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**STL Los Angeles**
1721 South Grand Avenue
Santa Ana, CA 92705-4808

Tel: 714 258 8610
Fax: 714 258 0921
www.stl-inc.com

March 30, 2001

STL LOT NUMBER: E1B270278
PO/CONTRACT: 05160-SEV002

Jay Knight
Kennedy/Jenks Consultants
2151 Michelson Drive
Suite 100
Irvine, CA 92612

Dear Mr. Knight,

This report contains the additional analytical results for the sample requested on February 27, 2001. This sample is associated with your BRC former C-6 Torrance Harbor Gateway project.

All applicable quality control procedures meet method-specified acceptance criteria Any matrix related anomaly is footnoted within the report.

STL Los Angeles certifies that the test performed at our facility meet all the requirements of NELAC certification number 01118CA. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at 714-258-8610.

Sincerely,

Diane Suzuki
Project Manager

cc: Project File

This report contains 000033 pages.

SEVERN TRENT SERVICES

# CHANGE ORDER

| | |
|---|---|
| Lab Analysis No. | E1B270278 |
| Client Name | Kennedy Jenks |
| Contact | Jay Knight / Beth Breitenbach |

- [ ] CANCEL Work
- [x] ADD Work
- [ ] Chain of Custody Discrepancy
- [ ] TAT Change
- [ ] Matrix
- [ ] Sample Problem
- [ ] Tests Not Defined
- [ ] Other

**EXPLANATION/RESOLUTION**

BUILD-2-AK-13-021801 ⇒ 8270; 8310; 8015

Initiated By: [signature]

Date/Time: 2/26/01

Received By: _____

Date/Time: _____

Distribution:

Original - Sample Control/Job Folder; Yellow - Lab; Pink - Initiator

ENS—3008

000002

BOE-C6-0124346

# EXECUTIVE SUMMARY - Detection Highlights

**E1B270278**

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | ANALYTICAL METHOD |
|---|---|---|---|---|
| **Build_2_AK_13_021901 02/19/01 08:20 001** | | | | |
| Anthracene | 67 J | 80 | ug/kg | SW846 8310 |
| Anthracene | 470 J | 990 | ug/kg | SW846 8270C |
| Fluorene | 1000 | 990 | ug/kg | SW846 8270C |
| 2-Methylnaphthalene | 11000 | 990 | ug/kg | SW846 8270C |
| Naphthalene | 1300 | 990 | ug/kg | SW846 8270C |
| Phenanthrene | 2700 | 990 | ug/kg | SW846 8270C |

# METHODS SUMMARY

**E1B270278**

| PARAMETER | ANALYTICAL METHOD | PREPARATION METHOD |
|---|---|---|
| Polynuclear Aromatic Hydrocarbons by HPLC | SW846 8310 | SW846 3550 |
| PCBs by SW-846 8082 | SW846 8082 | SW846 3550 |
| Semivolatile Organic Compounds by GC/MS | SW846 8270C | SW846 3550B |

**References:**

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

# SAMPLE SUMMARY

**E1B270278**

| WO # | SAMPLE# | CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|---|---|---|---|---|
| DWPGH | 001 | Build_2_AK_13_021901 | 02/19/01 | 08:20 |

**NOTE(S):**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

**KENNEDY/JENKS CONSULTANTS**

**Client Sample ID: Build_2_AK_13_021901**

**GC Semivolatiles**

**Lot-Sample #...:** E1B270278-001 **Work Order #...:** DWPGH1AC **Matrix.....:** SOLID
**Date Sampled...:** 02/19/01 08:20 **Date Received..:** 02/20/01 11:20 **MS Run #.....:** 1059162
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/01/01
**Prep Batch #...:** 1059304 **Analysis Time..:** 11:37
**Dilution Factor:** 1
**Analyst ID.....:** 018568 **Instrument ID..:** G8B
**Method.....:** SW846 8082

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Aroclor 1016 | ND | 33 | ug/kg | 10 |
| Aroclor 1221 | ND | 33 | ug/kg | 10 |
| Aroclor 1232 | ND | 33 | ug/kg | 10 |
| Aroclor 1242 | ND | 33 | ug/kg | 10 |
| Aroclor 1248 | ND | 33 | ug/kg | 10 |
| Aroclor 1254 | ND | 33 | ug/kg | 10 |
| Aroclor 1260 | ND | 33 | ug/kg | 10 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 79 | (60 - 140) |
| Tetrachloro-m-xylene | 86 | (60 - 140) |

**KENNEDY/JENKS CONSULTANTS**

**Client Sample ID: Build_2_AK_13_021901**

**GC/MS Semivolatiles**

**Lot-Sample #...:** E1B270278-001 **Work Order #...:** DWPGH1AA **Matrix.....:** SOLID
**Date Sampled...:** 02/19/01 08:20 **Date Received..:** 02/20/01 11:20 **MS Run #.....:** 1059166
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/02/01
**Prep Batch #...:** 1059302 **Analysis Time..:** 19:50
**Dilution Factor:** 3
**Analyst ID.....:** 010060 **Instrument ID..:** MSI
**Method.....:** SW846 8270C

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 990 | ug/kg | 300 |
| Aniline | ND | 2000 | ug/kg | 300 |
| Acenaphthylene | ND | 990 | ug/kg | 300 |
| Benzidine | ND | 2000 | ug/kg | 300 |
| **Anthracene** | **470 J** | **990** | **ug/kg** | **240** |
| Benzo(a)anthracene | ND | 990 | ug/kg | 300 |
| Benzo(b)fluoranthene | ND | 990 | ug/kg | 300 |
| Benzo(k)fluoranthene | ND | 990 | ug/kg | 600 |
| Benzo(ghi)perylene | ND | 990 | ug/kg | 450 |
| Benzo(a)pyrene | ND | 990 | ug/kg | 210 |
| Benzoic acid | ND | 4800 | ug/kg | 1500 |
| Benzyl alcohol | ND | 990 | ug/kg | 300 |
| bis(2-Chloroethoxy) methane | ND | 990 | ug/kg | 300 |
| bis(2-Chloroethyl)-ether | ND | 990 | ug/kg | 300 |
| bis(2-Chloroisopropyl) ether | ND | 990 | ug/kg | 330 |
| bis(2-Ethylhexyl) phthalate | ND | 990 | ug/kg | 600 |
| 4-Bromophenyl phenyl ether | ND | 990 | ug/kg | 240 |
| Butyl benzyl phthalate | ND | 990 | ug/kg | 300 |
| Carbazole | ND | 990 | ug/kg | 240 |
| 4-Chloroaniline | ND | 990 | ug/kg | 450 |
| 4-Chloro-3-methylphenol | ND | 990 | ug/kg | 300 |
| 2-Chloronaphthalene | ND | 990 | ug/kg | 300 |
| 2-Chlorophenol | ND | 990 | ug/kg | 450 |
| 4-Chlorophenyl phenyl ether | ND | 990 | ug/kg | 270 |
| Chrysene | ND | 990 | ug/kg | 300 |
| Dibenz(a,h)anthracene | ND | 990 | ug/kg | 300 |
| Dibenzofuran | ND | 990 | ug/kg | 270 |
| Di-n-butyl phthalate | ND | 990 | ug/kg | 300 |
| 1,2-Dichlorobenzene | ND | 990 | ug/kg | 390 |
| 1,3-Dichlorobenzene | ND | 990 | ug/kg | 390 |
| 1,4-Dichlorobenzene | ND | 990 | ug/kg | 390 |

