Date/Time: |

Final Sample Disposition

| Disposal Method: | Disposed by: | Date/Time: |
|---|---|---|

Comments:

Westinghouse Hanford Company 9613491.2948

# CHAIN OF CUSTODY

44

Custody Form Initiator C.E. Heiden

Company Contact Ron Mitchell Telephone 376-5122

Project Designation/Sampling Locations 618-9 Burial Ground Trench Collection Date 5/28/91

Ice Chest No. RM # 38 Field Logbook No. WHC-N-461

Bill of Lading/Airbill No. 247424957 T Offsite Property No. W91 0 0372 #1

Method of Shipment Emery

Shipped to Thermo Analytical, Inc. Richmond, CA

Possible Sample Hazards/Remarks N/A

**Sample Identification**

BOOY B7 - Soil (2) 120 ml glass jars
(2) 250 ml glass jars
(2) 250 ml plastic jars

☐ Field Transfer of Custody

**CHAIN OF POSSESSION** (Sign and Print Names)

| Relinquished by: | Received by: | Date/Time: |
|---|---|---|
| C.E. Heiden C.E. Heiden | J Demarest J Demarest | 5/30/91 1300 |
| J. Demarest J Demarest | Kermit Blum | 5-31-91 1307 |
| | | |
| | | |

**Final Sample Disposition**

| Disposal Method: | Disposed by: | Date/Time: |
|---|---|---|
| | | |

Comments:

A-6000-407 (12/

45

Westinghouse Hanford Company

# SAMPLE ANALYSIS REQUEST

## PART I: FIELD SECTION

Collector Lucas Date Sampled 5/22/91 Time ____ hours

Company Contact Ron Mitchell. Telephone (506) 376-5122

| Sample Number | Number and Type of Sample Containers | Type of Sample* | Analysis Requested |
|---|---|---|---|
| B001B2 | (2) 120 ml glass jar | Soil | VOA's (CLP) (2) 120 ml glass jars |
| | (2) 250 ml glass jar | | Semivolatiles (CLP) (1) 250 ml glass jar |
| | (2) 250 ml plastic jar | | Metals (CLP) } (1) 250 ml glass jar |
| | | | PCBs (CLP) } |
| | | | Gamma Scan } (2) 250 ml plastic jars |
| | | | Total Uranium } |
| | | | *Isotopic Uranium } |
| | *Isotopic Uranium is only to be completed when the total uranium analysis results are greater than detection limits. | | |

Field Information** ____

Special Handling and/or Storage ____

Possible Sample Hazards N/A

## PART II: LABORATORY SECTION

Received by ____ Title ____ Date ____

Analysis Required ____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

"Hot Dry Space" "Impractical Security"

| Contractor | OFF-SITE PROPERTY CONTROL | CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) |
|---|---|---|
| Westinghouse Hanford Co. | | 11-0372 |

PART I – TO BE COMPLETED BY ORIGINATOR

| Department | Section | Unit |
|---|---|---|
| Env. Engineering | Technical Baseline | |

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Energy ☐ Contractor ☐ Vendor

| Shipped to | Off-site Custodian |
|---|---|
| Inorganic Analytical, Inc.<br>2030 Wright Ave.<br>Richmond, CA 94804 | Attn: Robert Fox<br>Full Title: Project Coordinator |

| Quantity | Description (Include Serial and any Government Tag Numbers) | Original Cost |
|---|---|---|
| 1 | Poly Ice Chest<br>- Glass jars of soil packed in vermiculite and blue ice.<br>- Sample size: Total = 56 Jars | |

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Program is not available on site.

Will of testing: [illegible]

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

| RM Clearance for Public Release | RM Survey No | Date |
|---|---|---|
| | | |

| Location of Property (Area & Bldg.) | Contact | Phone |
|---|---|---|
| 3745-3 Central Stores | Ron Mitchell | (509) 376-5122 |

| Date Ready for Shipment | Cost Code to be Charged | Approximate Date This Property will be Returned |
|---|---|---|
| [illegible] | 8102C EN52E | N/A |

| Originated By | Date | Authorized By | Date |
|---|---|---|---|
| Ron Mitchell | 5/29/91 | [illegible] | |

| Signature and Name of Property Control | Custodian Date | Property Management Approval | Date |
|---|---|---|---|
| | | [illegible] | 5/30/91 |

PART II – TO BE COMPLETED BY SHIPPING

| Signature of Recipient | Return Order No | Date Issued | Purchase Order No. | Date Issued |
|---|---|---|---|---|
| | | | | |
| Date | | | | |

DISTRIBUTION

| By Originator | Shipping Operation – Sign all Copies and Forward to: |
|---|---|
| White, Green, Yellow, Pink – Property Management<br>Goldenrod – Retain | White – Property Management<br>Yellow – Retain<br>Green – Property Control Custodian (Issuing Office)<br>Pink – Originator |

9613491.2951

JUL 1991
RECEIVED
DATA RECEIPT

Federal Express 99286407552

July 15, 1991

TMA/ARLI
160 Taylor Street
Monrovia, CA 91016

Attention: Dennis Wells

## Quality Control Narrative

### Scope

Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on June 4, 1991. The samples were analyzed for the USEPA CLP TAL ICP metals only. The analysis was performed under Skinner and Sherman work order 9106016.

### Methodology

The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

### Discussion

All quality control requirements were met for the samples with the following exceptions.

- The antimony and manganese matrix spike recoveries exceeded the control limits. The required post-digestion spikes gave acceptable recoveries.

Please feel free to call if there are any questions concerning the data package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

Richard Purdy
Contract Laboratory Program
Program Manager

i 3/22/96 M.H.

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satis Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. C will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the in amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are hel thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

9613491.2952

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B00Y82

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D9-0033

Lab Code: SKINER Case No.: 618-9 SAS No.: SDG No.: B00Y82

Matrix (soil/water): SOIL Lab Sample ID: 06016-02S

Level (low/med): LOW Date Received: 06/04/91

% Solids: 95.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6140.00 | | | P |
| 7440-36-0 | Antimony | 3.40 | U | N | P |
| 7440-38-2 | Arsenic | | | | NR |
| 7440-39-3 | Barium | 64.40 | | | P |
| 7440-41-7 | Beryllium | 0.23 | B | | P |
| 7440-43-9 | Cadmium | 0.59 | U | | P |
| 7440-70-2 | Calcium | 3410.00 | | | P |
| 7440-47-3 | Chromium | 6.70 | | | P |
| 7440-48-4 | Cobalt | 9.30 | B | | P |
| 7440-50-8 | Copper | 11.20 | | | P |
| 7439-89-6 | Iron | 19100.00 | | | P |
| 7439-92-1 | Lead | | | | NR |
| 7439-95-4 | Magnesium | 3690.00 | | | P |
| 7439-96-5 | Manganese | 309.00 | | N | P |
| 7439-97-6 | Mercury | | | | NR |
| 7440-02-0 | Nickel | 8.30 | | | P |
| 7440-09-7 | Potassium | 1180.00 | | | P |
| 7782-49-2 | Selenium | | | | NR |
| 7440-22-4 | Silver | 0.99 | U | | P |
| 7440-23-5 | Sodium | 151.00 | B | | P |
| 7440-28-0 | Thallium | | | | NR |
| 7440-62-2 | Vanadium | 49.90 | | | P |
| 7440-66-6 | Zinc | 39.00 | | | P |
| | Cyanide | | | | NR |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

