20-Jul-2010

Eric Matzner
Pastor, Behling & Wheeler, LLC
2201 Double Creek Drive
Suite 4004
Round Rock, TX 78664

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: Waste Characterization Work Order: **1007064**

Dear Eric,

ALS Laboratory Group received 2 samples on 01-Jul-2010 01:36 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 23.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: R. Kevin Given

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

# ALS Laboratory Group

Date: 20-Jul-10

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** **1007064**

## Work Order Sample Summary

| Lab Samp ID | Client Sample ID | Matrix | Tag Number | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| 1007064-01 | HWPW-DC-1 | Soil | | 7/1/2010 06:30 | 7/1/2010 13:36 | ☐ |
| 1007064-02 | HWPW-DC-2 | Soil | | 7/1/2010 06:10 | 7/1/2010 13:36 | ☐ |

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** 1007064

# Case Narrative

Batch 44227, Low-Level Semivolatiles: Sample HWPW-DC-2 [ALS# 1007064-02] could not be analyzed at lower dilution due to the high concentration of target and non-target SVOCs.

# ALS Laboratory Group

**Date:** *20-Jul-10*

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** 1007064
**Sample ID:** HWPW-DC-1
**Lab ID:** 1007064-01
**Collection Date:** 7/1/2010 06:30 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| **TEXAS TPH** | | | **TX1005** | | Prep Date: **7/2/2010** | Analyst: **SE** |
| nC6 to nC12 | U | | 49 | mg/Kg | 1 | 7/2/2010 11:48 PM |
| >nC12 to nC28 | U | | 49 | mg/Kg | 1 | 7/2/2010 11:48 PM |
| >nC28 to nC35 | U | | 49 | mg/Kg | 1 | 7/2/2010 11:48 PM |
| Total Petroleum Hydrocarbon | U | | 49 | mg/Kg | 1 | 7/2/2010 11:48 PM |
| *Surr: 2-Fluorobiphenyl* | *76.8* | | *70-130* | *%REC* | 1 | 7/2/2010 11:48 PM |
| *Surr: Trifluoromethyl benzene* | *92.9* | | *70-130* | *%REC* | 1 | 7/2/2010 11:48 PM |
| **BTEX** | | | **SW8021B** | | | Analyst: **KKP** |
| Benzene | U | | 1.0 | µg/Kg | 1 | 7/3/2010 01:39 AM |
| **Toluene** | **0.46** | J | **1.0** | **µg/Kg** | 1 | 7/3/2010 01:39 AM |
| Ethylbenzene | U | | 1.0 | µg/Kg | 1 | 7/3/2010 01:39 AM |
| **Xylenes, Total** | **1.4** | J | **3.0** | **µg/Kg** | 1 | 7/3/2010 01:39 AM |
| *Surr: 4-Bromofluorobenzene* | *87.5* | | *75-131* | *%REC* | 1 | 7/3/2010 01:39 AM |
| *Surr: Trifluorotoluene* | *87.6* | | *73-130* | *%REC* | 1 | 7/3/2010 01:39 AM |
| **TCLP SEMIVOLATILES** | | | **SW1311/8270** | | Prep Date: **7/7/2010** | Analyst: **ACN** |
| 2,4,5-Trichlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| 2,4,6-Trichlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| 2,4-Dinitrotoluene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Cresols, Total | U | | 15 | µg/L | 1 | 7/8/2010 03:27 PM |
| Hexachlorobenzene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Hexachlorobutadiene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Hexachloroethane | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Nitrobenzene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Pentachlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| Pyridine | U | | 5.0 | µg/L | 1 | 7/8/2010 03:27 PM |
| *Surr: 2,4,6-Tribromophenol* | *77.2* | | *42-124* | *%REC* | 1 | 7/8/2010 03:27 PM |
| *Surr: 2-Fluorobiphenyl* | *85.0* | | *48-120* | *%REC* | 1 | 7/8/2010 03:27 PM |
| *Surr: 2-Fluorophenol* | *69.0* | | *20-120* | *%REC* | 1 | 7/8/2010 03:27 PM |
| *Surr: 4-Terphenyl-d14* | *87.8* | | *51-135* | *%REC* | 1 | 7/8/2010 03:27 PM |
| *Surr: Nitrobenzene-d5* | *81.4* | | *41-120* | *%REC* | 1 | 7/8/2010 03:27 PM |
| *Surr: Phenol-d6* | *70.9* | | *20-120* | *%REC* | 1 | 7/8/2010 03:27 PM |
| **LOW-LEVEL SEMIVOLATILES** | | | **SW8270** | | Prep Date: **7/2/2010** | Analyst: **LG** |
| 1,2-Diphenylhydrazine | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 2,4-Dimethylphenol | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 2,4-Dinitrotoluene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 2,6-Dinitrotoluene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 2-Chloronaphthalene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 2-Methylnaphthalene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

# ALS Laboratory Group

**Date:** *20-Jul-10*

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** 1007064
**Sample ID:** HWPW-DC-1
**Lab ID:** 1007064-01
**Collection Date:** 7/1/2010 06:30 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| 4-Nitrophenol | U | | 33 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| Acenaphthene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| Acenaphthylene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Anthracene** | **4.4** | J | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| **Benz(a)anthracene** | **13** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| **Benzo(a)pyrene** | **18** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| Bis(2-chloroethoxy)methane | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Bis(2-ethylhexyl)phthalate** | **16** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| **Chrysene** | **18** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| **Di-n-butyl phthalate** | **2.7** | J | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| Dibenzofuran | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Fluoranthene** | **34** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| Fluorene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| N-Nitrosodiphenylamine | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Naphthalene** | **4.1** | J | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| Nitrobenzene | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Pentachlorophenol** | **12** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| **Phenanthrene** | **13** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| Phenol | U | | 6.6 | µg/Kg | 1 | 7/15/2010 01:07 PM |
| **Pyrene** | **24** | | **6.6** | **µg/Kg** | 1 | 7/15/2010 01:07 PM |
| *Surr: 2,4,6-Tribromophenol* | *82.0* | | *36-126* | *%REC* | 1 | 7/15/2010 01:07 PM |
| *Surr: 2-Fluorobiphenyl* | *64.4* | | *43-125* | *%REC* | 1 | 7/15/2010 01:07 PM |
| *Surr: 2-Fluorophenol* | *59.8* | | *37-125* | *%REC* | 1 | 7/15/2010 01:07 PM |
| *Surr: 4-Terphenyl-d14* | *67.4* | | *32-125* | *%REC* | 1 | 7/15/2010 01:07 PM |
| *Surr: Nitrobenzene-d5* | *64.6* | | *37-125* | *%REC* | 1 | 7/15/2010 01:07 PM |
| *Surr: Phenol-d6* | *62.4* | | *40-125* | *%REC* | 1 | 7/15/2010 01:07 PM |
| **REACTIVE CYANIDE** | | | **SW-846** | | | Analyst: **HN** |
| Reactive Cyanide | U | n | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **REACTIVE SULFIDE** | | | **SW-846** | | | Analyst: **HN** |
| Reactive Sulfide | U | n | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **IGNITABILITY** | | | **SW1030** | | | Analyst: **JLC** |
| **Ignitability, Solid** | **Negative** | | | **no unit** | 1 | 7/12/2010 |
| **PH** | | | **SW9045B** | | | Analyst: **IAB** |
| **pH** | **6.96** | | **0.100** | **pH Units** | 1 | 7/7/2010 05:30 PM |