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**KENNEDY/JENKS CONSULTANTS**

**Client Sample ID: Build_2_AK_13_021901**

**GC/MS Semivolatiles**

**Lot-Sample #...:** E1B270278-001 **Work Order #...:** DWPGH1AA **Matrix.....:** SOLID

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | ND | 4800 | ug/kg | 1200 |
| 2,4-Dichlorophenol | ND | 990 | ug/kg | 270 |
| Diethyl phthalate | ND | 990 | ug/kg | 300 |
| 2,4-Dimethylphenol | ND | 990 | ug/kg | 300 |
| Dimethyl phthalate | ND | 990 | ug/kg | 240 |
| 4,6-Dinitro-2-methylphenol | ND | 4800 | ug/kg | 750 |
| 2,4-Dinitrophenol | ND | 4800 | ug/kg | 1500 |
| 2,4-Dinitrotoluene | ND | 990 | ug/kg | 300 |
| 2,6-Dinitrotoluene | ND | 990 | ug/kg | 270 |
| Di-n-octyl phthalate | ND | 990 | ug/kg | 330 |
| Fluoranthene | ND | 990 | ug/kg | 210 |
| **Fluorene** | **1000** | **990** | **ug/kg** | **270** |
| Hexachlorobenzene | ND | 990 | ug/kg | 240 |
| Hexachlorobutadiene | ND | 990 | ug/kg | 300 |
| Hexachlorocyclopentadiene | ND | 4800 | ug/kg | 960 |
| Hexachloroethane | ND | 990 | ug/kg | 360 |
| Indeno(1,2,3-cd)pyrene | ND | 990 | ug/kg | 300 |
| Isophorone | ND | 990 | ug/kg | 300 |
| **2-Methylnaphthalene** | **11000** | **990** | **ug/kg** | **270** |
| 2-Methylphenol | ND | 990 | ug/kg | 240 |
| 3-Methylphenol & 4-Methylphenol | ND | 990 | ug/kg | 300 |
| **Naphthalene** | **1300** | **990** | **ug/kg** | **270** |
| 2-Nitroaniline | ND | 4800 | ug/kg | 900 |
| 3-Nitroaniline | ND | 4800 | ug/kg | 1000 |
| 4-Nitroaniline | ND | 4800 | ug/kg | 600 |
| Nitrobenzene | ND | 990 | ug/kg | 450 |
| 2-Nitrophenol | ND | 990 | ug/kg | 300 |
| 4-Nitrophenol | ND | 4800 | ug/kg | 900 |
| N-Nitrosodiphenylamine | ND | 990 | ug/kg | 240 |
| N-Nitrosodi-n-propylamine | ND | 990 | ug/kg | 270 |
| Pentachlorophenol | ND | 4800 | ug/kg | 750 |
| **Phenanthrene** | **2700** | **990** | **ug/kg** | **240** |
| Phenol | ND | 990 | ug/kg | 300 |
| Pyrene | ND | 990 | ug/kg | 360 |
| 1,2,4-Trichlorobenzene | ND | 990 | ug/kg | 300 |
| 2,4,5-Trichlorophenol | ND | 990 | ug/kg | 300 |
| 2,4,6-Trichlorophenol | ND | 990 | ug/kg | 210 |

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**KENNEDY/JENKS CONSULTANTS**

**Client Sample ID: Build_2_AK_13_021901**

**GC/MS Semivolatiles**

**Lot-Sample #...:** E1B270278-001 **Work Order #...:** DWPGH1AA **Matrix.....:** SOLID

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 78 | (40 - 130) |
| 2-Fluorophenol | 67 | (50 - 115) |
| 2,4,6-Tribromophenol | 75 | (30 - 115) |
| Nitrobenzene-d5 | 64 | (45 - 115) |
| Phenol-d5 | 76 | (50 - 120) |
| Terphenyl-d14 | 94 | (50 - 140) |

**NOTE(S):**

J Estimated result. Result is less than RL.

**KENNEDY/JENKS CONSULTANTS**

**Client Sample ID: Build_2_AK_13_021901**

**HPLC**

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | E1B270278-001 | **Work Order #...:** | DWPGH1AD | **Matrix.....:** | SOLID |
| **Date Sampled...:** | 02/19/01 08:20 | **Date Received..:** | 02/20/01 11:20 | **MS Run #.....:** | 1064161 |
| **Prep Date.....:** | 03/05/01 | **Analysis Date..:** | 03/16/01 | | |
| **Prep Batch #...:** | 1064320 | **Analysis Time..:** | 15:20 | | |
| **Dilution Factor:** | 10 | | | | |
| **Analyst ID.....:** | 057134 | **Instrument ID..:** | LC7 | | |
| | | **Method.....:** | SW846 8310 | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acenaphthene | ND | 4000 | ug/kg | 630 |
| Acenaphthylene | ND | 2000 | ug/kg | 460 |
| **Anthracene** | **67 J** | **80** | **ug/kg** | **11** |
| Benzo(a)anthracene | ND | 160 | ug/kg | 17 |
| Benzo(a)pyrene | ND | 100 | ug/kg | 31 |
| Benzo(b)fluoranthene | ND | 40 | ug/kg | 24 |
| Benzo(ghi)perylene | ND | 160 | ug/kg | 31 |
| Benzo(k)fluoranthene | ND | 40 | ug/kg | 11 |
| Chrysene | ND | 200 | ug/kg | 140 |
| Dibenz(a,h)anthracene | ND | 400 | ug/kg | 92 |
| Fluoranthene | ND | 200 | ug/kg | 48 |
| Fluorene | ND | 400 | ug/kg | 67 |
| Indeno(1,2,3-cd)pyrene | ND | 200 | ug/kg | 31 |
| Naphthalene | ND | 2000 | ug/kg | 230 |
| Phenanthrene | ND | 160 | ug/kg | 26 |
| Pyrene | ND | 400 | ug/kg | 110 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 0.0 SRD | (41 - 115) |

**NOTE(S):**

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

J Estimated result. Result is less than RL.