STONES

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B00Y87

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-09-0088

Lab Code: SKINER Case No.: 618-9 SAS No.: SDG No.: B00Y82

Matrix (soil/water): SOIL Lab Sample ID: 06016-01S

Level (low/med): LOW Date Received: 06/04/91

% Solids: 98.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 8570.00 | | | P |
| 7440-36-0 | Antimony | 3.20 | U | N | P |
| 7440-38-2 | Arsenic | | | | NR |
| 7440-39-3 | Barium | 90.20 | | | P |
| 7440-41-7 | Beryllium | 0.33 | B | | P |
| 7440-43-9 | Cadmium | 0.57 | U | | P |
| 7440-70-2 | Calcium | 4170.00 | | | P |
| 7440-47-3 | Chromium | 9.70 | | | P |
| 7440-48-4 | Cobalt | 11.40 | | | P |
| 7440-50-8 | Copper | 16.70 | | | P |
| 7439-89-6 | Iron | 24900.00 | | | P |
| 7439-92-1 | Lead | | | | NR |
| 7439-95-4 | Magnesium | 4450.00 | | | P |
| 7439-96-5 | Manganese | 359.00 | | N | P |
| 7439-97-6 | Mercury | | | | NR |
| 7440-02-0 | Nickel | 10.60 | | | P |
| 7440-09-7 | Potassium | 1800.00 | | | P |
| 7782-49-2 | Selenium | | | | NR |
| 7440-22-4 | Silver | 0.95 | U | | P |
| 7440-23-5 | Sodium | 168.00 | B | | P |
| 7440-28-0 | Thallium | | | | NR |
| 7440-62-2 | Vanadium | 59.30 | | | P |
| 7440-66-6 | Zinc | 52.30 | | | P |
| | Cyanide | | | | NR |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

STONES

9615491.2954

TMA/SKINNER & SHERMAN LABS SAMPLE LOG-IN

CLIENT Hanford - Arli

S&S WORKORDER 9106016

PROTOCOL: CLP

No. OF SAMPLES:

2 (Soil) ___ (Water) ___ (Specify)

TURNAROUND: 21 Days

___ (Oil) ___ (Sludge) ___ (Drinking)

CUSTODIAN: SF

SDG/Batch# ___

COOLER TEMP: 4 oC, or NA

CUSTODY SEAL - PRESENT/ABSENT

INTACT/NOT

CLIENT CASE# ___

PO/CONTRACT# ___

TAGS: PRESENT/ABSENT/NA/SEE COC

CONTACT Dennis Wells

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # 818-357-3247

COMMENTS: Samples are Radioactive - See Tonia for Scan

AIRBILL # 9157870282 TRANSPORTER: FED EX HAND DEL ___

SAMPLE CONTAINERS-INTACT/BROKEN(COMMENTS) ___

CLIENT COMMENTS? YES / NO

Radioactive Samples

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

| | CLIENT ID | MATRIX | RECEIVED | QC | TEST(S) | HOLD TIME DATE/ TEST |
|---|---|---|---|---|---|---|
| 1 | B00487 | Soil | | D,S | IC2as, FCPOES, SOW7/8 | 7/25/91 6/6 |
| 2 | B00482 | ↓ | | | ↓ | |
| 3 | LCSS | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
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| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | COMMENTS: |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | |
| 27 | | | | | | |

SUBCONTRACT: YES NO, TO: ___ DATE 000063

Rev. 1.3

ATTACHMENT 1 DATA TABLE

| Customer I.D. | TMA/Norcal Group No. 9501 | Collection Date | Analysis | Results pCi/g ± 2 σ |
|---|---|---|---|---|
| BOOY B7 | 1 | 5/30/91 | Total Uranium | <0.8 |
| | | | Gamma Scan: | |
| | | | $^{40}K$ | 11.6 ± 0.8 |
| | | | $^{137}Cs$ | <0.04 |
| | | | $^{226}Ra$ | 0.36 ± 0.07 |
| | | | $^{228}Th$ | 0.51 ± 0.05 |
| | | | $^{232}Th$ | 0.57 ± 0.14 |

**ATTACHMENT 1 DATA TABLE**

| Customer I.D. | TMA/Norcal Group No. 6401 | Collection Date | Analysis | Results pCi/g ± 2 σ |
|---|---|---|---|---|
| BOOY 82 | 1 | 5/22/91 | Gross Alpha | 8 ± 4 |
| | | | Gross Beta | 17 ± 2 |
| | | | Total Uranium | <5 |
| | | | Gamma Scan: | |
| | | | $^{40}K$ | 10.4 ± 0.8 |
| | | | $^{137}Cs$ | <0.04 |
| | | | $^{226}Ra$ | 0.29 ± 0.06 |
| | | | $^{228}Th$ | 0.46 ± 0.05 |
| | | | $^{232}Th$ | 0.44 ± 0.18 |

9613491.2957



# CASE NARRATIVE

The soil sample as received was placed in an appropriate container for gamma counting.

Total Uranium was determined on an aliquot of the dissolved sample. Results re reported as pCi/gram sample.

# CASE NARRATIVE

The sample was deposited on a stainless steel planchet for gross alpha and beta determinations.

The soil sample, as received, was placed in an appropriate container for gamma counting.

Total uranium was determined on an aliquot of the dissolved sample.

The results are reported as pCi/gram sample.

9613491.2959

Westinghouse Hanford Company

# CHAIN OF CUSTODY

12

Custody Form Initiator: C.E. Heiden

Company Contact: Ron Mitchell  Telephone: 376-5122

Project Designation/Sampling Locations: 618-9 Burial Ground Trench  Collection Date: 5/28/91

Ice Chest No.: RM # 38  Field Logbook No.: WHC-N-461

Bill of Lading/Airbill No.: 247424957 T  Offsite Property No.: W91 0 0372 #1

Method of Shipment: Emery

Shipped to: Thermo Analytical, Inc. Richmond, CA

Possible Sample Hazards/Remarks: N/A

Sample Identification

B00YB7 - Soil (2) 120 ml glass jars
(2) 250 ml glass jars
(2) 250 ml plastic jars

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

| Relinquished by: | Received by: | Date/Time: |
|---|---|---|
| C.E. Heiden<br>C.E. Heiden | J. DeMarest<br>J. DeMarest | 5/30/91 1300 |
| J. DeMarest<br>J. DeMarest | Kermit Blum | 5-31-91 1307 |
| | | |
| | | |

Final Sample Disposition

| Disposal Method: | Disposed by: | Date/Time: |
|---|---|---|

Comments:

A-6000-407 (12/90)

9613491.2960

| Contractor | OFF-SITE PROPERTY CONTROL | CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) |
|---|---|---|
| Westinghouse Hanford Co. | | [illegible] |

**PART I – TO BE COMPLETED BY ORIGINATOR**

| Department | Section | Unit |
|---|---|---|
| Env. Engineering | Technical Baseline | |