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

# ALS Laboratory Group

**Date:** *20-Jul-10*

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** 1007064
**Sample ID:** HWPW-DC-2
**Lab ID:** 1007064-02
**Collection Date:** 7/1/2010 06:10 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| **TEXAS TPH** | | | **TX1005** | | Prep Date: **7/2/2010** | Analyst: **SE** |
| nC6 to nC12 | U | | 49 | mg/Kg | 1 | 7/3/2010 12:19 AM |
| >nC12 to nC28 | U | | 49 | mg/Kg | 1 | 7/3/2010 12:19 AM |
| >nC28 to nC35 | U | | 49 | mg/Kg | 1 | 7/3/2010 12:19 AM |
| Total Petroleum Hydrocarbon | U | | 49 | mg/Kg | 1 | 7/3/2010 12:19 AM |
| *Surr: 2-Fluorobiphenyl* | *86.6* | | *70-130* | *%REC* | 1 | 7/3/2010 12:19 AM |
| *Surr: Trifluoromethyl benzene* | *106* | | *70-130* | *%REC* | 1 | 7/3/2010 12:19 AM |
| **BTEX** | | | **SW8021B** | | | Analyst: **KKP** |
| Benzene | U | | 1.0 | µg/Kg | 1 | 7/3/2010 01:19 AM |
| Toluene | U | | 1.0 | µg/Kg | 1 | 7/3/2010 01:19 AM |
| Ethylbenzene | U | | 1.0 | µg/Kg | 1 | 7/3/2010 01:19 AM |
| Xylenes, Total | U | | 3.0 | µg/Kg | 1 | 7/3/2010 01:19 AM |
| *Surr: 4-Bromofluorobenzene* | *75.3* | | *75-131* | *%REC* | 1 | 7/3/2010 01:19 AM |
| *Surr: Trifluorotoluene* | *83.7* | | *73-130* | *%REC* | 1 | 7/3/2010 01:19 AM |
| **TCLP SEMIVOLATILES** | | | **SW1311/8270** | | Prep Date: **7/7/2010** | Analyst: **ACN** |
| 2,4,5-Trichlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| 2,4,6-Trichlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| 2,4-Dinitrotoluene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Cresols, Total | U | | 15 | µg/L | 1 | 7/8/2010 03:49 PM |
| Hexachlorobenzene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Hexachlorobutadiene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Hexachloroethane | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Nitrobenzene | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Pentachlorophenol | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| Pyridine | U | | 5.0 | µg/L | 1 | 7/8/2010 03:49 PM |
| *Surr: 2,4,6-Tribromophenol* | *85.8* | | *42-124* | *%REC* | 1 | 7/8/2010 03:49 PM |
| *Surr: 2-Fluorobiphenyl* | *82.5* | | *48-120* | *%REC* | 1 | 7/8/2010 03:49 PM |
| *Surr: 2-Fluorophenol* | *67.8* | | *20-120* | *%REC* | 1 | 7/8/2010 03:49 PM |
| *Surr: 4-Terphenyl-d14* | *84.3* | | *51-135* | *%REC* | 1 | 7/8/2010 03:49 PM |
| *Surr: Nitrobenzene-d5* | *79.6* | | *41-120* | *%REC* | 1 | 7/8/2010 03:49 PM |
| *Surr: Phenol-d6* | *68.5* | | *20-120* | *%REC* | 1 | 7/8/2010 03:49 PM |
| **LOW-LEVEL SEMIVOLATILES** | | | **SW8270** | | Prep Date: **7/2/2010** | Analyst: **LG** |
| 1,2-Diphenylhydrazine | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **2,4-Dimethylphenol** | **110** | J | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| 2,4-Dinitrotoluene | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| 2,6-Dinitrotoluene | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| 2-Chloronaphthalene | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **2-Methylnaphthalene** | **130** | J | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

# ALS Laboratory Group

**Date:** *20-Jul-10*

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**Work Order:** 1007064
**Sample ID:** HWPW-DC-2
**Lab ID:** 1007064-02
**Collection Date:** 7/1/2010 06:10 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| 4-Nitrophenol | U | | 990 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **Acenaphthene** | **180** | J | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Acenaphthylene** | **2,300** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Anthracene** | **6,000** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Benz(a)anthracene** | **2,600** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Benzo(a)pyrene** | **5,000** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| Bis(2-chloroethoxy)methane | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **Bis(2-ethylhexyl)phthalate** | **780** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Chrysene** | **3,900** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| Di-n-butyl phthalate | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **Dibenzofuran** | **170** | J | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Fluoranthene** | **5,100** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Fluorene** | **310** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| N-Nitrosodiphenylamine | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **Naphthalene** | **500** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| Nitrobenzene | U | | 200 | µg/Kg | 10 | 7/15/2010 08:43 PM |
| **Pentachlorophenol** | **570** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Phenanthrene** | **1,100** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Phenol** | **440** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| **Pyrene** | **5,800** | | **200** | **µg/Kg** | 10 | 7/15/2010 08:43 PM |
| *Surr: 2,4,6-Tribromophenol* | *115* | | *36-126* | *%REC* | 10 | 7/15/2010 08:43 PM |
| *Surr: 2-Fluorobiphenyl* | *79.6* | | *43-125* | *%REC* | 10 | 7/15/2010 08:43 PM |
| *Surr: 2-Fluorophenol* | *58.8* | | *37-125* | *%REC* | 10 | 7/15/2010 08:43 PM |
| *Surr: 4-Terphenyl-d14* | *101* | | *32-125* | *%REC* | 10 | 7/15/2010 08:43 PM |
| *Surr: Nitrobenzene-d5* | *78.1* | | *37-125* | *%REC* | 10 | 7/15/2010 08:43 PM |
| *Surr: Phenol-d6* | *65.9* | | *40-125* | *%REC* | 10 | 7/15/2010 08:43 PM |
| **REACTIVE CYANIDE** | | | **SW-846** | | | Analyst: **HN** |
| Reactive Cyanide | U | n | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **REACTIVE SULFIDE** | | | **SW-846** | | | Analyst: **HN** |
| Reactive Sulfide | U | n | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **IGNITABILITY** | | | **SW1030** | | | Analyst: **JLC** |
| **Ignitability, Solid** | **Negative** | | | **no unit** | 1 | 7/12/2010 |
| **PH** | | | **SW9045B** | | | Analyst: **IAB** |
| **pH** | **7.50** | | **0.100** | **pH Units** | 1 | 7/7/2010 05:30 PM |

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

# ALS Laboratory Group

**Date:** 20-Jul-10

**WorkOrder:** 1007064
**Test Code:** 1311_SV
**Test Number:** SW1311/8270
**Test Name:** TCLP Semivolatiles

## METHOD DETECTION / REPORTING LIMITS

**Matrix:** Leachate **Units:** µg/L

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | 2,4,5-Trichlorophenol | 95-95-4 | 0.9 | 5 |
| A | 2,4,6-Trichlorophenol | 88-06-2 | 1.4 | 5 |
| A | 2,4-Dinitrotoluene | 121-14-2 | 1 | 5 |
| A | Cresols, Total | 1319-77-3 | 2 | 15 |
| A | Hexachlorobenzene | 118-74-1 | 1.1 | 5 |
| A | Hexachlorobutadiene | 87-68-3 | 1.1 | 5 |
| A | Hexachloroethane | 67-72-1 | 1 | 5 |
| A | Nitrobenzene | 98-95-3 | 0.8 | 5 |
| A | Pentachlorophenol | 87-86-5 | 1.6 | 5 |
| A | Pyridine | 110-86-1 | 2 | 5 |
| S | Surr: 2,4,6-Tribromophenol | 118-79-6 | 0 | 5 |
| S | Surr: 2-Fluorobiphenyl | 321-60-8 | 0 | 5 |
| S | Surr: 2-Fluorophenol | 367-12-4 | 0 | 5 |
| S | Surr: 4-Terphenyl-d14 | 1718-51-0 | 0 | 5 |
| S | Surr: Nitrobenzene-d5 | 4165-60-0 | 0 | 5 |
| S | Surr: Phenol-d6 | 13127-88-3 | 0 | 5 |

**WorkOrder:** 1007064
**Test Code:** 8270_LOW_S
**Test Number:** SW8270
**Test Name:** Low-Level Semivolatiles **Matrix:** Solid **Units:** µg/Kg