**KENNEDY/JENKS CONSULTANTS**

**Build_2_AK_13_021901**

**GC/MS Semivolatiles**

**Lot-Sample #:** E1B270278-001 **Work Order #:** DWPGH1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

| PARAMETER | CAS # | ESTIMATED RESULT | | RETENTION TIME | UNITS |
|---|---|---|---|---|---|
| Pyridine | | ND | M | | ug/kg |
| 2-Naphthylamine | | ND | M | | ug/kg |
| Pentachloroethane | | ND | M | | ug/kg |

**NOTE(S):**

M: Result was measured against nearest internal standard assuming a response factor of 1.

**KENNEDY/JENKS CONSULTANTS**

**Method Blank Report**

**GC/MS Semivolatiles**

**Lot-Sample #:** E1B280000-302 B **Work Order #:** DWQGV1AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

| PARAMETER | CAS # | ESTIMATED RESULT | | RETENTION TIME | UNITS |
|---|---|---|---|---|---|
| Pyridine | | ND | M | | ug/kg |
| 2-Naphthylamine | | ND | M | | ug/kg |
| Pentachloroethane | | ND | M | | ug/kg |

**NOTE(S):**

M: Result was measured against nearest internal standard assuming a response factor of 1.

# QC DATA ASSOCIATION SUMMARY

**E1B270278**

Sample Preparation and Analysis Control Numbers

| SAMPLE# | MATRIX | ANALYTICAL METHOD | LEACH BATCH # | PREP BATCH # | MS RUN# |
|---|---|---|---|---|---|
| 001 | SOLID | SW846 8082 | | 1059304 | 1059162 |
| | SOLID | SW846 8270C | | 1059302 | 1059166 |
| | SOLID | SW846 8310 | | 1064320 | 1064161 |

## METHOD BLANK REPORT

### GC Semivolatiles

**Client Lot #...:** E1B270278
**MB Lot-Sample #:** E1B280000-304
**Analysis Date..:** 03/01/01
**Dilution Factor:** 1

**Work Order #...:** DWQDG1AA
**Prep Date.....:** 02/28/01
**Prep Batch #...:** 1059304
**Analyst ID.....:** 018568

**Matrix.....:** SOLID
**Analysis Time..:** 09:38
**Instrument ID..:** G8B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| Aroclor 1016 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1221 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1232 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1242 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1248 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1254 | ND | 33 | ug/kg | SW846 8082 |
| Aroclor 1260 | ND | 33 | ug/kg | SW846 8082 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 111 | (60 - 140) |
| Tetrachloro-m-xylene | 93 | (60 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**METHOD BLANK REPORT**

**GC/MS Semivolatiles**

**Client Lot #...:** E1B270278 **Work Order #...:** DWQGV1AA **Matrix.....:** SOLID
**MB Lot-Sample #:** E1B280000-302

**Prep Date.....:** 02/28/01 **Analysis Time..:** 14:37
**Analysis Date..:** 03/02/01 **Prep Batch #...:** 1059302 **Instrument ID..:** MSI
**Dilution Factor:** 1

**Analyst ID.....:** 010060

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| Acenaphthene | ND | 330 | ug/kg | SW846 8270C |
| Aniline | ND | 660 | ug/kg | SW846 8270C |
| Acenaphthylene | ND | 330 | ug/kg | SW846 8270C |
| Benzidine | ND | 660 | ug/kg | SW846 8270C |
| Anthracene | ND | 330 | ug/kg | SW846 8270C |
| Benzo(a)anthracene | ND | 330 | ug/kg | SW846 8270C |
| Benzo(b)fluoranthene | ND | 330 | ug/kg | SW846 8270C |
| Benzo(k)fluoranthene | ND | 330 | ug/kg | SW846 8270C |
| Benzo(ghi)perylene | ND | 330 | ug/kg | SW846 8270C |
| Benzo(a)pyrene | ND | 330 | ug/kg | SW846 8270C |
| Benzoic acid | ND | 1600 | ug/kg | SW846 8270C |
| Benzyl alcohol | ND | 330 | ug/kg | SW846 8270C |
| bis(2-Chloroethoxy) methane | ND | 330 | ug/kg | SW846 8270C |
| bis(2-Chloroethyl)-ether | ND | 330 | ug/kg | SW846 8270C |
| bis(2-Chloroisopropyl) ether | ND | 330 | ug/kg | SW846 8270C |
| bis(2-Ethylhexyl) phthalate | ND | 330 | ug/kg | SW846 8270C |
| 4-Bromophenyl phenyl ether | ND | 330 | ug/kg | SW846 8270C |
| Butyl benzyl phthalate | ND | 330 | ug/kg | SW846 8270C |
| Carbazole | ND | 330 | ug/kg | SW846 8270C |
| 4-Chloroaniline | ND | 330 | ug/kg | SW846 8270C |
| 4-Chloro-3-methylphenol | ND | 330 | ug/kg | SW846 8270C |
| 2-Chloronaphthalene | ND | 330 | ug/kg | SW846 8270C |
| 2-Chlorophenol | ND | 330 | ug/kg | SW846 8270C |
| 4-Chlorophenyl phenyl ether | ND | 330 | ug/kg | SW846 8270C |
| Chrysene | ND | 330 | ug/kg | SW846 8270C |
| Dibenz(a,h)anthracene | ND | 330 | ug/kg | SW846 8270C |
| Dibenzofuran | ND | 330 | ug/kg | SW846 8270C |
| Di-n-butyl phthalate | ND | 330 | ug/kg | SW846 8270C |
| 1,2-Dichlorobenzene | ND | 330 | ug/kg | SW846 8270C |
| 1,3-Dichlorobenzene | ND | 330 | ug/kg | SW846 8270C |
| 1,4-Dichlorobenzene | ND | 330 | ug/kg | SW846 8270C |
| 3,3'-Dichlorobenzidine | ND | 1600 | ug/kg | SW846 8270C |
| 2,4-Dichlorophenol | ND | 330 | ug/kg | SW846 8270C |
| Diethyl phthalate | ND | 330 | ug/kg | SW846 8270C |