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Every ☒ Contractor ☐ Vendor

| Shipped to | Off-site Custodian |
|---|---|
| Thermo Analytical, Inc.<br>2030 Wright Ave.<br>Richmond, CA 94804 | Attn: Robert Fox |
| | Full Title<br>Project Coordinator |

| Quantity | Description (Include Serial and any Government Tag Numbers) | Original Cost |
|---|---|---|
| 1 | Poly Ice Chest<br>- Glass jars of soil packed in vermiculite and blueice.<br>- Samples. [illegible] | |

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Program is not available on site.
Still at Laboratory [illegible]

*CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.*

| RM Clearance for Public Release | RM Survey No | Date |
|---|---|---|
| | | |

| Location of Property (Area & Bldg) | Contact | Phone |
|---|---|---|
| 618-9 Burial Ground | Ron Mitchell | (505) 376-5122 |

| Date Ready for Shipment | Cost Code to be Charged | Approximate Date This Property will be Returned |
|---|---|---|
| [illegible] | EN52E | |

| Originated By | Date | Authorized By | Date |
|---|---|---|---|
| Ron Mitchell | [illegible] | [illegible] | |

| Signature and Name of Property Control | Custodian Date | Property Management Approval | Date |
|---|---|---|---|
| | | [illegible] | 5/Sep/[illegible] |

**PART II – TO BE COMPLETED BY SHIPPING**

| Signature of Recipient | Return Order No | Date Issued | Purchase Order No. | Date Issued |
|---|---|---|---|---|
| [illegible] | | | | |
| Date [illegible] | | | | |

**DISTRIBUTION**

| By Originator | Shipping Operation – Sign all Copies and Forward to: | |
|---|---|---|
| White, Green, Yellow, Pink – Property Management<br>Goldenrod – Retain | White – Property Management<br>Yellow – Retain | Green – Property Control Custodian (Issuing Office)<br>Pink – Originator |

54 3000-479 (09/89)

9613491.2961

14

Westinghouse Hanford Company

# SAMPLE ANALYSIS REQUEST

## PART I: FIELD SECTION

Collector C. Kramer Date Sampled 5/28/91 Time 0910 hours

Company Contact Ron Mitchell. Telephone (509) 376-5122

| Sample Number | Number and Type of Sample Containers | Type of Sample* | Analysis Requested |
|---|---|---|---|
| B00YB7 | (2) 120 ml glass jar | Soil | VOA's (CLP) (2) 120ml glass jars |
| | (2) 250 ml glass jar | | Semivolatiles (CLP) (1) 250 ml glass jar |
| | (2) 250 ml plastic jar | | Metals (CLP) } |
| | | | PCB's (CLP) } (1) 250 ml glass jar |
| | | | Gamma Scan } |
| | | | Total Uranium } (2) 250 ml plastic jars |
| | | | *Isotopic Uranium } |
| | | | |
| | *Isotopic Uranium is only to be completed when the total uranium analysis results are greater than detection limits. | | |

Field Information** —

Special Handling and/or Storage —

Possible Sample Hazards N/A

## PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90

9613491.2962

15

Westinghouse Hanford Company

# SAMPLE ANALYSIS REQUEST

## PART I: FIELD SECTION

Collector Lucas Date Sampled 5/22/91 Time ____ hours

Company Contact Ron Mitchell. Telephone (506) 376-5122

| Sample Number | Number and Type of Sample Containers | Type of Sample* | Analysis Requested |
|---|---|---|---|
| B00Y82 | (2) 120 ml glass jar | Soil | VOA's (CLP) (2) 120 ml glass jars |
| | (2) 250 ml glass jar | | Semivolatiles (CLP) (1) 250 ml glass jar |
| | (2) 250 ml plastic jar | | Metals (CLP) } |
| | | | PCBs (CLP) } (1) 250 ml glass jar |
| | | | Gamma Scan } |
| | | | Total Uranium } (2) 250 ml plastic jars |
| | | | *Isotopic Uranium } |
| | *Isotopic Uranium is only to be completed when the total uranium analysis results are greater than detection limits. | | |

Field Information** ____

Special Handling and/or Storage ____

Possible Sample Hazards N/A

## PART II: LABORATORY SECTION

Received by ____ Title ____ Date ____

Analysis Required ____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9613491.2963

| Westinghouse Hanford Company | CHAIN OF CUSTODY | 16 |
|---|---|---|

Custody Form Initiator C.E. Heiden

Company Contact Ron Mitchell Telephone 376-5122

Project Designation/Sampling Locations 618-9 Burial Ground Trench Collection Date 5/22/91

Ice Chest No. #36 Field Logbook No. —

Bill of Lading/Airbill No. 247424947 0 Offsite Property No. W91-0372

Method of Shipment Emery

Shipped to Thermo Analytical, Inc. Richmond, CA

Possible Sample Hazards/Remarks N/A

Sample Identification

B00Y82-Soil (2) 120ml glass jars
(2) 250ml glass jars
(2) 250 plastic jars

☐ Field Transfer of Custody

| CHAIN OF POSSESSION | | (Sign and Print Names) |
|---|---|---|
| Relinquished by: C.E. Heiden C.E. Heiden | Received by: J. Demarest J. Demarest | Date/Time: 5/23/91 1315 |
| Relinquished by: J. DEMAREST J. Demarest | Received by: Kermit Blum | Date/Time: 28 May, 1991 1500 |
| Relinquished by: | Received by: | Date/Time: |
| Relinquished by: | Received by: | Date/Time: |

Final Sample Disposition

| Disposal Method: | Disposed by: | Date/Time: |
|---|---|---|

Comments:

A-6000-407 (12/90)

9613491.2964

| Contractor | OFF-SITE PROPERTY CONTROL | CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) |
|---|---|---|
| Westinghouse Hanford Co. | | [illegible] |

**PART I – TO BE COMPLETED BY ORIGINATOR**

| Department Env Engineering | Section Technical Baseline | Unit |
|---|---|---|

**The following items are to be shipped from** ☒ Contractor ☐ Vendor

**Routing** [illegible] ☐ Contractor ☐ Vendor

| Shipped to | Off-site Custodian |
|---|---|
| Chemie Analytical, Inc.<br>[illegible] Wright Ave.<br>[illegible] CA 9460[illegible] | Attn: Robert Fox |
| | Full Title<br>Project Coordinator |

| Quantity | Description (Include Serial and any Government Tag Numbers) | Original Cost |
|---|---|---|
| 1 | Dry Ice Chest.<br>- Glass jars of soil packed in vermiculite and dry ice.<br>- Sample [illegible] | |

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Project to be [illegible]

[illegible]

*CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.*

| RM Clearance for Public Release | RM Survey No | Date |
|---|---|---|
| Location of Property (Area & Bldg) [illegible] | Contact [illegible] | Phone (509) 373-[illegible] |
| Date Ready for Shipment [illegible] | Cost Code to be Charged [illegible] | Approximate Date This Property will be Returned |
| Originated By [illegible] | Date [illegible] | Authorized By [illegible] / Date |
| Signature and Name of Property Control | Custodian Date | Property Management Approval / Date |

**PART II – TO BE COMPLETED BY SHIPPING**

| Signature of Recipient | Return Order No | Date Issued | Purchase Order No. | Date Issued |
|---|---|---|---|---|
| Date | | | | |

**DISTRIBUTION**

| By Originator | Shipping Operation – Sign all Copies and Forward to: |
|---|---|
| White, Green, Yellow, Pink – Property Management<br>Goldenrod – Retain | White – Property Management<br>Yellow – Retain<br>Green – Property Control Custodian (Issuing Office)<br>Pink – Originator |

54 3000-479 (09-89)

9613491.2965

JFL

**TMA**
**Thermo Analytical Inc.**

**TMA/Norcal**
2030 Wright Avenue
P.O. Box 4040
Richmond, CA 94804-0040
(415) 235-2633 Fax No. (415) 235-0438

July 9, 1991

Ref. TMA/Norcal N1-05-256-6401

Mr. Dennis Wells
TMA/ARLI
160 Taylor Street
Monrovia, CA 91016

Dear Dennis:

Enclosed in Section 1, Attachment 1, are the total uranium, gamma spectroscopy, and gross alpha, beta results for the soil sample we received 24 May 1991. Please forward these to Westinghouse-Hanford.