# METHOD DETECTION / REPORTING LIMITS

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | 1,2-Diphenylhydrazine | 122-66-7 | 2.2 | 6.6 |
| A | 2,4-Dimethylphenol | 105-67-9 | 3.3 | 6.6 |
| A | 2,4-Dinitrotoluene | 121-14-2 | 3.3 | 6.6 |
| A | 2,6-Dinitrotoluene | 606-20-2 | 3.2 | 6.6 |
| A | 2-Chloronaphthalene | 91-58-7 | 4.1 | 6.6 |
| A | 2-Methylnaphthalene | 91-57-6 | 2.7 | 6.6 |
| A | 4,6-Dinitro-2-methylphenol | 534-52-1 | 3.3 | 6.6 |
| A | 4-Nitrophenol | 100-02-7 | 3.8 | 33 |
| A | Acenaphthene | 83-32-9 | 2.2 | 6.6 |
| A | Acenaphthylene | 208-96-8 | 2.2 | 6.6 |
| A | Anthracene | 120-12-7 | 2.2 | 6.6 |
| A | Benz(a)anthracene | 56-55-3 | 2.8 | 6.6 |
| A | Benzo(a)pyrene | 50-32-8 | 2.3 | 6.6 |
| A | Bis(2-chloroethoxy)methane | 111-91-1 | 2.4 | 6.6 |
| A | Bis(2-ethylhexyl)phthalate | 117-81-7 | 6.6 | 6.6 |
| A | Chrysene | 218-01-9 | 2.9 | 6.6 |
| A | Di-n-butyl phthalate | 84-74-2 | 2.5 | 6.6 |
| A | Dibenzofuran | 132-64-9 | 2.2 | 6.6 |
| A | Fluoranthene | 206-44-0 | 2.2 | 6.6 |
| A | Fluorene | 86-73-7 | 2.2 | 6.6 |
| A | N-Nitrosodiphenylamine | 86-30-6 | 2.2 | 6.6 |
| A | Naphthalene | 91-20-3 | 3.3 | 6.6 |
| A | Nitrobenzene | 98-95-3 | 3.3 | 6.6 |
| A | Pentachlorophenol | 87-86-5 | 2.8 | 6.6 |
| A | Phenanthrene | 85-01-8 | 3 | 6.6 |
| A | Phenol | 108-95-2 | 3.3 | 6.6 |
| A | Pyrene | 129-00-0 | 2.2 | 6.6 |
| S | Surr: 2,4,6-Tribromophenol | 118-79-6 | 0 | 6.6 |
| S | Surr: 2-Fluorobiphenyl | 321-60-8 | 0 | 6.6 |
| S | Surr: 2-Fluorophenol | 367-12-4 | 0 | 6.6 |
| S | Surr: 4-Terphenyl-d14 | 1718-51-0 | 0 | 6.6 |
| S | Surr: Nitrobenzene-d5 | 4165-60-0 | 0 | 6.6 |
| S | Surr: Phenol-d6 | 13127-88-3 | 0 | 6.6 |

**WorkOrder:** 1007064
**Test Code:** BTEX_S
**Test Number:** SW8021B
**Test Name:** BTEX

# METHOD DETECTION / REPORTING LIMITS

**Matrix:** Solid **Units:** µg/Kg

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | Benzene | 71-43-2 | 0.2 | 1 |
| A | Ethylbenzene | 100-41-4 | 0.3 | 1 |
| A | Toluene | 108-88-3 | 0.4 | 1 |
| M | Xylenes, Total | 1330-20-7 | 0.5 | 3 |
| S | Surr: 4-Bromofluorobenzene | 460-00-4 | 0.3 | 1 |
| S | Surr: Trifluorotoluene | 98-08-8 | 0.3 | 1 |

**WorkOrder:** 1007064
**Test Code:** IGN_S 1030
**Test Number:** SW1030
**Test Name:** Ignitability

# METHOD DETECTION / REPORTING LIMITS

**Matrix:** Solid Waste **Units:** no unit

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | Ignitability, Solid | IGNIT | | |

**WorkOrder:** 1007064
**Test Code:** PH_S
**Test Number:** SW9045B
**Test Name:** pH

# METHOD DETECTION / REPORTING LIMITS

**Matrix:** Solid **Units:** pH Units

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | pH | PH | 0.1 | 0.1 |

**WorkOrder:** 1007064
**Test Code:** RCN_S
**Test Number:** SW-846
**Test Name:** Reactive Cyanide **Matrix:** Solid **Units:** mg/Kg

# METHOD DETECTION / REPORTING LIMITS

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | Reactive Cyanide | RCN | 23 | 40 |

**WorkOrder:** 1007064
**Test Code:** RS_S
**Test Number:** SW-846
**Test Name:** Reactive Sulfide

# METHOD DETECTION / REPORTING LIMITS

**Matrix:** Solid **Units:** mg/Kg

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | Reactive Sulfide | RS | 14 | 40 |

**WorkOrder:** 1007064
**Test Code:** TX1005_S_REV3
**Test Number:** TX1005
**Test Name:** Texas TPH **Matrix:** Solid **Units:** mg/Kg

# METHOD DETECTION / REPORTING LIMITS

| Type | Analyte | CAS | MDL | PQL |
|---|---|---|---|---|
| A | >nC12 to nC28 | TPHDRO | 16 | 50 |
| A | >nC28 to nC35 | 10W40MOTO | 16 | 50 |
| A | nC6 to nC12 | TPHGRO | 16 | 50 |
| M | Total Petroleum Hydrocarbon | TPH | 16 | 50 |
| S | Surr: 2-Fluorobiphenyl | 321-60-8 | 0 | 0 |
| S | Surr: Trifluoromethyl benzene | 98-08-8 | 0 | 0 |

# QC BATCH REPORT

Batch ID: **44248** Instrument ID **FID-12** Method: **TX1005**

**MBLK** Sample ID: **FBLKS1-100702-44248** Units: **mg/Kg** Analysis Date: **7/2/2010 04:52 PM**

Client ID: Run ID: **FID-12_100702A** SeqNo: **2017740** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | U | 50 | | | | | | | | |
| >nC12 to nC28 | U | 50 | | | | | | | | |
| >nC28 to nC35 | U | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | U | 50 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *22.09* | 0 | *25* | 0 | *88.3* | *70-130* | 0 | | | |
| *Surr: Trifluoromethyl benzene* | *22.94* | 0 | *25* | 0 | *91.8* | *70-130* | 0 | | | |

**LCS** Sample ID: **FLCSS1-100702-2-44248** Units: **mg/Kg** Analysis Date: **7/2/2010 06:28 PM**

Client ID: Run ID: **FID-12_100702A** SeqNo: **2017747** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 200.3 | 50 | 250 | 0 | 80.1 | 75-125 | 0 | | | |
| >nC12 to nC28 | 237.4 | 50 | 250 | 0 | 95 | 75-125 | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *24.81* | 0 | *25* | 0 | *99.3* | *70-130* | 0 | | | |
| *Surr: Trifluoromethyl benzene* | *22.15* | 0 | *25* | 0 | *88.6* | *70-130* | 0 | | | |

**LCS** Sample ID: **FLCSS1-100702-44248** Units: **mg/Kg** Analysis Date: **7/2/2010 05:24 PM**

Client ID: Run ID: **FID-12_100702A** SeqNo: **2017782** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 199 | 50 | 250 | 0 | 79.6 | 75-125 | 0 | | | |
| >nC12 to nC28 | 226.7 | 50 | 250 | 0 | 90.7 | 75-125 | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *23.29* | 0 | *25* | 0 | *93.2* | *70-130* | 0 | | | |
| *Surr: Trifluoromethyl benzene* | *23.59* | 0 | *25* | 0 | *94.4* | *70-130* | 0 | | | |

**LCSD** Sample ID: **FLCSDS1-100702-44248** Units: **mg/Kg** Analysis Date: **7/2/2010 05:56 PM**

Client ID: Run ID: **FID-12_100702A** SeqNo: **2017744** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 196.9 | 50 | 250 | 0 | 78.8 | 75-125 | 199 | 1.04 | 20 | |
| >nC12 to nC28 | 228 | 50 | 250 | 0 | 91.2 | 75-125 | 226.7 | 0.587 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *25.57* | 0 | *25* | 0 | *102* | *70-130* | 23.29 | *9.33* | *20* | |
| *Surr: Trifluoromethyl benzene* | *23.26* | 0 | *25* | 0 | *93.1* | *70-130* | 23.59 | *1.39* | *20* | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44248** Instrument ID **FID-12** Method: **TX1005**

**LCSD** Sample ID: **FLCSDS1-100702-2-44248** Units: **mg/Kg** Analysis Date: **7/2/2010 06:59 PM**
Client ID: Run ID: **FID-12_100702A** SeqNo: **2017749** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 208.8 | 50 | 250 | 0 | 83.5 | 75-125 | 200.3 | 4.19 | 20 | |
| >nC12 to nC28 | 246.7 | 50 | 250 | 0 | 98.7 | 75-125 | 237.4 | 3.85 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *26.25* | 0 | *25* | 0 | *105* | *70-130* | 24.81 | *5.62* | *20* | |
| *Surr: Trifluoromethyl benzene* | *22.83* | 0 | *25* | 0 | *91.3* | *70-130* | 22.15 | *3.04* | *20* | |