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**METHOD BLANK REPORT**

**GC/MS Semivolatiles**

**Client Lot #...:** E1B270278 **Work Order #...:** DWQGV1AA **Matrix.....:** SOLID

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| 2,4-Dimethylphenol | ND | 330 | ug/kg | SW846 8270C |
| Dimethyl phthalate | ND | 330 | ug/kg | SW846 8270C |
| 4,6-Dinitro-2-methylphenol | ND | 1600 | ug/kg | SW846 8270C |
| 2,4-Dinitrophenol | ND | 1600 | ug/kg | SW846 8270C |
| 2,4-Dinitrotoluene | ND | 330 | ug/kg | SW846 8270C |
| 2,6-Dinitrotoluene | ND | 330 | ug/kg | SW846 8270C |
| Di-n-octyl phthalate | ND | 330 | ug/kg | SW846 8270C |
| Fluoranthene | ND | 330 | ug/kg | SW846 8270C |
| Fluorene | ND | 330 | ug/kg | SW846 8270C |
| Hexachlorobenzene | ND | 330 | ug/kg | SW846 8270C |
| Hexachlorobutadiene | ND | 330 | ug/kg | SW846 8270C |
| Hexachlorocyclopentadiene | ND | 1600 | ug/kg | SW846 8270C |
| Hexachloroethane | ND | 330 | ug/kg | SW846 8270C |
| Indeno(1,2,3-cd)pyrene | ND | 330 | ug/kg | SW846 8270C |
| Isophorone | ND | 330 | ug/kg | SW846 8270C |
| 2-Methylnaphthalene | ND | 330 | ug/kg | SW846 8270C |
| 2-Methylphenol | ND | 330 | ug/kg | SW846 8270C |
| 3-Methylphenol & 4-Methylphenol | ND | 330 | ug/kg | SW846 8270C |
| Naphthalene | ND | 330 | ug/kg | SW846 8270C |
| 2-Nitroaniline | ND | 1600 | ug/kg | SW846 8270C |
| 3-Nitroaniline | ND | 1600 | ug/kg | SW846 8270C |
| 4-Nitroaniline | ND | 1600 | ug/kg | SW846 8270C |
| Nitrobenzene | ND | 330 | ug/kg | SW846 8270C |
| 2-Nitrophenol | ND | 330 | ug/kg | SW846 8270C |
| 4-Nitrophenol | ND | 1600 | ug/kg | SW846 8270C |
| N-Nitrosodiphenylamine | ND | 330 | ug/kg | SW846 8270C |
| N-Nitrosodi-n-propylamine | ND | 330 | ug/kg | SW846 8270C |
| Pentachlorophenol | ND | 1600 | ug/kg | SW846 8270C |
| Phenanthrene | ND | 330 | ug/kg | SW846 8270C |
| Phenol | ND | 330 | ug/kg | SW846 8270C |
| Pyrene | ND | 330 | ug/kg | SW846 8270C |
| 1,2,4-Trichlorobenzene | ND | 330 | ug/kg | SW846 8270C |
| 2,4,5-Trichlorophenol | ND | 330 | ug/kg | SW846 8270C |
| 2,4,6-Trichlorophenol | ND | 330 | ug/kg | SW846 8270C |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 78 | (40 - 130) |

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## METHOD BLANK REPORT

## GC/MS Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWQGV1AA **Matrix.....:** SOLID

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| 2-Fluorophenol | 94 | (50 - 115) | | |
| 2,4,6-Tribromophenol | 94 | (30 - 115) | | |
| Nitrobenzene-d5 | 86 | (45 - 115) | | |
| Phenol-d5 | 90 | (50 - 120) | | |
| Terphenyl-d14 | 103 | (50 - 140) | | |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## METHOD BLANK REPORT

### HPLC

**Client Lot #...:** E1B270278
**MB Lot-Sample #:** G1C050000-320
**Analysis Date..:** 03/15/01
**Dilution Factor:** 1

**Work Order #...:** DWX401AA
**Prep Date.....:** 03/05/01
**Prep Batch #...:** 1064320
**Analyst ID.....:** 057134

**Matrix.....:** SOLID
**Analysis Time..:** 13:36
**Instrument ID..:** LC7

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| Acenaphthene | ND | 400 | ug/kg | SW846 8310 |
| Acenaphthylene | ND | 200 | ug/kg | SW846 8310 |
| Anthracene | ND | 8.0 | ug/kg | SW846 8310 |
| Benzo(a)anthracene | ND | 16 | ug/kg | SW846 8310 |
| Benzo(a)pyrene | ND | 10 | ug/kg | SW846 8310 |
| Benzo(b)fluoranthene | ND | 4.0 | ug/kg | SW846 8310 |
| Benzo(ghi)perylene | ND | 16 | ug/kg | SW846 8310 |
| Benzo(k)fluoranthene | ND | 4.0 | ug/kg | SW846 8310 |
| Chrysene | ND | 20 | ug/kg | SW846 8310 |
| Dibenz(a,h)anthracene | ND | 40 | ug/kg | SW846 8310 |
| Fluoranthene | ND | 20 | ug/kg | SW846 8310 |
| Fluorene | ND | 40 | ug/kg | SW846 8310 |
| Indeno(1,2,3-cd)pyrene | ND | 20 | ug/kg | SW846 8310 |
| Naphthalene | ND | 200 | ug/kg | SW846 8310 |
| Phenanthrene | ND | 16 | ug/kg | SW846 8310 |
| Pyrene | ND | 40 | ug/kg | SW846 8310 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 69 | (41 - 115) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## LABORATORY CONTROL SAMPLE DATA REPORT

### GC Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWQDG1AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** E1B280000-304
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/01/01
**Prep Batch #...:** 1059304 **Analysis Time..:** 10:18
**Dilution Factor:** 1 **Instrument ID..:** G8B
**Analyst ID.....:** 018568