Call me if you have any questions concerning this data.

Sincerely,

D.P. Kharkar

Dinkar P. Kharkar, Ph.D.
Manager, Nuclear Programs

DPK/ss

Enclosures: Sections 1 through 9

9613491.2966

DPK

**TMA**
**Thermo Analytical Inc.**

**TMA/Norcal**
2030 Wright Avenue
P.O. Box 4040
Richmond, CA 94804-0040

(415) 235-2633 Fax No. (415) 235-0438

July 9, 1991

Ref. TMA/Norcal N1-05-298-9501

Mr. Dennis Wells
TMA/ARLI
160 Taylor Street
Monrovia, CA 91016

Dear Dennis:

Enclosed in Section 1, Attachment 1, are the total uranium and gamma spectroscopy results for the soil sample we received 31 May 1991. Please forward these to Westinghouse-Hanford.

Please call if you have any questions concerning this data.

Sincerely,

D.P. Kharkar

Dinkar P. Kharkar, Ph.D.
Manager, Nuclear Programs

Sections 1 through 8

9613491.2967

Westinghouse
Hanford Company

# OSM ORGANIC DATA ASSESSMENT

DATE 7-23-91

REVIEWED BY CJ Simuel

LABORATORY TMA

CASE # 06-007S

SDG # 06-007

SAMPLES/MATRIX B00Y82-Soils

B00Y87

## DATA ASSESSMENT SUMMARY

| | VOA | ABN | ~~PEST~~/PCB |
|---|---|---|---|
| 1. Holding Times (Form I) | O | O | O |
| 2. Surrogate Recovery (II) | O | O | O |
| 3. Matrix Spike/ MSD (III) | O | X | O |
| 4. Blanks (IV) | O | X | O |
| 5. GC/MS Tune (V) | O | O | |
| 6. Calibration (VI-VII; VIII pest) | O | O | O |
| 7. Internal Standards (VIII) | O | O | |
| 8. Instr. Perform. (IX pest) | | | O |
| 9. Other ( ) | N/A | N/A | N/A |

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems, some data may be unusable

OVERALL ASSESSMENT: _____

NOTES : _____

Refer to the corresponding attachments for explanation of any problems.

9613491.2968

T

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R07

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 Date Analyzed: 06/04/91

Column: (pack/cap) PACK Dilution Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 50 | |
| 67-64-1 | Acetone | 34 | |
| 75-15-0 | Carbon Disulfide | 5 | U |
| 75-35-4 | 1,1-Dichloroethene | 5 | U |
| 75-34-3 | 1,1-Dichloroethane | 5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5 | U |
| 67-66-3 | Chloroform | 5 | U |
| 107-06-2 | 1,2-Dichloroethane | 5 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5 | U |
| 56-23-5 | Carbon Tetrachloride | 5 | U |
| 108-05-4 | Vinyl Acetate | 10 | U |
| 75-27-4 | Bromodichloromethane | 5 | U |
| 78-87-5 | 1,2-Dichloropropane | 5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5 | U |
| 79-01-6 | Trichloroethene | 5 | U |
| 124-48-1 | Dibromochloromethane | 5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5 | U |
| 71-43-2 | Benzene | 5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5 | U |
| 75-25-2 | Bromoform | 5 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5 | U |
| 108-88-3 | Toluene | 5 | U |
| 108-90-7 | Chlorobenzene | 5 | U |
| 100-41-4 | Ethylbenzene | 5 | U |
| 100-42-5 | Styrene | 5 | U |
| 1330-20-7 | Xylenes (total) | 5 | U |

T

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R07

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 Date Analyzed: 06/04/91

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

T

1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R08

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 Date Analyzed: 06/04/91

Column: (pack/cap) PACK Dilution Factor: 1.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 10 | U |
| 74-83-9 | Bromomethane | 10 | U |
| 75-01-4 | Vinyl Chloride | 10 | U |
| 75-00-3 | Chloroethane | 10 | U |
| 75-09-2 | Methylene Chloride | 17 | |
| 67-64-1 | Acetone | 64 | |
| 75-15-0 | Carbon Disulfide | 5 | U |
| 75-35-4 | 1,1-Dichloroethene | 5 | U |
| 75-34-3 | 1,1-Dichloroethane | 5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 5 | U |
| 67-66-3 | Chloroform | 5 | U |
| 107-06-2 | 1,2-Dichloroethane | 5 | U |
| 78-93-3 | 2-Butanone | 10 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5 | U |
| 56-23-5 | Carbon Tetrachloride | 5 | U |
| 108-05-4 | Vinyl Acetate | 10 | U |
| 75-27-4 | Bromodichloromethane | 5 | U |
| 78-87-5 | 1,2-Dichloropropane | 5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5 | U |
| 79-01-6 | Trichloroethene | 5 | U |
| 124-48-1 | Dibromochloromethane | 5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5 | U |
| 71-43-2 | Benzene | 5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5 | U |
| 75-25-2 | Bromoform | 5 | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 10 | U |
| 591-78-6 | 2-Hexanone | 10 | U |
| 127-18-4 | Tetrachloroethene | 5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5 | U |
| 108-88-3 | Toluene | 9 | |
| 108-90-7 | Chlorobenzene | 5 | U |
| 100-41-4 | Ethylbenzene | 5 | U |
| 100-42-5 | Styrene | 5 | U |
| 1330-20-7 | Xylenes (total) | 5 | U |

9613491.2971

T

1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B00Y87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007V SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 604R08