**MS** Sample ID: **1007042-01AMS** Units: **mg/Kg** Analysis Date: **7/2/2010 08:04 PM**
Client ID: Run ID: **FID-12_100702A** SeqNo: **2017754** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 220 | 49 | 246.5 | 17.26 | 82.2 | 75-125 | 0 | | | |
| >nC12 to nC28 | 245.1 | 49 | 246.5 | 3.539 | 98 | 75-125 | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *26.82* | 0 | *24.65* | 0 | *109* | *70-130* | 0 | | | |
| *Surr: Trifluoromethyl benzene* | *24.41* | 0 | *24.65* | 0 | *99* | *70-130* | 0 | | | |

**MSD** Sample ID: **1007042-01AMSD** Units: **mg/Kg** Analysis Date: **7/2/2010 08:36 PM**
Client ID: Run ID: **FID-12_100702A** SeqNo: **2017755** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 223 | 49 | 246.5 | 17.26 | 83.5 | 75-125 | 220 | 1.35 | 20 | |
| >nC12 to nC28 | 255.4 | 49 | 246.5 | 3.539 | 102 | 75-125 | 245.1 | 4.13 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *26.47* | 0 | *24.65* | 0 | *107* | *70-130* | 26.82 | *1.33* | *20* | |
| *Surr: Trifluoromethyl benzene* | *24.24* | 0 | *24.65* | 0 | *98.3* | *70-130* | 24.41 | *0.701* | *20* | |

**The following samples were analyzed in this batch:** 1007064-01B 1007064-02B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **R93638** Instrument ID **BTEX3** Method: **SW8021B**

**MBLK** Sample ID: **BBLKS1-070210-R93638** Units: **µg/Kg** Analysis Date: **7/2/2010 05:18 PM**
Client ID: Run ID: **BTEX3_100702A** SeqNo: **2018407** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | U | 1.0 | | | | | | | | |
| Toluene | U | 1.0 | | | | | | | | |
| Ethylbenzene | U | 1.0 | | | | | | | | |
| Xylenes, Total | U | 3.0 | | | | | | | | |
| *Surr: 4-Bromofluorobenzene* | *24.54* | 1.0 | *30* | 0 | *81.8* | *75-131* | 0 | | | |
| *Surr: Trifluorotoluene* | *24.56* | 1.0 | *30* | 0 | *81.9* | *73-130* | 0 | | | |

**LCS** Sample ID: **BLCSS1-070210-R93638** Units: **µg/Kg** Analysis Date: **7/2/2010 04:27 PM**
Client ID: Run ID: **BTEX3_100702A** SeqNo: **2018406** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 19.9 | 1.0 | 20 | 0 | 99.5 | 74-129 | 0 | | | |
| Toluene | 19.89 | 1.0 | 20 | 0 | 99.4 | 75-128 | 0 | | | |
| Ethylbenzene | 19.93 | 1.0 | 20 | 0 | 99.7 | 73-127 | 0 | | | |
| Xylenes, Total | 60.36 | 3.0 | 60 | 0 | 101 | 74-127 | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *27.51* | 1.0 | *30* | 0 | *91.7* | *75-131* | 0 | | | |
| *Surr: Trifluorotoluene* | *26.09* | 1.0 | *30* | 0 | *87* | *73-130* | 0 | | | |

**MS** Sample ID: **1007063-01AMS** Units: **µg/Kg** Analysis Date: **7/2/2010 10:58 PM**
Client ID: Run ID: **BTEX3_100702A** SeqNo: **2018420** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20.53 | 1.0 | 20 | 0 | 103 | 74-129 | 0 | | | |
| Toluene | 20.21 | 1.0 | 20 | 0 | 101 | 75-128 | 0 | | | |
| Ethylbenzene | 19.89 | 1.0 | 20 | 0 | 99.4 | 73-127 | 0 | | | |
| Xylenes, Total | 60.48 | 3.0 | 60 | 0 | 101 | 74-127 | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *28.61* | 1.0 | *30* | 0 | *95.4* | *75-131* | 0 | | | |
| *Surr: Trifluorotoluene* | *27.25* | 1.0 | *30* | 0 | *90.8* | *73-130* | 0 | | | |

**MSD** Sample ID: **1007063-01AMSD** Units: **µg/Kg** Analysis Date: **7/2/2010 11:18 PM**
Client ID: Run ID: **BTEX3_100702A** SeqNo: **2018422** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20.78 | 1.0 | 20 | 0 | 104 | 74-129 | 20.53 | 1.18 | 30 | |
| Toluene | 20.85 | 1.0 | 20 | 0 | 104 | 75-128 | 20.21 | 3.09 | 30 | |
| Ethylbenzene | 20.57 | 1.0 | 20 | 0 | 103 | 73-127 | 19.89 | 3.35 | 30 | |
| Xylenes, Total | 62.78 | 3.0 | 60 | 0 | 105 | 74-127 | 60.48 | 3.73 | 30 | |
| *Surr: 4-Bromofluorobenzene* | *28.51* | 1.0 | *30* | 0 | *95* | *75-131* | 28.61 | *0.333* | *30* | |
| *Surr: Trifluorotoluene* | *27.63* | 1.0 | *30* | 0 | *92.1* | *73-130* | 27.25 | *1.39* | *30* | |

**The following samples were analyzed in this batch:** 1007064-01A 1007064-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44227** Instrument ID **SV-6** Method: **SW8270**

**MBLK** Sample ID: **SBLKS2-100702-44227** Units: **µg/Kg** Analysis Date: **7/15/2010 12:26 PM**

Client ID: Run ID: **SV-6_100715A** SeqNo: **2030269** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | U | 6.6 | | | | | | | | |
| 2,4-Dimethylphenol | U | 6.6 | | | | | | | | |
| 2,4-Dinitrotoluene | U | 6.6 | | | | | | | | |
| 2,6-Dinitrotoluene | U | 6.6 | | | | | | | | |
| 2-Chloronaphthalene | U | 6.6 | | | | | | | | |
| 2-Methylnaphthalene | U | 6.6 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | U | 6.6 | | | | | | | | |
| 4-Nitrophenol | U | 33 | | | | | | | | |
| Acenaphthene | U | 6.6 | | | | | | | | |
| Acenaphthylene | U | 6.6 | | | | | | | | |
| Anthracene | U | 6.6 | | | | | | | | |
| Benz(a)anthracene | U | 6.6 | | | | | | | | |
| Benzo(a)pyrene | U | 6.6 | | | | | | | | |
| Bis(2-chloroethoxy)methane | U | 6.6 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | U | 6.6 | | | | | | | | |
| Chrysene | U | 6.6 | | | | | | | | |
| Di-n-butyl phthalate | U | 6.6 | | | | | | | | |
| Dibenzofuran | U | 6.6 | | | | | | | | |
| Fluoranthene | U | 6.6 | | | | | | | | |
| Fluorene | U | 6.6 | | | | | | | | |
| N-Nitrosodiphenylamine | U | 6.6 | | | | | | | | |
| Naphthalene | U | 6.6 | | | | | | | | |
| Nitrobenzene | U | 6.6 | | | | | | | | |
| Pentachlorophenol | U | 6.6 | | | | | | | | |
| Phenanthrene | U | 6.6 | | | | | | | | |
| Phenol | U | 6.6 | | | | | | | | |
| Pyrene | U | 6.6 | | | | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *126.2* | 6.6 | *166.7* | 0 | *75.7* | *36-126* | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *129.8* | 6.6 | *166.7* | 0 | *77.9* | *43-125* | 0 | | | |
| *Surr: 2-Fluorophenol* | *116.8* | 6.6 | *166.7* | 0 | *70.1* | *37-125* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *131.2* | 6.6 | *166.7* | 0 | *78.7* | *32-125* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *132.9* | 6.6 | *166.7* | 0 | *79.7* | *37-125* | 0 | | | |
| *Surr: Phenol-d6* | *118.1* | 6.6 | *166.7* | 0 | *70.9* | *40-125* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44227** Instrument ID **SV-6** Method: **SW8270**