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | METHOD |
|---|---|---|---|---|---|
| **Aroclor 1016** | **333** | **351** | **ug/kg** | **105** | **SW846 8082** |
| **Aroclor 1260** | **333** | **346** | **ug/kg** | **104** | **SW846 8082** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 98 | (60 - 140) |
| Tetrachloro-m-xylene | 64 | (60 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE DATA REPORT

### GC/MS Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWQGV1AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** E1B280000-302
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/02/01
**Prep Batch #...:** 1059302 **Analysis Time..:** 16:11
**Dilution Factor:** 1 **Instrument ID..:** MSI
**Analyst ID.....:** 010060

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | METHOD |
|---|---|---|---|---|---|
| **Acenaphthene** | **3330** | **2710** | **ug/kg** | **81** | **SW846 8270C** |
| **4-Chloro-3-methylphenol** | **5000** | **4220** | **ug/kg** | **84** | **SW846 8270C** |
| **2-Chlorophenol** | **5000** | **3980** | **ug/kg** | **80** | **SW846 8270C** |
| **1,4-Dichlorobenzene** | **3330** | **2270** | **ug/kg** | **68** | **SW846 8270C** |
| **2,4-Dinitrotoluene** | **3330** | **2690** | **ug/kg** | **81** | **SW846 8270C** |
| **4-Nitrophenol** | **5000** | **3450** | **ug/kg** | **69** | **SW846 8270C** |
| **N-Nitrosodi-n-propyl-amine** | **3330** | **2830** | **ug/kg** | **85** | **SW846 8270C** |
| **Pentachlorophenol** | **5000** | **3830** | **ug/kg** | **77** | **SW846 8270C** |
| **Phenol** | **5000** | **3490** | **ug/kg** | **70** | **SW846 8270C** |
| **Pyrene** | **3330** | **2960** | **ug/kg** | **89** | **SW846 8270C** |
| **1,2,4-Trichloro-benzene** | **3330** | **2560** | **ug/kg** | **77** | **SW846 8270C** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 76 | (40 - 130) |
| 2-Fluorophenol | 82 | (50 - 115) |
| 2,4,6-Tribromophenol | 89 | (30 - 115) |
| Nitrobenzene-d5 | 79 | (45 - 115) |
| Phenol-d5 | 81 | (50 - 120) |
| Terphenyl-d14 | 95 | (50 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE DATA REPORT

### HPLC

**Client Lot #...:** E1B270278 **Work Order #...:** DWX401AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** G1C050000-320
**Prep Date.....:** 03/05/01 **Analysis Date..:** 03/15/01
**Prep Batch #...:** 1064320 **Analysis Time..:** 14:16
**Dilution Factor:** 1 **Instrument ID..:** LC7
**Analyst ID.....:** 057134

| PARAMETER | SPIKE AMOUNT | MEASURED AMOUNT | UNITS | PERCENT RECOVERY | METHOD |
|---|---|---|---|---|---|
| Acenaphthene | 1330 | 1050 | ug/kg | 79 | SW846 8310 |
| Acenaphthylene | 667 | 527 | ug/kg | 79 | SW846 8310 |
| Anthracene | 26.6 | 20.8 | ug/kg | 78 | SW846 8310 |
| Benzo(a)anthracene | 66.7 | 54.7 | ug/kg | 82 | SW846 8310 |
| **Benzo(a)pyrene** | **66.7** | **49.6** | **ug/kg** | **74** | **SW846 8310** |
| Benzo(b)fluoranthene | 26.6 | 21.4 | ug/kg | 80 | SW846 8310 |
| Benzo(ghi)perylene | 106 | 83.9 | ug/kg | 79 | SW846 8310 |
| Benzo(k)fluoranthene | 26.6 | 20.9 | ug/kg | 79 | SW846 8310 |
| Chrysene | 66.7 | 54.8 | ug/kg | 82 | SW846 8310 |
| Dibenz(a,h)anthracene | 266 | 208 | ug/kg | 78 | SW846 8310 |
| Fluoranthene | 66.7 | 54.5 | ug/kg | 82 | SW846 8310 |
| **Fluorene** | **133** | **105** | **ug/kg** | **79** | **SW846 8310** |
| **Indeno(1,2,3-cd)pyrene** | **66.7** | **52.1** | **ug/kg** | **78** | **SW846 8310** |
| **Naphthalene** | **667** | **496** | **ug/kg** | **74** | **SW846 8310** |
| Phenanthrene | 53.2 | 42.8 | ug/kg | 80 | SW846 8310 |
| **Pyrene** | **133** | **112** | **ug/kg** | **84** | **SW846 8310** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 78 | (41 - 115) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWQDG1AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** E1B280000-304
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/01/01
**Prep Batch #...:** 1059304 **Analysis Time..:** 10:18
**Dilution Factor:** 1 **Instrument ID..:** G8B
**Analyst ID.....:** 018568

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | METHOD |
|---|---|---|---|
| **Aroclor 1016** | **105** | **(65 - 130)** | **SW846 8082** |
| **Aroclor 1260** | **104** | **(70 - 130)** | **SW846 8082** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 98 | (60 - 140) |
| Tetrachloro-m-xylene | 64 | (60 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC/MS Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWQGV1AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** E1B280000-302
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/02/01
**Prep Batch #...:** 1059302 **Analysis Time..:** 16:11
**Dilution Factor:** 1 **Instrument ID..:** MSI
**Analyst ID.....:** 010060

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | METHOD |
|---|---|---|---|
| **Acenaphthene** | **81** | **(50 - 125)** | **SW846 8270C** |
| **4-Chloro-3-methylphenol** | **84** | **(50 - 110)** | **SW846 8270C** |
| **2-Chlorophenol** | **80** | **(50 - 120)** | **SW846 8270C** |
| **1,4-Dichlorobenzene** | **68** | **(40 - 115)** | **SW846 8270C** |
| **2,4-Dinitrotoluene** | **81** | **(40 - 120)** | **SW846 8270C** |
| **4-Nitrophenol** | **69** | **(10 - 120)** | **SW846 8270C** |
| **N-Nitrosodi-n-propyl-amine** | **85** | **(40 - 120)** | **SW846 8270C** |
| **Pentachlorophenol** | **77** | **(20 - 130)** | **SW846 8270C** |
| **Phenol** | **70** | **(40 - 110)** | **SW846 8270C** |
| **Pyrene** | **89** | **(50 - 140)** | **SW846 8270C** |
| **1,2,4-Trichloro-benzene** | **77** | **(50 - 115)** | **SW846 8270C** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 76 | (40 - 130) |
| 2-Fluorophenol | 82 | (50 - 115) |
| 2,4,6-Tribromophenol | 89 | (30 - 115) |
| Nitrobenzene-d5 | 79 | (45 - 115) |
| Phenol-d5 | 81 | (50 - 120) |
| Terphenyl-d14 | 95 | (50 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