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 Date Analyzed: 06/04/91

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 31 | U |
| 62-53-3 | Aniline | 31 | U |
| 111-44-4 | bis(2-Chloroethyl)Ether | 31 | U |
| 95-57-8 | 2-Chlorophenol | 31 | U |
| 541-73-1 | 1,3%Dichlorobenzene | 31 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 31 | U |
| 100-51-6 | Benzyl Alcohol | 31 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 31 | U |
| 95-48-7 | 2-Methylphenol | 31 | U |
| 108-60-1 | bis(2-Chloroisopropyl)Ether | 31 | U |
| 106-44-5 | 4-Methylphenol | 31 | U |
| 621-64-7 | N-Nitroso-Di-n-Propylamine | 31 | U |
| 67-72-1 | Hexachloroethane | 31 | U |
| 98-95-3 | Nitrobenzene | 31 | U |
| 78-59-1 | Isophorone | 31 | U |
| 88-75-5 | 2-Nitrophenol | 31 | U |
| 105-67-9 | 2,4-Dimethylphenol | 31 | U |
| 65-85-0 | Benzoic Acid | 210 | U |
| 111-91-1 | bis(2-Chloroethoxy)Methane | 31 | U |
| 120-83-2 | 2,4-Dichlorophenol | 31 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 31 | U |
| 91-20-3 | Naphthalene | 31 | U |
| 106-47-8 | 4-Chloroaniline | 31 | U |
| 87-68-3 | Hexachlorobutadiene | 31 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 31 | U |
| 91-57-6 | 2-Methylnaphthalene | 31 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 31 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 31 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 31 | U |
| 91-58-7 | 2-Chloronaphthalene | 31 | U |
| 88-74-4 | 2-Nitroaniline | 210 | U |
| 131-11-3 | Dimethyl Phthalate | 31 | U |
| 208-96-8 | Acenaphthylene | 31 | U |

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. ____ Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q | |
|---|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 210 | U | |
| 83-32-9 | Acenaphthene | 31 | U | |
| 51-28-5 | 2,4-Dinitrophenol | 210 | U | |
| 100-02-7 | 4-Nitrophenol | 210 | U | |
| 132-64-9 | Dibenzofuran | 31 | U | |
| 121-14-2 | 2,4-Dinitrotoluene | 31 | U | |
| 606-20-2 | 2,6-Dinitrotoluene | 31 | U | |
| 84-66-2 | Diethylphthalate | 31 | U | |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 31 | U | |
| 86-73-7 | Fluorene | 31 | U | |
| 100-01-6 | 4-Nitroaniline | 210 | U | |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 210 | U | |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 31 | U | |
| 101-55-3 | 4-Bromophenyl-phenylether | 31 | U | |
| 118-74-1 | Hexachlorobenzene | 31 | U | |
| 87-86-5 | Pentachlorophenol | 210 | U | |
| 85-01-8 | Phenanthrene | 31 | U | |
| 120-12-7 | Anthracene | 31 | U | |
| 84-74-2 | Di-n-Butylphthalate | 1400 | B u | 7-23 |
| 206-44-0 | Fluoranthene | 31 | U | |
| 129-00-0 | Pyrene | 31 | U | |
| 85-68-7 | Butylbenzylphthalate | 31 | U | |
| 91-94-1 | 3,3'-Dichlorobenzidine | 62 | U | |
| 56-55-3 | Benzo(a)anthracene | 31 | U | |
| 117-81-7 | bis(2-Ethylhexyl)Phthalate | 36 | B u | 7-23 |
| 218-01-9 | Chrysene | 31 | U | |
| 117-84-0 | Di-n-Octyl Phthalate | 31 | U | |
| 205-99-2 | Benzo(b)fluoranthene | 31 | U | |
| 207-08-9 | Benzo(k)fluoranthene | 31 | U | |
| 50-32-8 | Benzo(a)pyrene | 31 | U | |
| 193-39-5 | Indeno(1,2,3-cd)Pyrene | 31 | U | |
| 53-70-3 | Dibenz(a,h)Anthracene | 31 | U | |
| 191-24-2 | Benzo(g,h,i)perylene | 31 | U | |

(1) - Cannot be separated from Diphenylamine

9613491.2974

1F

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A04

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 3 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN HYDROCARBON | 2.23 | 1000 | ~~J~~ U |
| 2. | UNKNOWN ALKANE | 2.33 | 650 | ~~J~~ U |
| 3. | UNKNOWN HYDROCARBON | 2.92 | 190000 | ~~J~~ U |
| 4. | UNKNOWN HYDROCARBON | 3.00 | 6100 | J |
| 5. 2216-34-4 | OCTANE, 4-METHYL- | 3.12 | 5100 | J |
| 6. 2216-33-3 | OCTANE, 3-METHYL- | 3.25 | 3600 | ~~BJ~~ U |
| 7. | UNKNOWN HYDROCARBON | 4.27 | 4200 | ~~J~~ U |
| 8. | UNKNOWN KETONE | 4.63 | 1200 | J |
| 9. 124-18-5 | DECANE | 5.75 | 1500 | J |
| 10. | UNKNOWN ALKANE | 6.25 | 720 | J |
| 11. | UNKNOWN KETONE | 6.80 | 650 | J |
| 12. | UNKNOWN KETONE | 7.15 | 1800 | J |
| 13. | UNKNOWN ALKANE | 12.24 | 550 | J |
| 14. | UNKNOWN ALKANE | 12.65 | 450 | J |
| 15. | UNKNOWN HYDROCARBON | 13.64 | 410 | J |
| 16. | UNKNOWN ALKANE | 13.80 | 480 | J |
| 17. | UNKNOWN ALKANE | 14.25 | 790 | J |
| 18. | UNKNOWN HYDROCARBON | 14.60 | 690 | J |
| 19. | UNKNOWN ALKANE | 15.45 | 450 | J |
| 20. | UNKNOWN HYDROCARBON | 25.37 | 550 | J |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 30 | U |
| 62-53-3 | Aniline | 30 | U |
| 111-44-4 | bis(2-Chloroethyl)Ether | 30 | U |
| 95-57-8 | 2-Chlorophenol | 30 | U |
| 541-73-1 | 1,3%Dichlorobenzene | 30 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 30 | U |
| 100-51-6 | Benzyl Alcohol | 30 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 30 | U |
| 95-48-7 | 2-Methylphenol | 30 | U |
| 108-60-1 | bis(2-Chloroisopropyl)Ether | 30 | U |
| 106-44-5 | 4-Methylphenol | 30 | U |
| 621-64-7 | N-Nitroso-Di-n-Propylamine | 30 | U |
| 67-72-1 | Hexachloroethane | 30 | U |
| 98-95-3 | Nitrobenzene | 30 | U |
| 78-59-1 | Isophorone | 30 | U |
| 88-75-5 | 2-Nitrophenol | 30 | U |
| 105-67-9 | 2,4-Dimethylphenol | 30 | U |
| 65-85-0 | Benzoic Acid | 200 | U |
| 111-91-1 | bis(2-Chloroethoxy)Methane | 30 | U |
| 120-83-2 | 2,4-Dichlorophenol | 30 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 30 | U |
| 91-20-3 | Naphthalene | 30 | U |
| 106-47-8 | 4-Chloroaniline | 30 | U |
| 87-68-3 | Hexachlorobutadiene | 150 | |
| 59-50-7 | 4-Chloro-3-methylphenol | 30 | U |
| 91-57-6 | 2-Methylnaphthalene | 30 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 30 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 30 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 30 | U |
| 91-58-7 | 2-Chloronaphthalene | 30 | U |
| 88-74-4 | 2-Nitroaniline | 200 | U |
| 131-11-3 | Dimethyl Phthalate | 30 | U |
| 208-96-8 | Acenaphthylene | 30 | U |