**LCS** Sample ID: **SLCSS2-100702-44227** Units: **µg/Kg** Analysis Date: **7/15/2010 12:45 PM**

Client ID: Run ID: **SV-6_100715A** SeqNo: **2030270** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 124.7 | 6.6 | 166.7 | 0 | 74.8 | 50-135 | 0 | | | |
| 2,4-Dimethylphenol | 97.05 | 6.6 | 166.7 | 0 | 58.2 | 45-120 | 0 | | | |
| 2,4-Dinitrotoluene | 141.5 | 6.6 | 166.7 | 0 | 84.9 | 50-130 | 0 | | | |
| 2,6-Dinitrotoluene | 143.5 | 6.6 | 166.7 | 0 | 86.1 | 50-125 | 0 | | | |
| 2-Chloronaphthalene | 155.5 | 6.6 | 166.7 | 0 | 93.3 | 50-145 | 0 | | | |
| 2-Methylnaphthalene | 133.1 | 6.6 | 166.7 | 0 | 79.8 | 50-120 | 0 | | | |
| 4,6-Dinitro-2-methylphenol | 118.2 | 6.6 | 166.7 | 0 | 70.9 | 15-135 | 0 | | | |
| 4-Nitrophenol | 133.9 | 33 | 166.7 | 0 | 80.4 | 40-147 | 0 | | | |
| Acenaphthene | 123.8 | 6.6 | 166.7 | 0 | 74.3 | 50-120 | 0 | | | |
| Acenaphthylene | 135.2 | 6.6 | 166.7 | 0 | 81.1 | 50-120 | 0 | | | |
| Anthracene | 139.9 | 6.6 | 166.7 | 0 | 84 | 50-123 | 0 | | | |
| Benz(a)anthracene | 129.8 | 6.6 | 166.7 | 0 | 77.9 | 50-131 | 0 | | | |
| Benzo(a)pyrene | 146.4 | 6.6 | 166.7 | 0 | 87.8 | 50-130 | 0 | | | |
| Bis(2-chloroethoxy)methane | 129.1 | 6.6 | 166.7 | 0 | 77.5 | 50-120 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 141.2 | 6.6 | 166.7 | 0 | 84.7 | 21-148 | 0 | | | |
| Chrysene | 146.4 | 6.6 | 166.7 | 0 | 87.8 | 50-130 | 0 | | | |
| Di-n-butyl phthalate | 156.1 | 6.6 | 166.7 | 0 | 93.7 | 50-140 | 0 | | | |
| Dibenzofuran | 125.9 | 6.6 | 166.7 | 0 | 75.5 | 50-125 | 0 | | | |
| Fluoranthene | 142 | 6.6 | 166.7 | 0 | 85.2 | 50-131 | 0 | | | |
| Fluorene | 130.2 | 6.6 | 166.7 | 0 | 78.1 | 50-125 | 0 | | | |
| N-Nitrosodiphenylamine | 128.1 | 6.6 | 166.7 | 0 | 76.9 | 50-130 | 0 | | | |
| Naphthalene | 133.1 | 6.6 | 166.7 | 0 | 79.9 | 50-125 | 0 | | | |
| Nitrobenzene | 129.6 | 6.6 | 166.7 | 0 | 77.8 | 50-125 | 0 | | | |
| Pentachlorophenol | 108.2 | 6.6 | 166.7 | 0 | 64.9 | 23-136 | 0 | | | |
| Phenanthrene | 128.4 | 6.6 | 166.7 | 0 | 77.1 | 50-125 | 0 | | | |
| Phenol | 129 | 6.6 | 166.7 | 0 | 77.4 | 45-130 | 0 | | | |
| Pyrene | 130.3 | 6.6 | 166.7 | 0 | 78.2 | 45-130 | 0 | | | |
| *Surr: 2,4,6-Tribromophenol* | *136.1* | 6.6 | *166.7* | 0 | *81.7* | *36-126* | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *119.9* | 6.6 | *166.7* | 0 | *72* | *43-125* | 0 | | | |
| *Surr: 2-Fluorophenol* | *119* | 6.6 | *166.7* | 0 | *71.4* | *37-125* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *111.7* | 6.6 | *166.7* | 0 | *67* | *32-125* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *117.2* | 6.6 | *166.7* | 0 | *70.3* | *37-125* | 0 | | | |
| *Surr: Phenol-d6* | *120* | 6.6 | *166.7* | 0 | *72* | *40-125* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44227** Instrument ID **SV-6** Method: **SW8270**

**MS** Sample ID: **1007064-01CMS** Units: **µg/Kg** Analysis Date: **7/15/2010 01:26 PM**

Client ID: **HWPW-DC-1** Run ID: **SV-6_100715A** SeqNo: **2030272** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 123.7 | 6.6 | 166.6 | 0 | 74.3 | 50-135 | 0 | | | |
| 2,4-Dimethylphenol | 118.6 | 6.6 | 166.6 | 0 | 71.2 | 45-120 | 0 | | | |
| 2,4-Dinitrotoluene | 142.3 | 6.6 | 166.6 | 0 | 85.4 | 50-130 | 0 | | | |
| 2,6-Dinitrotoluene | 137.1 | 6.6 | 166.6 | 0 | 82.3 | 50-125 | 0 | | | |
| 2-Chloronaphthalene | 136.4 | 6.6 | 166.6 | 0 | 81.9 | 50-145 | 0 | | | |
| 2-Methylnaphthalene | 117 | 6.6 | 166.6 | 0 | 70.2 | 50-120 | 0 | | | |
| 4,6-Dinitro-2-methylphenol | 119.9 | 6.6 | 166.6 | 0 | 72 | 15-135 | 0 | | | |
| 4-Nitrophenol | 124 | 33 | 166.6 | 0 | 74.5 | 40-147 | 0 | | | |
| Acenaphthene | 117.1 | 6.6 | 166.6 | 0 | 70.3 | 50-120 | 0 | | | |
| Acenaphthylene | 122.9 | 6.6 | 166.6 | 0 | 73.8 | 50-120 | 0 | | | |
| Anthracene | 130.1 | 6.6 | 166.6 | 4.395 | 75.5 | 50-123 | 0 | | | |
| Benz(a)anthracene | 145.6 | 6.6 | 166.6 | 12.72 | 79.8 | 50-131 | 0 | | | |
| Benzo(a)pyrene | 156.7 | 6.6 | 166.6 | 17.93 | 83.3 | 50-130 | 0 | | | |
| Bis(2-chloroethoxy)methane | 114 | 6.6 | 166.6 | 0 | 68.4 | 50-120 | 0 | | | |
| Bis(2-ethylhexyl)phthalate | 148.2 | 6.6 | 166.6 | 16.08 | 79.3 | 21-148 | 0 | | | |
| Chrysene | 160 | 6.6 | 166.6 | 17.85 | 85.3 | 50-130 | 0 | | | |
| Di-n-butyl phthalate | 152.2 | 6.6 | 166.6 | 2.675 | 89.7 | 50-140 | 0 | | | |
| Dibenzofuran | 118.1 | 6.6 | 166.6 | 0 | 70.9 | 50-125 | 0 | | | |
| Fluoranthene | 169 | 6.6 | 166.6 | 33.77 | 81.2 | 50-131 | 0 | | | |
| Fluorene | 124.3 | 6.6 | 166.6 | 0 | 74.6 | 50-125 | 0 | | | |
| N-Nitrosodiphenylamine | 129.4 | 6.6 | 166.6 | 0 | 77.7 | 50-130 | 0 | | | |
| Naphthalene | 118.8 | 6.6 | 166.6 | 4.136 | 68.9 | 50-125 | 0 | | | |
| Nitrobenzene | 114.3 | 6.6 | 166.6 | 0 | 68.6 | 50-125 | 0 | | | |
| Pentachlorophenol | 128.8 | 6.6 | 166.6 | 11.7 | 70.3 | 23-136 | 0 | | | |
| Phenanthrene | 134.9 | 6.6 | 166.6 | 12.52 | 73.5 | 50-125 | 0 | | | |
| Phenol | 113.6 | 6.6 | 166.6 | 0 | 68.2 | 45-130 | 0 | | | |
| Pyrene | 148 | 6.6 | 166.6 | 24.08 | 74.4 | 45-130 | 0 | | | |
| *Surr: 2,4,6-Tribromophenol* | *142.2* | 6.6 | *166.6* | 0 | *85.4* | *36-126* | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *107.4* | 6.6 | *166.6* | 0 | *64.5* | *43-125* | 0 | | | |
| *Surr: 2-Fluorophenol* | *101.8* | 6.6 | *166.6* | 0 | *61.1* | *37-125* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *111.8* | 6.6 | *166.6* | 0 | *67.1* | *32-125* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *107.4* | 6.6 | *166.6* | 0 | *64.5* | *37-125* | 0 | | | |
| *Surr: Phenol-d6* | *107.8* | 6.6 | *166.6* | 0 | *64.7* | *40-125* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44227** Instrument ID **SV-6** Method: **SW8270**