### HPLC

**Client Lot #...:** E1B270278 **Work Order #...:** DWX401AC **Matrix.....:** SOLID
**LCS Lot-Sample#:** G1C050000-320
**Prep Date.....:** 03/05/01 **Analysis Date..:** 03/15/01
**Prep Batch #...:** 1064320 **Analysis Time..:** 14:16
**Dilution Factor:** 1 **Instrument ID..:** LC7
**Analyst ID.....:** 057134

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | METHOD |
|---|---|---|---|
| Acenaphthene | 79 | (50 - 150) | SW846 8310 |
| Acenaphthylene | 79 | (50 - 150) | SW846 8310 |
| Anthracene | 78 | (50 - 150) | SW846 8310 |
| Benzo(a)anthracene | 82 | (50 - 150) | SW846 8310 |
| **Benzo(a)pyrene** | **74** | **(49 - 107)** | **SW846 8310** |
| Benzo(b)fluoranthene | 80 | (50 - 150) | SW846 8310 |
| Benzo(ghi)perylene | 79 | (50 - 150) | SW846 8310 |
| Benzo(k)fluoranthene | 79 | (50 - 150) | SW846 8310 |
| Chrysene | 82 | (50 - 150) | SW846 8310 |
| Dibenz(a,h)anthracene | 78 | (50 - 150) | SW846 8310 |
| Fluoranthene | 82 | (50 - 150) | SW846 8310 |
| **Fluorene** | **79** | **(43 - 112)** | **SW846 8310** |
| **Indeno(1,2,3-cd)pyrene** | **78** | **(54 - 114)** | **SW846 8310** |
| **Naphthalene** | **74** | **(44 - 110)** | **SW846 8310** |
| Phenanthrene | 80 | (50 - 150) | SW846 8310 |
| **Pyrene** | **84** | **(49 - 115)** | **SW846 8310** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 78 | (41 - 115) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE DATA REPORT

### GC Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWPGH1AE-MS **Matrix.....:** SOLID
**MS Lot-Sample #:** E1B270278-001 DWPGH1AF-MSD
**Date Sampled...:** 02/19/01 08:20 **Date Received..:** 02/20/01 11:20 **MS Run #.....:** 1059162
**Prep Date.....:** 02/28/01 **Analysis Date..:** 03/01/01
**Prep Batch #...:** 1059304 **Analysis Time..:** 12:17
**Dilution Factor:** 1 **Analyst ID.....:** 018568 **Instrument ID..:** G8B

| PARAMETER | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|---|
| **Aroclor 1016** | **ND** | **333** | **264** | **ug/kg** | **79** | | **SW846 8082** |
| | **ND** | **333** | **274** | **ug/kg** | **82** | **3.7** | **SW846 8082** |
| **Aroclor 1260** | **ND** | **333** | **269** | **ug/kg** | **81** | | **SW846 8082** |
| | **ND** | **333** | **286** | **ug/kg** | **86** | **6.2** | **SW846 8082** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 84 | (60 - 140) |
| | 87 | (60 - 140) |
| Tetrachloro-m-xylene | 74 | (60 - 140) |
| | 80 | (60 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE DATA REPORT

### GC/MS Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client Lot #...:** | E1B270278 | **Work Order #...:** | DWPGK1AE-MS<br>DWPGK1AF-MSD | **Matrix.....:** | SOLID |
| **MS Lot-Sample #:** | E1B270279-001 | | | | |
| **Date Sampled...:** | 02/20/01 08:55 | **Date Received..:** | 02/20/01 16:45 | **MS Run #.....:** | 1059166 |
| **Prep Date.....:** | 02/28/01 | **Analysis Date..:** | 03/01/01 | | |
| **Prep Batch #...:** | 1059302 | **Analysis Time..:** | 18:12 | | |
| **Dilution Factor:** | 1 | **Analyst ID.....:** | 010060 | **Instrument ID..:** | MSE |

| PARAMETER | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|---|
| **Acenaphthene** | ND | 3330 | 2630 | ug/kg | 79 | | SW846 8270C |
| | ND | 3330 | 2390 | ug/kg | 72 | 9.5 | SW846 8270C |
| **4-Chloro-3-methylphenol** | ND | 5000 | 4060 | ug/kg | 81 | | SW846 8270C |
| | ND | 5000 | 3890 | ug/kg | 78 | 4.2 | SW846 8270C |
| **2-Chlorophenol** | ND | 5000 | 3920 | ug/kg | 78 | | SW846 8270C |
| | ND | 5000 | 3450 | ug/kg | 69 | 13 | SW846 8270C |
| **1,4-Dichlorobenzene** | ND | 3330 | 2150 | ug/kg | 65 | | SW846 8270C |
| | ND | 3330 | 1780 | ug/kg | 53 | 19 | SW846 8270C |
| **2,4-Dinitrotoluene** | ND | 3330 | 3240 | ug/kg | 97 | | SW846 8270C |
| | ND | 3330 | 3070 | ug/kg | 92 | 5.4 | SW846 8270C |
| **4-Nitrophenol** | ND | 5000 | 3660 | ug/kg | 73 | | SW846 8270C |
| | ND | 5000 | 3340 | ug/kg | 67 | 9.0 | SW846 8270C |
| **N-Nitrosodi-n-propyl-amine** | ND | 3330 | 2820 | ug/kg | 85 | | SW846 8270C |
| | ND | 3330 | 2450 | ug/kg | 73 | 14 | SW846 8270C |
| **Pentachlorophenol** | ND | 5000 | 4240 | ug/kg | 85 | | SW846 8270C |
| | ND | 5000 | 3650 | ug/kg | 73 | 15 | SW846 8270C |
| **Phenol** | ND | 5000 | 3370 | ug/kg | 67 | | SW846 8270C |
| | ND | 5000 | 3070 | ug/kg | 61 | 9.4 | SW846 8270C |
| **Pyrene** | ND | 3330 | 2840 | ug/kg | 85 | | SW846 8270C |
| | ND | 3330 | 2630 | ug/kg | 79 | 7.4 | SW846 8270C |
| **1,2,4-Trichloro-benzene** | ND | 3330 | 2680 | ug/kg | 80 | | SW846 8270C |
| | ND | 3330 | 2330 | ug/kg | 70 | 14 | SW846 8270C |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 77 | (40 - 130) |
| | 66 | (40 - 130) |
| 2-Fluorophenol | 77 | (50 - 115) |
| | 67 | (50 - 115) |
| 2,4,6-Tribromophenol | 80 | (30 - 115) |
| | 74 | (30 - 115) |
| Nitrobenzene-d5 | 77 | (45 - 115) |
| | 70 | (45 - 115) |
| Phenol-d5 | 79 | (50 - 120) |
| | 71 | (50 - 120) |