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. ____ Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 200 | U |
| 83-32-9 | Acenaphthene | 30 | U |
| 51-28-5 | 2,4-Dinitrophenol | 200 | U |
| 100-02-7 | 4-Nitrophenol | 200 | U |
| 132-64-9 | Dibenzofuran | 30 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 30 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 30 | U |
| 84-66-2 | Diethylphthalate | 30 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 30 | U |
| 86-73-7 | Fluorene | 30 | U |
| 100-01-6 | 4-Nitroaniline | 200 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 200 | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 30 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 30 | U |
| 118-74-1 | Hexachlorobenzene | 30 | U |
| 87-86-5 | Pentachlorophenol | 200 | U |
| 85-01-8 | Phenanthrene | 30 | U |
| 120-12-7 | Anthracene | 30 | U |
| 84-74-2 | Di-n-Butylphthalate | 1100 | B |
| 206-44-0 | Fluoranthene | 30 | U |
| 129-00-0 | Pyrene | 30 | U |
| 85-68-7 | Butylbenzylphthalate | 30 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 61 | U |
| 56-55-3 | Benzo(a)anthracene | 30 | U |
| 117-81-7 | bis(2-Ethylhexyl)Phthalate | 54 | B |
| 218-01-9 | Chrysene | 30 | U |
| 117-84-0 | Di-n-Octyl Phthalate | 30 | U |
| 205-99-2 | Benzo(b)fluoranthene | 30 | U |
| 207-08-9 | Benzo(k)fluoranthene | 30 | U |
| 50-32-8 | Benzo(a)pyrene | 30 | U |
| 193-39-5 | Indeno(1,2,3-cd)Pyrene | 30 | U |
| 53-70-3 | Dibenz(a,h)Anthracene | 30 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 30 | U |

7-23
WSU

(1) - Cannot be separated from Diphenylamine

9613491.2977

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007S SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0617A05

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. Date Extracted: 06/06/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/17/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

Number TICs found: 20

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN HYDROCARBON | 2.97 | 190000 | ~~J~~ U |
| 2. | UNKNOWN ALKANE | 3.13 | 980 | J |
| 3. | UNKNOWN ALKANE | 3.25 | 870 | J |
| 4. | UNKNOWN KETONE | 4.70 | 3600 | J |
| 5. | UNKNOWN HYDROCARBON | 5.60 | 2600 | J |
| 6. | UNKNOWN HYDROCARBON | 6.07 | 770 | J |
| 7. | UNKNOWN HYDROCARBON | 6.13 | 710 | J |
| 8. | UNKNOWN ALKANE | 13.80 | 400 | J |
| 9. | UNKNOWN HYDROCARBON | 17.34 | 500 | ~~J~~ U |
| 10. | UNKNOWN | 19.25 | 170000 | J |
| 11. | UNKNOWN HYDROCARBON | 21.10 | 570 | J |
| 12. | UNKNOWN HYDROCARBON | 21.95 | 67000 | J |
| 13. | UNKNOWN HYDROCARBON | 23.00 | 8700 | J |
| 14. | UNKNOWN HYDROCARBON | 23.40 | 440 | J |
| 15. | UNKNOWN HYDROCARBON | 23.65 | 670 | J |
| 16. | UNKNOWN HYDROCARBON | 24.05 | 2500 | J |
| 17. | UNKNOWN HYDROCARBON | 24.44 | 3500 | J |
| 18. | UNKNOWN HYDROCARBON | 25.61 | 1100 | J |
| 19. | UNKNOWN CARBOXYLIC ACID | 26.81 | 370 | J |
| 20. | UNKNOWN HYDROCARBON | 34.41 | 1300 | J |

9613491.2978

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY82

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-01CR

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

Level: (low/med) LOW Date Received: 05/31/91

% Moisture: not dec. 3 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 8.2 | U |
| 319-85-7 | beta-BHC | 8.2 | U |
| 319-86-8 | delta-BHC | 8.2 | U |
| 58-89-9 | gamma-BHC (Lindane) | 8.2 | U |
| 76-44-8 | Heptachlor | 8.2 | U |
| 309-00-2 | Aldrin | 8.2 | U |
| 1024-57-3 | Heptachlor epoxide | 8.2 | U |
| 959-98-8 | Endosulfan I | 8.2 | U |
| 60-57-1 | Dieldrin | 16 | U |
| 72-55-9 | 4,4'-DDE | 16 | U |
| 72-20-8 | Endrin | 16 | U |
| 33213-65-9 | Endosulfan II | 16 | U |
| 72-54-8 | 4,4'-DDD | 16 | U |
| 1031-07-8 | Endosulfan sulfate | 16 | U |
| 50-29-3 | 4,4'-DDT | 16 | U |
| 72-43-5 | Methoxychlor | 82 | U |
| 53494-70-5 | Endrin ketone | 16 | U |
| 5103-71-9 | alpha-Chlordane | 82 | U |
| 5103-74-2 | gamma-Chlordane | 82 | U |
| 8001-35-2 | Toxaphene | 160 | U |
| 12674-11-2 | Aroclor-1016 | 82 | U |
| 11104-28-2 | Aroclor-1221 | 82 | U |
| 11141-16-5 | Aroclor-1232 | 82 | U |
| 53469-21-9 | Aroclor-1242 | 82 | U |
| 12672-29-6 | Aroclor-1248 | 82 | U |
| 11097-69-1 | Aroclor-1254 | 160 | U |
| 11096-82-5 | Aroclor-1260 | 160 | U |

9613491.2979

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02C

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 8.1 | U |
| 319-85-7 | beta-BHC | 8.1 | U |
| 319-86-8 | delta-BHC | 8.1 | U |
| 58-89-9 | gamma-BHC (Lindane) | 8.1 | U |
| 76-44-8 | Heptachlor | 8.1 | U |
| 309-00-2 | Aldrin | 390 | |
| 1024-57-3 | Heptachlor epoxide | 44 | |
| 959-98-8 | Endosulfan I | 8.1 | U |
| 60-57-1 | Dieldrin | 16 | U |
| 72-55-9 | 4,4'-DDE | 16 | U |
| 72-20-8 | Endrin | 16 | U |
| 33213-65-9 | Endosulfan II | 16 | U |
| 72-54-8 | 4,4'-DDD | 16 | U |
| 1031-07-8 | Endosulfan sulfate | 16 | U |
| 50-29-3 | 4,4'-DDT | 16 | U |
| 72-43-5 | Methoxychlor | 81 | U |
| 53494-70-5 | Endrin ketone | 16 | U |
| 5103-71-9 | alpha-Chlordane | 81 | U |
| 5103-74-2 | gamma-Chlordane | 69 | JX |
| 8001-35-2 | Toxaphene | 160 | U |
| 12674-11-2 | Aroclor-1016 | 81 | U |
| 11104-28-2 | Aroclor-1221 | 81 | U |
| 11141-16-5 | Aroclor-1232 | 81 | U |
| 53469-21-9 | Aroclor-1242 | 81 | U |
| 12672-29-6 | Aroclor-1248 | 81 | U |
| 11097-69-1 | Aroclor-1254 | 160 | U |
| 11096-82-5 | Aroclor-1260 | 160 | U |