**MSD** Sample ID: **1007064-01CMSD** Units: **µg/Kg** Analysis Date: **7/15/2010 01:45 PM**

Client ID: **HWPW-DC-1** Run ID: **SV-6_100715A** SeqNo: **2030273** Prep Date: **7/2/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 127.4 | 6.6 | 166.4 | 0 | 76.6 | 50-135 | 123.7 | 2.9 | 30 | |
| 2,4-Dimethylphenol | 122.8 | 6.6 | 166.4 | 0 | 73.8 | 45-120 | 118.6 | 3.45 | 30 | |
| 2,4-Dinitrotoluene | 143.2 | 6.6 | 166.4 | 0 | 86.1 | 50-130 | 142.3 | 0.639 | 30 | |
| 2,6-Dinitrotoluene | 139.6 | 6.6 | 166.4 | 0 | 83.9 | 50-125 | 137.1 | 1.84 | 30 | |
| 2-Chloronaphthalene | 144 | 6.6 | 166.4 | 0 | 86.5 | 50-145 | 136.4 | 5.42 | 30 | |
| 2-Methylnaphthalene | 125.3 | 6.6 | 166.4 | 0 | 75.3 | 50-120 | 117 | 6.86 | 30 | |
| 4,6-Dinitro-2-methylphenol | 121.4 | 6.6 | 166.4 | 0 | 73 | 15-135 | 119.9 | 1.25 | 30 | |
| 4-Nitrophenol | 147.8 | 33 | 166.4 | 0 | 88.8 | 40-147 | 124 | 17.5 | 30 | |
| Acenaphthene | 120.4 | 6.6 | 166.4 | 0 | 72.4 | 50-120 | 117.1 | 2.77 | 30 | |
| Acenaphthylene | 128.2 | 6.6 | 166.4 | 0 | 77.1 | 50-120 | 122.9 | 4.25 | 30 | |
| Anthracene | 137.1 | 6.6 | 166.4 | 4.395 | 79.8 | 50-123 | 130.1 | 5.22 | 30 | |
| Benz(a)anthracene | 148.3 | 6.6 | 166.4 | 12.72 | 81.5 | 50-131 | 145.6 | 1.89 | 30 | |
| Benzo(a)pyrene | 161.8 | 6.6 | 166.4 | 17.93 | 86.5 | 50-130 | 156.7 | 3.18 | 30 | |
| Bis(2-chloroethoxy)methane | 118.9 | 6.6 | 166.4 | 0 | 71.4 | 50-120 | 114 | 4.2 | 30 | |
| Bis(2-ethylhexyl)phthalate | 154.8 | 6.6 | 166.4 | 16.08 | 83.4 | 21-148 | 148.2 | 4.36 | 30 | |
| Chrysene | 163.7 | 6.6 | 166.4 | 17.85 | 87.6 | 50-130 | 160 | 2.26 | 30 | |
| Di-n-butyl phthalate | 166.4 | 6.6 | 166.4 | 2.675 | 98.4 | 50-140 | 152.2 | 8.94 | 30 | |
| Dibenzofuran | 121.4 | 6.6 | 166.4 | 0 | 73 | 50-125 | 118.1 | 2.73 | 30 | |
| Fluoranthene | 178.5 | 6.6 | 166.4 | 33.77 | 87 | 50-131 | 169 | 5.48 | 30 | |
| Fluorene | 127.7 | 6.6 | 166.4 | 0 | 76.7 | 50-125 | 124.3 | 2.69 | 30 | |
| N-Nitrosodiphenylamine | 132 | 6.6 | 166.4 | 0 | 79.3 | 50-130 | 129.4 | 1.94 | 30 | |
| Naphthalene | 127.5 | 6.6 | 166.4 | 4.136 | 74.1 | 50-125 | 118.8 | 7.01 | 30 | |
| Nitrobenzene | 123.4 | 6.6 | 166.4 | 0 | 74.2 | 50-125 | 114.3 | 7.7 | 30 | |
| Pentachlorophenol | 130.6 | 6.6 | 166.4 | 11.7 | 71.4 | 23-136 | 128.8 | 1.37 | 30 | |
| Phenanthrene | 147.6 | 6.6 | 166.4 | 12.52 | 81.2 | 50-125 | 134.9 | 8.98 | 30 | |
| Phenol | 115.8 | 6.6 | 166.4 | 0 | 69.6 | 45-130 | 113.6 | 1.99 | 30 | |
| Pyrene | 157.2 | 6.6 | 166.4 | 24.08 | 80 | 45-130 | 148 | 5.99 | 30 | |
| *Surr: 2,4,6-Tribromophenol* | *140.2* | 6.6 | *166.4* | 0 | *84.3* | *36-126* | 142.2 | *1.46* | *30* | |
| *Surr: 2-Fluorobiphenyl* | *112.7* | 6.6 | *166.4* | 0 | *67.7* | *43-125* | 107.4 | *4.84* | *30* | |
| *Surr: 2-Fluorophenol* | *103.6* | 6.6 | *166.4* | 0 | *62.2* | *37-125* | 101.8 | *1.76* | *30* | |
| *Surr: 4-Terphenyl-d14* | *115.9* | 6.6 | *166.4* | 0 | *69.7* | *32-125* | 111.8 | *3.61* | *30* | |
| *Surr: Nitrobenzene-d5* | *112.7* | 6.6 | *166.4* | 0 | *67.8* | *37-125* | 107.4 | *4.87* | *30* | |
| *Surr: Phenol-d6* | *108.4* | 6.6 | *166.4* | 0 | *65.1* | *40-125* | 107.8 | *0.482* | *30* | |

**The following samples were analyzed in this batch:** 1007064-01C 1007064-02C

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44322** Instrument ID **SV-5** Method: **SW1311/8270**

**MBLK** Sample ID: **SBLKT1-100707-44322** Units: **µg/L** Analysis Date: **7/8/2010 01:49 PM**

Client ID: Run ID: **SV-5_100708A** SeqNo: **2021966** Prep Date: **7/7/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | U | 5.0 | | | | | | | | |
| 2,4,6-Trichlorophenol | U | 5.0 | | | | | | | | |
| 2,4-Dinitrotoluene | U | 5.0 | | | | | | | | |
| Cresols, Total | U | 15 | | | | | | | | |
| Hexachlorobenzene | U | 5.0 | | | | | | | | |
| Hexachlorobutadiene | U | 5.0 | | | | | | | | |
| Hexachloroethane | U | 5.0 | | | | | | | | |
| Nitrobenzene | U | 5.0 | | | | | | | | |
| Pentachlorophenol | U | 5.0 | | | | | | | | |
| Pyridine | U | 5.0 | | | | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *83.57* | 5.0 | *100* | 0 | *83.6* | *42-124* | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *91.1* | 5.0 | *100* | 0 | *91.1* | *48-120* | 0 | | | |
| *Surr: 2-Fluorophenol* | *73.92* | 5.0 | *100* | 0 | *73.9* | *20-120* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *85.48* | 5.0 | *100* | 0 | *85.5* | *51-135* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *89.21* | 5.0 | *100* | 0 | *89.2* | *41-120* | 0 | | | |
| *Surr: Phenol-d6* | *75.1* | 5.0 | *100* | 0 | *75.1* | *20-120* | 0 | | | |