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## MATRIX SPIKE SAMPLE DATA REPORT

### GC/MS Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWPGK1AE-MS **Matrix.....:** SOLID
**MS Lot-Sample #:** E1B270279-001 DWPGK1AF-MSD

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Terphenyl-d14 | 85 | (50 - 140) |
| | 80 | (50 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE DATA REPORT

### HPLC

**Client Lot #...:** E1B270278 **Work Order #...:** DWPGM1AE-MS **Matrix.....:** SOLID
**MS Lot-Sample #:** E1B270279-003 DWPGM1AF-MSD
**Date Sampled...:** 02/20/01 13:20 **Date Received..:** 02/20/01 16:45 **MS Run #.....:** 1064161
**Prep Date.....:** 03/05/01 **Analysis Date..:** 03/16/01
**Prep Batch #...:** 1064320 **Analysis Time..:** 13:19
**Dilution Factor:** 10 **Analyst ID.....:** 057134 **Instrument ID..:** LC7

| PARAMETER | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|---|
| Acenaphthene | ND | 1330 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 1330 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Acenaphthylene | ND | 667 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 667 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Anthracene | ND | 26.6 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 26.6 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Benzo(a)anthracene | ND | 66.7 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 66.7 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| **Benzo(a)pyrene** | **ND** | **66.7** | | **ug/kg** | **0.0** | | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| | **ND** | **66.7** | | **ug/kg** | **0.0** | **0.0** | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| Benzo(b)fluoranthene | ND | 26.6 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 26.6 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Benzo(ghi)perylene | ND | 106 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 106 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Benzo(k)fluoranthene | ND | 26.6 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 26.6 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Chrysene | ND | 66.7 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 66.7 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| Dibenz(a,h)anthracene | ND | 266 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 266 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |

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## MATRIX SPIKE SAMPLE DATA REPORT

### HPLC

**Client Lot #...:** E1B270278 **Work Order #...:** DWPGM1AE-MS **Matrix.....:** SOLID
**MS Lot-Sample #:** E1B270279-003 DWPGM1AF-MSD

| PARAMETER | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT | UNITS | PERCENT RECOVERY | RPD | METHOD |
|---|---|---|---|---|---|---|---|
| Fluoranthene | ND | 66.7 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 66.7 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| **Fluorene** | **ND** | **133** | | **ug/kg** | **0.0** | | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| | **ND** | **133** | | **ug/kg** | **0.0** | **0.0** | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| **Indeno(1,2,3-cd)pyrene** | **ND** | **66.7** | | **ug/kg** | **0.0** | | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| | **ND** | **66.7** | | **ug/kg** | **0.0** | **0.0** | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| **Naphthalene** | **16000** | **667** | | **ug/kg** | **0.0** | | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| | **16000** | **667** | | **ug/kg** | **0.0** | **0.0** | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| Phenanthrene | ND | 53.2 | | ug/kg | 0.0 | | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| | ND | 53.2 | | ug/kg | 0.0 | 0.0 | SW846 8310 |
| | | Qualifiers: MSA | | | | | |
| **Pyrene** | **ND** | **133** | | **ug/kg** | **0.0** | | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |
| | **ND** | **133** | | **ug/kg** | **0.0** | **0.0** | **SW846 8310** |
| | | Qualifiers: MSA | | | | | |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 0.0 SRD | (41 - 115) |
| | 0.0 SRD | (41 - 115) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MSA The recovery and RPD were not calculated because the sample was diluted beyond the ability to quantitate a recovery.

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

## MATRIX SPIKE SAMPLE EVALUATION REPORT

### GC Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client Lot #...:** | E1B270278 | **Work Order #...:** | DWPGH1AE-MS | **Matrix.....:** | SOLID |
| **MS Lot-Sample #:** | E1B270278-001 | | DWPGH1AF-MSD | | |
| **Date Sampled...:** | 02/19/01 08:20 | **Date Received..:** | 02/20/01 11:20 | **MS Run #.....:** | 1059162 |
| **Prep Date.....:** | 02/28/01 | **Analysis Date..:** | 03/01/01 | | |
| **Prep Batch #...:** | 1059304 | **Analysis Time..:** | 12:17 | | |
| **Dilution Factor:** | 1 | **Analyst ID.....:** | 018568 | **Instrument ID..:** | G8B |

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **Aroclor 1016** | **79** | **(65 - 130)** | | | **SW846 8082** |
| | **82** | **(65 - 130)** | **3.7** | **(0-30)** | **SW846 8082** |
| **Aroclor 1260** | **81** | **(70 - 130)** | | | **SW846 8082** |
| | **86** | **(70 - 130)** | **6.2** | **(0-30)** | **SW846 8082** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Decachlorobiphenyl | 84 | (60 - 140) |
| | 87 | (60 - 140) |
| Tetrachloro-m-xylene | 74 | (60 - 140) |
| | 80 | (60 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE EVALUATION REPORT

### GC/MS Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client Lot #...:** | E1B270278 | **Work Order #...:** | DWPGK1AE-MS | **Matrix.....:** | SOLID |
| **MS Lot-Sample #:** | E1B270279-001 | | DWPGK1AF-MSD | | |
| **Date Sampled...:** | 02/20/01 08:55 | **Date Received..:** | 02/20/01 16:45 | **MS Run #.....:** | 1059166 |
| **Prep Date.....:** | 02/28/01 | **Analysis Date..:** | 03/01/01 | | |
| **Prep Batch #...:** | 1059302 | **Analysis Time..:** | 18:12 | | |
| **Dilution Factor:** | 1 | **Analyst ID.....:** | 010060 | **Instrument ID..:** | MSE |