9613491.2980

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87DL5

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02CD

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/06/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 5.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 40 | U |
| 319-85-7 | beta-BHC | 40 | U |
| 319-86-8 | delta-BHC | 40 | U |
| 58-89-9 | gamma-BHC (Lindane) | 40 | U |
| 76-44-8 | Heptachlor | 40 | U |
| 309-00-2 | Aldrin | 740 | D |
| 1024-57-3 | Heptachlor epoxide | 42 | D |
| 959-98-8 | Endosulfan I | 40 | U |
| 60-57-1 | Dieldrin | 81 | U |
| 72-55-9 | 4,4'-DDE | 81 | U |
| 72-20-8 | Endrin | 81 | U |
| 33213-65-9 | Endosulfan II | 81 | U |
| 72-54-8 | 4,4'-DDD | 81 | U |
| 1031-07-8 | Endosulfan sulfate | 81 | U |
| 50-29-3 | 4,4'-DDT | 81 | U |
| 72-43-5 | Methoxychlor | 400 | U |
| 53494-70-5 | Endrin ketone | 81 | U |
| 5103-71-9 | alpha-Chlordane | 400 | U |
| 5103-74-2 | gamma-Chlordane | 53 | DJX |
| 8001-35-2 | Toxaphene | 810 | U |
| 12674-11-2 | Aroclor-1016 | 400 | U |
| 11104-28-2 | Aroclor-1221 | 400 | U |
| 11141-16-5 | Aroclor-1232 | 400 | U |
| 53469-21-9 | Aroclor-1242 | 400 | U |
| 12672-29-6 | Aroclor-1248 | 400 | U |
| 11097-69-1 | Aroclor-1254 | 810 | U |
| 11096-82-5 | Aroclor-1260 | 810 | U |

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOOY87DL10

Lab Name: TMA/ARLI Contract: WESTINGHOUS

Lab Code: TMALA Case No.: 06007P SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A106007-02CD

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

Level: (low/med) LOW Date Received: 06/04/91

% Moisture: not dec. 1 dec. __ Date Extracted: 06/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/07/91

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 10.0

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 81 | U |
| 319-85-7 | beta-BHC | 81 | U |
| 319-86-8 | delta-BHC | 81 | U |
| 58-89-9 | gamma-BHC (Lindane) | 81 | U |
| 76-44-8 | Heptachlor | 81 | U |
| 309-00-2 | Aldrin | 770 | DX |
| 1024-57-3 | Heptachlor epoxide | 40 | DJX |
| 959-98-8 | Endosulfan I | 81 | U |
| 60-57-1 | Dieldrin | 160 | U |
| 72-55-9 | 4,4'-DDE | 160 | U |
| 72-20-8 | Endrin | 160 | U |
| 33213-65-9 | Endosulfan II | 160 | U |
| 72-54-8 | 4,4'-DDD | 160 | U |
| 1031-07-8 | Endosulfan sulfate | 160 | U |
| 50-29-3 | 4,4'-DDT | 160 | U |
| 72-43-5 | Methoxychlor | 810 | U |
| 53494-70-5 | Endrin ketone | 160 | U |
| 5103-71-9 | alpha-Chlordane | 810 | U |
| 5103-74-2 | gamma-Chlordane | 52 | DJX |
| 8001-35-2 | Toxaphene | 1600 | U |
| 12674-11-2 | Aroclor-1016 | 810 | U |
| 11104-28-2 | Aroclor-1221 | 810 | U |
| 11141-16-5 | Aroclor-1232 | 810 | U |
| 53469-21-9 | Aroclor-1242 | 810 | U |
| 12672-29-6 | Aroclor-1248 | 810 | U |
| 11097-69-1 | Aroclor-1254 | 1600 | U |
| 11096-82-5 | Aroclor-1260 | 1600 | U |

9613491.2982

# ORGANIC QC - Holding Times

Name CJ Simiele Date 7-23-91

COMMENTS: VOA (hold time 14days) analysis performed seven days after sampling.
BNA-(extract-7days; analysis-40days from extract) extraction performed 7days after sampling, analysis 11days after extraction
PEST/PCB- extraction performed 7days after sampling, analysis performed one day after extraction

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

# ORGANIC QC - Surrogate Recovery

Name CJ Simiele Date 7-23-91

COMMENTS: VOA- all surrogate recoveries are within required control limits.
BNA- all surrogate recoveries are within required control limits
PEST/PCB- all surrogate recoveries are within required control limits

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2984

## ORGANIC QC - MS/MSD

Name CJ Simiele Date 7-23-91

COMMENTS: All VOA & Pest/PCB matrix spike % recoveries and % RPD's are within required control limits. BNA - two MS and MSD % recoveries were not detected due to sample matrix.

ACTION: None - other data will be reviewed to determine if MS % recovery represents a true data problem.

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

# ORGANIC QC - Blanks

Name CJ Samuels Date 7-23-91

COMMENTS: VOA- no contaminants detected in blank, blank analysis frequency met
BNA- Common lab contaminants detected in blank (Di-n-Butylphthalate (2000 ug/kg) and bis (2-Ethylhexyl) phalate
Blank frequency met. Qualify TIC's detected in blanks as U. (37 ug/kg
Pest/PCB- no contaminants detected in blank, blank analysis frequency met.

ACTION: Qualify associated samples as per OSM guidelines.

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| B00Y82 | Di-n-Butylphthalate | 1400 u | | | |
| ↓ | bis(2-Ethylhexyl) Phthalate | 36 u | | | |
| B00Y87 | Di-n-Butylphthalate | 1100 u | | | |
| ↓ | bis(2-Ethylhexyl) Phthalate | 54 u | | | |

9613491.2986

# ORGANIC QC - GC/MS Tune

Name CJ Simiele Date 7-23-91

COMMENTS: VOA-BFB and BNA-DFTPP % relative abundance are within required control limits. Tune frequency met for VOA's and BNA.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

# ORGANIC QC - Calibrations

Name CJ Simiele Date 7-23-91

COMMENTS: VOA- initial and continuing calibration are within required control limits, calibration frequency met.
BNA- initial calibration ~~has 3 RRF's out of control limits~~ & continuing calibration are within required control limits, calibration frequency met. KAS 7-23-
Pest/PCB- all initial calibration %RSD are within required control limits, analytical sequence met, continuing calibration %D within control limits, with the exception of 1 TMA, which is not at the begining of the run.

ACTION: Action: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

## ORGANIC QC - Internal Standards

Name CJ Simiele Date 7-23-91

COMMENTS: All VOA, BNA, ~~and Pest/PCB~~ CJS 7-23-91 internal standard area counts and retention times are within required control limits.

ACTION: None.

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2989

## ORGANIC QC - Instrument Performance (pest)

Name CJ Simiele Date 7-23-91

COMMENTS: All DDT retention times are >12 minutes and are within control limits. Endrin & DDT %Breakdown limits were not exceeded. All samples within SAG had RT shift within required control limits

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2990

# ORGANIC QC - Other

Name CJ Simiele Date 7-23-91

COMMENTS: None

ACTION: N/A

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2991

Westinghouse
Hanford Company

# OSM INORGANIC DATA ASSESSMENT

DATE 7-23-91 SAMPLES/MATRIX B00Y-82-SOLIS

REVIEWED BY CJ Simuel B00Y87

LABORATORY TMA

CASE # 06-0075

SDG # 06-0075

## DATA ASSESSMENT SUMMARY

| | ICP | AA | Hg | CN |
|---|---|---|---|---|
| 1. Calibrations (Form II) | O | | | |
| 2. Blanks (III) | O | | | |
| 3. ICS (IV) | O | | | |
| 4. Matrix Spike (V) | O | | | |
| 5. Duplicate Analysis (VI) | O | | | |
| 6. LCS (VII) | O | | | |
| 7. Serial Dilution (IX) | O | | | |
| 8. GFAA | | | | |
| 9. Holding Times (XIV) | O | | | |
| 10. Other QC | N/A | | | |

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: Good, no QC problems with data.