**LCS** Sample ID: **SLCST1-100707-44322** Units: **µg/L** Analysis Date: **7/7/2010 06:39 PM**

Client ID: Run ID: **SV-5_100708A** SeqNo: **2021970** Prep Date: **7/7/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 89.19 | 5.0 | 100 | 0 | 89.2 | 52-115 | 0 | | | |
| 2,4,6-Trichlorophenol | 88.23 | 5.0 | 100 | 0 | 88.2 | 53-115 | 0 | | | |
| 2,4-Dinitrotoluene | 48.54 | 5.0 | 50 | 0 | 97.1 | 56-115 | 0 | | | |
| Cresols, Total | 208.4 | 15 | 250 | 0 | 83.3 | 35-115 | 0 | | | |
| Hexachlorobenzene | 44.86 | 5.0 | 50 | 0 | 89.7 | 54-115 | 0 | | | |
| Hexachlorobutadiene | 41.38 | 5.0 | 50 | 0 | 82.8 | 51-115 | 0 | | | |
| Hexachloroethane | 40.84 | 5.0 | 50 | 0 | 81.7 | 54-115 | 0 | | | |
| Nitrobenzene | 42 | 5.0 | 50 | 0 | 84 | 40-124 | 0 | | | |
| Pentachlorophenol | 93.57 | 5.0 | 100 | 0 | 93.6 | 45-125 | 0 | | | |
| Pyridine | 30.84 | 5.0 | 50 | 0 | 61.7 | 34-115 | 0 | | | |
| *Surr: 2,4,6-Tribromophenol* | *86.85* | 5.0 | *100* | 0 | *86.8* | *42-124* | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *87.97* | 5.0 | *100* | 0 | *88* | *48-120* | 0 | | | |
| *Surr: 2-Fluorophenol* | *75.01* | 5.0 | *100* | 0 | *75* | *20-120* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *82.37* | 5.0 | *100* | 0 | *82.4* | *51-135* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *79.82* | 5.0 | *100* | 0 | *79.8* | *41-120* | 0 | | | |
| *Surr: Phenol-d6* | *75.4* | 5.0 | *100* | 0 | *75.4* | *20-120* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **44322** Instrument ID **SV-5** Method: **SW1311/8270**

**LCSD** Sample ID: **SLCSDT1-100707-44322** Units: **µg/L** Analysis Date: **7/7/2010 07:01 PM**

Client ID: Run ID: **SV-5_100708A** SeqNo: **2021971** Prep Date: **7/7/2010** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 88.53 | 5.0 | 100 | 0 | 88.5 | 52-115 | 89.19 | 0.746 | 25 | |
| 2,4,6-Trichlorophenol | 87.73 | 5.0 | 100 | 0 | 87.7 | 53-115 | 88.23 | 0.56 | 25 | |
| 2,4-Dinitrotoluene | 46.72 | 5.0 | 50 | 0 | 93.4 | 56-115 | 48.54 | 3.82 | 25 | |
| Cresols, Total | 198.4 | 15 | 250 | 0 | 79.3 | 35-115 | 208.4 | 4.92 | 25 | |
| Hexachlorobenzene | 46.12 | 5.0 | 50 | 0 | 92.2 | 54-115 | 44.86 | 2.77 | 25 | |
| Hexachlorobutadiene | 40.91 | 5.0 | 50 | 0 | 81.8 | 51-115 | 41.38 | 1.14 | 25 | |
| Hexachloroethane | 38.59 | 5.0 | 50 | 0 | 77.2 | 54-115 | 40.84 | 5.67 | 25 | |
| Nitrobenzene | 41.6 | 5.0 | 50 | 0 | 83.2 | 40-124 | 42 | 0.963 | 25 | |
| Pentachlorophenol | 95.44 | 5.0 | 100 | 0 | 95.4 | 45-125 | 93.57 | 1.98 | 25 | |
| Pyridine | 31.79 | 5.0 | 50 | 0 | 63.6 | 34-115 | 30.84 | 3.04 | 25 | |
| *Surr: 2,4,6-Tribromophenol* | *87.17* | 5.0 | *100* | 0 | *87.2* | *42-124* | 86.85 | *0.371* | *25* | |
| *Surr: 2-Fluorobiphenyl* | *84.37* | 5.0 | *100* | 0 | *84.4* | *48-120* | 87.97 | *4.18* | *25* | |
| *Surr: 2-Fluorophenol* | *73.74* | 5.0 | *100* | 0 | *73.7* | *20-120* | 75.01 | *1.71* | *25* | |
| *Surr: 4-Terphenyl-d14* | *84.24* | 5.0 | *100* | 0 | *84.2* | *51-135* | 82.37 | *2.25* | *25* | |
| *Surr: Nitrobenzene-d5* | *76.98* | 5.0 | *100* | 0 | *77* | *41-120* | 79.82 | *3.62* | *25* | |
| *Surr: Phenol-d6* | *71.19* | 5.0 | *100* | 0 | *71.2* | *20-120* | 75.4 | *5.75* | *25* | |

**The following samples were analyzed in this batch:** 1007064-01D 1007064-02D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **R93737** Instrument ID **WetChem** Method: **SW9045B**

**LCS** Sample ID: **LCS-070710-R93737** Units: **pH Units** Analysis Date: **7/7/2010 05:30 PM**
Client ID: Run ID: **WETCHEM_100707F** SeqNo: **2020039** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| pH | 6.03 | 0.10 | 6 | 0 | 100 | 90-110 | 0 | | | |

**DUP** Sample ID: **1007037-10BDUP** Units: **pH Units** Analysis Date: **7/7/2010 05:30 PM**
Client ID: Run ID: **WETCHEM_100707F** SeqNo: **2020057** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.89 | 0.10 | 0 | 0 | 0 | 0-0 | 8.93 | 0.449 | 20 | |

**The following samples were analyzed in this batch:** 1007064-01D 1007064-02D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Work Order:** 1007064
**Project:** Waste Characterization

# QC BATCH REPORT

Batch ID: **R93922** Instrument ID **WetChem** Method: **SW1030**

**DUP** Sample ID: **1007064-01DDUP** Units: **no unit** Analysis Date: **7/12/2010**
Client ID: **HWPW-DC-1** Run ID: **WETCHEM_100712I** SeqNo: **2024673** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ignitability, Solid | U | 0 | 0 | 0 | 0 | | 0 | 0 | | |

**DUP** Sample ID: **1007142-02CDUP** Units: **no unit** Analysis Date: **7/12/2010**
Client ID: Run ID: **WETCHEM_100712I** SeqNo: **2024674** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ignitability, Solid | U | 0 | 0 | 0 | 0 | | 0 | 0 | | |

**The following samples were analyzed in this batch:** 1007064-01D 1007064-02D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Pastor, Behling & Wheeler, LLC
**Project:** Waste Characterization
**WorkOrder:** **1007064**

# QUALIFIERS, ACRONYMS, UNITS

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |

| Acronym | Description |
|---|---|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Units Reported | Description |
|---|---|
| µg/Kg | Micrograms per Kilogram |
| µg/L | Micrograms per Liter |
| mg/Kg | Milligrams per Kilogram |
| no unit | |
| pH Units | |

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# Chain of Custody Form

Page 1 of 1

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1059104

| Customer Information | | Project Information | | Parameter/Method Request for Analysis | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | Waste Characterization | A | BTEX (8021) |
| Work Order | | Project Number | 1620 | B | TPH (TX 1005) |
| Company Name | Pastor, Behling & Wheeler, LLC | Bill To Company | Union Pacific Railroad | C | LOW SVOC (8270) Select |
| Send Report To | Eric Matzner | Invoice Attn | | D | RCI Profile |
| Address | 2201 Double Creek Drive<br>Suite 4004 | Address | 1400 Douglas Street<br>Stop 0750 | E | TCLP SVOC (SW-846) |
| | | | | F | |
| City/State/Zip | Round Rock, TX 78664 | City/State/Zip | Omaha, NE 681790750 | G | |
| Phone | (512) 671-3434 | Phone | | H | |
| Fax | (512) 671-3446 | Fax | | I | |
| e-Mail Address | | e-Mail Address | | J | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HWPW - DC-1 | 7-1-10 | 0630 | S | | | X | X | X | X | X | | | | | | |
| 2 | HWPW - DC-2 | 7-1-10 | 0610 | S | | | X | X | X | X | X | | | | | | |
| 3 | VC - DC-1 | 7-1-10 | 0620 | S | | | X | X | X | X | X | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: JOHN BRAINERD John Brainerd

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brainerd Date: 7-1-10 Time: 1350

Relinquished by: Date: Time:

Received by:

Received by (Laboratory): 7-1-10 1350

Notes:

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

| Cooler ID | Cooler Temp. |
|---|---|
| | |
| | |
| | |

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

## Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **01-Jul-10 13:36**

Work Order: **1007064** Received by: **RSZ**

Checklist completed by Robert D. Harris (eSignature) 01-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 20-Jul-10 (Date)

Matrices: soils
Carrier name: Client

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 2.6c | 002 | |
| Cooler(s)/Kit(s): | 3478 | | |
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