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| **Acenaphthene** | **79** | **(50 - 125)** | | | **SW846 8270C** |
| | **72** | **(50 - 125)** | **9.5** | **(0-35)** | **SW846 8270C** |
| **4-Chloro-3-methylphenol** | **81** | **(50 - 110)** | | | **SW846 8270C** |
| | **78** | **(50 - 110)** | **4.2** | **(0-35)** | **SW846 8270C** |
| **2-Chlorophenol** | **78** | **(50 - 120)** | | | **SW846 8270C** |
| | **69** | **(50 - 120)** | **13** | **(0-35)** | **SW846 8270C** |
| **1,4-Dichlorobenzene** | **65** | **(40 - 115)** | | | **SW846 8270C** |
| | **53** | **(40 - 115)** | **19** | **(0-35)** | **SW846 8270C** |
| **2,4-Dinitrotoluene** | **97** | **(40 - 120)** | | | **SW846 8270C** |
| | **92** | **(40 - 120)** | **5.4** | **(0-35)** | **SW846 8270C** |
| **4-Nitrophenol** | **73** | **(10 - 120)** | | | **SW846 8270C** |
| | **67** | **(10 - 120)** | **9.0** | **(0-35)** | **SW846 8270C** |
| **N-Nitrosodi-n-propyl-amine** | **85** | **(40 - 120)** | | | **SW846 8270C** |
| | **73** | **(40 - 120)** | **14** | **(0-35)** | **SW846 8270C** |
| **Pentachlorophenol** | **85** | **(20 - 130)** | | | **SW846 8270C** |
| | **73** | **(20 - 130)** | **15** | **(0-35)** | **SW846 8270C** |
| **Phenol** | **67** | **(40 - 110)** | | | **SW846 8270C** |
| | **61** | **(40 - 110)** | **9.4** | **(0-35)** | **SW846 8270C** |
| **Pyrene** | **85** | **(50 - 140)** | | | **SW846 8270C** |
| | **79** | **(50 - 140)** | **7.4** | **(0-35)** | **SW846 8270C** |
| **1,2,4-Trichloro-benzene** | **80** | **(50 - 115)** | | | **SW846 8270C** |
| | **70** | **(50 - 115)** | **14** | **(0-35)** | **SW846 8270C** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 2-Fluorobiphenyl | 77 | (40 - 130) |
| | 66 | (40 - 130) |
| 2-Fluorophenol | 77 | (50 - 115) |
| | 67 | (50 - 115) |
| 2,4,6-Tribromophenol | 80 | (30 - 115) |
| | 74 | (30 - 115) |
| Nitrobenzene-d5 | 77 | (45 - 115) |
| | 70 | (45 - 115) |
| Phenol-d5 | 79 | (50 - 120) |
| | 71 | (50 - 120) |

(Continued on next page)

## MATRIX SPIKE SAMPLE EVALUATION REPORT

### GC/MS Semivolatiles

**Client Lot #...:** E1B270278 **Work Order #...:** DWPGK1AE-MS **Matrix.....:** SOLID
**MS Lot-Sample #:** E1B270279-001 DWPGK1AF-MSD

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Terphenyl-d14 | 85 | (50 - 140) |
| | 80 | (50 - 140) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

## MATRIX SPIKE SAMPLE EVALUATION REPORT

### HPLC

| | | | | | |
|---|---|---|---|---|---|
| **Client Lot #...:** | E1B270278 | **Work Order #...:** | DWPGM1AE-MS | **Matrix.....:** | SOLID |
| **MS Lot-Sample #:** | E1B270279-003 | | DWPGM1AF-MSD | | |
| **Date Sampled...:** | 02/20/01 13:20 | **Date Received..:** | 02/20/01 16:45 | **MS Run #.....:** | 1064161 |
| **Prep Date.....:** | 03/05/01 | **Analysis Date..:** | 03/16/01 | | |
| **Prep Batch #...:** | 1064320 | **Analysis Time..:** | 13:19 | | |
| **Dilution Factor:** | 10 | **Analyst ID.....:** | 057134 | **Instrument ID..:** | LC7 |

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD | RPD LIMITS | METHOD |
|---|---|---|---|---|---|
| Acenaphthene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Acenaphthylene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Anthracene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Benzo(a)anthracene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| **Benzo(a)pyrene** | **0.0 MSA** | **(49 - 107)** | | | **SW846 8310** |
| | **0.0 MSA** | **(49 - 107)** | **0.0** | **(0-53)** | **SW846 8310** |
| Benzo(b)fluoranthene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Benzo(ghi)perylene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Benzo(k)fluoranthene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Chrysene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Dibenz(a,h)anthracene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| Fluoranthene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| **Fluorene** | **0.0 MSA** | **(43 - 112)** | | | **SW846 8310** |
| | **0.0 MSA** | **(43 - 112)** | **0.0** | **(0-56)** | **SW846 8310** |
| **Indeno(1,2,3-cd)pyrene** | **0.0 MSA** | **(54 - 114)** | | | **SW846 8310** |
| | **0.0 MSA** | **(54 - 114)** | **0.0** | **(0-51)** | **SW846 8310** |
| **Naphthalene** | **0.0 MSA** | **(44 - 110)** | | | **SW846 8310** |
| | **0.0 MSA** | **(44 - 110)** | **0.0** | **(0-50)** | **SW846 8310** |
| Phenanthrene | 0.0 MSA | (50 - 150) | | | SW846 8310 |
| | 0.0 MSA | (50 - 150) | 0.0 | (0-50) | SW846 8310 |
| **Pyrene** | **0.0 MSA** | **(49 - 115)** | | | **SW846 8310** |
| | **0.0 MSA** | **(49 - 115)** | **0.0** | **(0-54)** | **SW846 8310** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1-Methylnaphthalene | 0.0 SRD | (41 - 115) |
| | 0.0 SRD | (41 - 115) |

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MSA The recovery and RPD were not calculated because the sample was diluted beyond the ability to quantitate a recovery.

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.