NOTES:

o Refer to the corresponding attachments for explanation of any problems.

9613491.2992

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B00Y82

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D9-0088

Lab Code: SKINER Case No.: 618-9 SAS No.: SDG No.: B00Y82

Matrix (soil/water): SOIL Lab Sample ID: D6016-02S

Level (low/med): LOW Date Received: 06/04/91

% Solids: 95.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6140.00 | | | P |
| 7440-36-0 | Antimony | 3.40 | U | N | P |
| 7440-38-2 | Arsenic | | | | NR |
| 7440-39-3 | Barium | 64.40 | | | P |
| 7440-41-7 | Beryllium | 0.23 | B | | P |
| 7440-43-9 | Cadmium | 0.59 | U | | P |
| 7440-70-2 | Calcium | 3410.00 | | | P |
| 7440-47-3 | Chromium | 6.70 | | | P |
| 7440-48-4 | Cobalt | 9.30 | B | | P |
| 7440-50-8 | Copper | 11.20 | | | P |
| 7439-89-6 | Iron | 19100.00 | | | P |
| 7439-92-1 | Lead | | | | NR |
| 7439-95-4 | Magnesium | 3690.00 | | | P |
| 7439-96-5 | Manganese | 309.00 | | N | P |
| 7439-97-6 | Mercury | | | | NR |
| 7440-02-0 | Nickel | 8.30 | | | P |
| 7440-09-7 | Potassium | 1180.00 | | | P |
| 7782-49-2 | Selenium | | | | NR |
| 7440-22-4 | Silver | 0.99 | U | | P |
| 7440-23-5 | Sodium | 151.00 | B | | P |
| 7440-28-0 | Thallium | | | | NR |
| 7440-62-2 | Vanadium | 49.90 | | | P |
| 7440-66-6 | Zinc | 39.00 | | | P |
| | Cyanide | | | | NR |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

STONES

9613491.2993

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B00Y87

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D9-0088

Lab Code: SKINER Case No.: 618-9 SAS No.: SDG No.: B00Y82

Matrix (soil/water): SOIL Lab Sample ID: D6016-01S

Level (low/med): LOW Date Received: 06/04/91

% Solids: 98.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 8570.00 | | | P |
| 7440-36-0 | Antimony | 3.20 | U | N | P |
| 7440-38-2 | Arsenic | | | | NR |
| 7440-39-3 | Barium | 90.20 | | | P |
| 7440-41-7 | Beryllium | 0.33 | B | | P |
| 7440-43-9 | Cadmium | 0.57 | U | | P |
| 7440-70-2 | Calcium | 4170.00 | | | P |
| 7440-47-3 | Chromium | 9.70 | | | P |
| 7440-48-4 | Cobalt | 11.40 | | | P |
| 7440-50-8 | Copper | 16.70 | | | P |
| 7439-89-6 | Iron | 24900.00 | | | P |
| 7439-92-1 | Lead | | | | NR |
| 7439-95-4 | Magnesium | 4450.00 | | | P |
| 7439-96-5 | Manganese | 359.00 | | N | P |
| 7439-97-6 | Mercury | | | | NR |
| 7440-02-0 | Nickel | 10.60 | | | P |
| 7440-09-7 | Potassium | 1800.00 | | | P |
| 7782-49-2 | Selenium | | | | NR |
| 7440-22-4 | Silver | 0.95 | U | | P |
| 7440-23-5 | Sodium | 168.00 | B | | P |
| 7440-28-0 | Thallium | | | | NR |
| 7440-62-2 | Vanadium | 59.30 | | | P |
| 7440-66-6 | Zinc | 52.30 | | | P |
| | Cyanide | | | | NR |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:

STONES

9613491.2994

# INORGANIC QC - Calibrations

Name CJ Simiele Date 7-23-91

COMMENTS: Initial and continuing calibration % recoveries are all within required control limits. Calibration frequency was met.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

# INORGANIC QC - Blanks

Name CJ Simiele Date 7-23-91

COMMENTS: Contaminants detected in blanks for Al (27.8 ug/L), Ba (2.3 ug/L), Ca (10.95 mg/kg), Cu (2.17 mg/kg) Fe (9.06 mg/kg), Mg (29.3 ug/L), Mn (2.7 ug/L) & Na (7.96 mg/kg)

ACTION: Qualify all associated samples as per OSM guidelines - None all constituents have concentrations greater than 5x concentration in blank

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2996

# INORGANIC QC - ICS

Name CJ Simiele Date 7-23-91

COMMENTS: ICS % recoveries are within ±20% control limits. ICS analysis frequency requirements met.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2997

# INORGANIC QC - Matrix Spike

Name CJ Simiele Date 7-23-91

COMMENTS: matrix spike % recoveries are out of ±25% control limits for Sb (42%) and Mn (57%). Post digestion spikes for Sb & Mn are within ± 25% control limits.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2998

# INORGANIC QC - Duplicate Analysis

Name CJ Simiele Date 7-23-91

COMMENTS: Duplicate analysis RPD results are within ±20% control limits

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.2999

# INORGANIC QC - LCS

Name CJ Simpely Date 7-23-91

COMMENTS: LCS % recoveries are within ±20% Control Limits

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

# INORGANIC QC - Serial Dilution

Name CJ Simiele Date 7-23-91

COMMENTS: All % Differences are within the ±10% Control limits, for initial sample results greater than 50x the IDL.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

## INORGANIC QC - Holding Times

Name CJ Simiele Date 7-23-91

COMMENTS: Analysis was performed 27 days after sampling. ICP analysis holding time is 6 months.

ACTION: None

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

## INORGANIC QC - other

Name CJ Simiale Date 7-23-91

COMMENTS: None

ACTION: N/A

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|

9613491.3003

Westinghouse
Hanford Company

# OSM RCRA LEVEL C DATA ASSESSMENT

DATE _____ SAMPLES/MATRIX _____ _____ _____

REVIEWED BY _____ _____ _____ _____

LABORATORY _____ _____ _____ _____

CASE # _____ _____ _____ _____

SDG # _____ _____ _____ _____

## DATA ASSESSMENT SUMMARY

| QUALITY CONTROL CHECK | ANALYSIS | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: _____

_____

_____

NOTES: _____

_____

o Refer to the corresponding attachments for explanation of any problems.

9613491.3004

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____

9613491.3005

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____

9613491.3006

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____

9613491.3007

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____

9613491.3008

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____

9613491.3009

RCRA LEVEL C QC

Name _____ Date _____

QC Check: _____

COMMENTS: _____

_____

_____

_____

ACTION: _____

_____

_____

| sample # | constituent | value/qual | sample # | constituent | value/qual |
|---|---|---|---|---|---|
| | | | | | |

____ of ____