# ALS Laboratory Group

Date: 09-Jul-10

**Client:** ALS Laboratory Group
**Project:** 1007064
**Work Order:** **1007084**

## Work Order Sample Summary

| Lab Samp ID | Client Sample ID | Matrix | Tag Number | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| 1007084-01 | 1007064-01E | Soil | | 7/1/2010 06:30 | 7/3/2010 10:25 | ☐ |
| 1007084-02 | 1007064-02E | Soil | | 7/1/2010 06:10 | 7/3/2010 10:25 | ☐ |
| 1007084-03 | 1007064-03E | Soil | | 7/1/2010 06:20 | 7/3/2010 10:25 | ☐ |

# ALS Laboratory Group

Date: 09-Jul-10

**Client:** ALS Laboratory Group
**Project:** 1007064
**WorkOrder:** **1007084**

## QUALIFIERS, ACRONYMS, UNITS

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |

| Acronym | Description |
|---|---|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |

| Units Reported | Description |
|---|---|
| mg/Kg | Milligrams per Kilogram |

# ALS Laboratory Group

**Date:** *09-Jul-10*

**Client:** ALS Laboratory Group
**Project:** 1007064
**Work Order:** 1007084
**Sample ID:** 1007064-01E
**Lab ID:** 1007084-01
**Collection Date:** 7/1/2010 06:30 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| **CYANIDE, REACTIVE** | | | **SW7.3.3.2** | | | Analyst: **EE** |
| Cyanide, Reactive | ND | | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **SULFIDE, REACTIVE** | | | **SW7.3.4.2** | | | Analyst: **EE** |
| Sulfide, Reactive | ND | | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Laboratory Group

**Date:** *09-Jul-10*

**Client:** ALS Laboratory Group
**Project:** 1007064
**Work Order:** 1007084
**Sample ID:** 1007064-02E
**Lab ID:** 1007084-02
**Collection Date:** 7/1/2010 06:10 AM
**Matrix:** SOIL

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|
| **CYANIDE, REACTIVE** | | | **SW7.3.3.2** | | | Analyst: **EE** |
| Cyanide, Reactive | ND | | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |
| **SULFIDE, REACTIVE** | | | **SW7.3.4.2** | | | Analyst: **EE** |
| Sulfide, Reactive | ND | | 40.0 | mg/Kg | 1 | 7/9/2010 09:00 AM |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** ALS Laboratory Group

**Work Order:** 1007084

**Project:** 1007064

# QC BATCH REPORT

Batch ID: **R78916** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

**MBLK** Sample ID: **WBLKW1-070710-R78916** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**

Client ID: Run ID: **WETCHEM_100707D** SeqNo: **1363419** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfide, Reactive | ND | 40 | | | | | | | | |

**The following samples were analyzed in this batch:** 1007084-01A 1007084-02A 1007084-03A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ALS Laboratory Group
**Work Order:** 1007084
**Project:** 1007064

# QC BATCH REPORT

Batch ID: **R78917** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

**MBLK** Sample ID: **WBLKW1-070710-R78917** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**
Client ID: Run ID: **WETCHEM_100707E** SeqNo: **1363431** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Reactive | ND | 40 | | | | | | | | |

**LCS** Sample ID: **WLCSW1-070710-R78917** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**
Client ID: Run ID: **WETCHEM_100707E** SeqNo: **1363432** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Reactive | 205.5 | 40 | 250 | 0 | 82.2 | 75-125 | 0 | | | |

**LCSD** Sample ID: **WLCSDW1-070710-R78917** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**
Client ID: Run ID: **WETCHEM_100707E** SeqNo: **1363446** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Reactive | 234.9 | 40 | 250 | 0 | 94 | 75-125 | 205.5 | 13.3 | 35 | |

**MS** Sample ID: **1006726-03A MS** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**
Client ID: Run ID: **WETCHEM_100707E** SeqNo: **1363436** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Reactive | 249.6 | 40 | 250 | 0 | 99.8 | 50-150 | 0 | | | |

**MSD** Sample ID: **1006726-03A MSD** Units: **mg/Kg** Analysis Date: **7/7/2010 09:00 AM**
Client ID: Run ID: **WETCHEM_100707E** SeqNo: **1363437** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cyanide, Reactive | 249.6 | 40 | 250 | 0 | 99.8 | 50-150 | 249.6 | 0 | 35 | |

**The following samples were analyzed in this batch:** 1007084-01A 1007084-02A 1007084-03A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

WO # 1007084

Subcontractor:
ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424
TEL: (616) 399-6070
FAX: (616) 399-6185
Acct #:

# CHAIN-OF-CUSTODY RECORD



Date: 01-Jul-10
COC ID: 9032
Due Date 13-Jul-10

| Customer Information | | Project Information | | Parameter/Method Request for Analysis | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | 1007064 | A | Reactive Cyanide (SW-846) |
| Work Order | | Project Number | | B | Reactive Sulfide (SW-846) |
| Company Name | ALS Group USA, Corp. | Bill To Company | ALS Group USA, Corp. | C | |
| Send Report To | R. Kevin Given | Inv Attn | Accounts Payable | D | |
| Address | 10450 Stancliff Rd, Suite 210 | Address | 10450 Stancliff Rd, Suite 210 | E | |
| | | | | F | |
| City/State/Zip | Houston, Texas 77099-4338 | City/State/Zip | Houston, Texas 77099-4338 | G | |
| Phone | (281) 530-5656 | Phone | (281) 530-5656 | H | |
| Fax | (281) 530-5887 | Fax | (281) 530-5887 | I | |
| eMail Address | kevin.given@alsenviro.com | eMail CC | glenda.ramos@alsenviro.com | J | |

| Sample ID | Matrix | Collection Date 24hr | Bottle | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1007064-01E (HWPW-DC-1) | Soil | 7/1/2010 6:30 | (1) 4OZGNEAT | X | X | | | | | | | | |
| 1007064-02E (HWPW-DC-2) | Soil | 7/1/2010 6:10 | (1) 4OZGNEAT | X | X | | | | | | | | |
| 1007064-03E (VC-DC-1) | Soil | 7/1/2010 6:20 | (1) 4OZGNEAT | X | X | | | | | | | | |

**Comments:**

Please analyze for Reactive Cyanide & Reactive Sulfide.

| Relinquished by: | Date/Time | Received by: | Date/Time | Cooler IDs | Report/QC Level |
|---|---|---|---|---|---|
| | | | | | Std. |
| Relinquished by: | Date/Time | Received by: | Date/Time | | |
| | | | 7/3/10 1025 | | |

3.8°c

ALS Laboratory Group

## Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **03-Jul-10 10:25**

Work Order: **1007084** Received by: **JR**

Checklist completed by Diane Shaw (eSignature) 06-Jul-10 (Date) Reviewed by: Ann Preston (eSignature) 06-Jul-10 (Date)

Matrices: Soil
Carrier name: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 3.8 c | | |
| Cooler(s)/Kit(s): | | | |
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ORIGIN ID: JGQA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

Ship Date: 02JUL10
ActWgt: 32.5 LB
CAD: 300130/CAFE2453

TO **RECEIVING**
**ALS LABORATORY**
**3352 128TH AVE.**

**HOLLAND, MI 49424**

(616) 399-6070

FedEx Express

(US)

J09200911302223

**Trk# 4340 2160 2062**

**PRIORITY OVERNIGHT**

3352 128TH AVE.

Part # 156148-434 NRIT V3 12-09

**PLACE THIS LABEL ON PACKAGE**
**NEXT TO THE SHIPPING LABEL**

## Kevin Given

**From:** Eric C. Matzner [eric.matzner@pbwllc.com]
**Sent:** Monday, July 19, 2010 7:32 AM
**To:** Kevin Given
**Subject:** RE: 1007064 Waste Characterization

Kevin,
Can we break out the VC-DC-1 sample into a separate report? That sample is for a different site (UPRR United Creosote).

Thanks,

Eric C. Matzner, P.G.
Pastor, Behling & Wheeler, LLC
512-671-3434

**From:** Kevin Given [mailto:Kevin.Given@ALSGlobal.com]
**Sent:** Friday, July 16, 2010 4:26 PM
**To:** Eric C. Matzner
**Cc:** UPRR-SysDat@craworld.com
**Subject:** 1007064 Waste Characterization

Attached you will find the Final report for the above work order/project. No hardcopy version will be sent. Let me know if you have any questions.

Thanks for your patronage.

Regards,

R. Kevin Given
ALS Laboratory Group
10450 Stancliff Rd, Suite 210
Houston, Texas 77099-4338
(281) 530-5656
http://www.alsglobal.com

to support operational activities. All information will be held in accordance with the Company's Privacy Policy which can be found on the Company's website - www.campbell.com.au.
**********