Mountain States ACCUTEST LABORATORIES

10/31/11

Technical Report for

KRW Consulting, Inc.

PCU 197-33A

1103-03A

Accutest Job Number: D28945

Sampling Date: 10/26/11

Report to:

KRW Consulting, Inc.
8000 West 14th Avenue Suite 200
Lakewood, CO 80214
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dknudson@krwconsulting.com; jhess@krwconsulting.com;
ATTN: Dwayne Knudson

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)


Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7

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# Sample Summary

KRW Consulting, Inc.

**Job No:** D28945

PCU 197-33A
Project No: 1103-03A

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| D28945-1 | 10/26/11 | 09:00 | DS | 10/27/11 | SO | Soil | BACKFILL MATERIAL |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

# CASE NARRATIVE / CONFORMANCE SUMMARY

| | | | |
|---|---|---|---|
| **Client:** | KRW Consulting, Inc. | **Job No** | D28945 |
| **Site:** | PCU 197-33A | **Report Dat** | 10/31/2011 5:00:56 PM |

On 10/27/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 5.9 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D28945 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Volatiles by GCMS By Method SW846 8260B

**Matrix** SO **Batch ID:** V5V1091

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28910-1MS, D28910-1MSD were used as the QC samples indicated.

## Volatiles by GC By Method SW846 8015B

**Matrix** SO **Batch ID:** GGB773

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28909-1MS, D28909-1MSD were used as the QC samples indicated.

## Extractables by GC By Method SW846-8015B

**Matrix** SO **Batch ID:** OP4740

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28910-1MS, D28910-1MSD were used as the QC samples indicated.

## Wet Chemistry By Method SM19 2540B M

**Matrix** SO **Batch ID:** GN12227

- The data for SM19 2540B M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

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## Sample Results

Report of Analysis

# Report of Analysis





**Client Sample ID:** BACKFILL MATERIAL
**Lab Sample ID:** D28945-1
**Matrix:** SO - Soil
**Method:** SW846 8260B
**Project:** PCU 197-33A

**Date Sampled:** 10/26/11
**Date Received:** 10/27/11
**Percent Solids:** 87.9

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 5V18235.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume | Methanol Aliquot |
|---|---|---|---|
| Run #1 | 5.08 g | 5.0 ml | 100 ul |
| Run #2 | | | |

**Purgeable Aromatics**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 63 | 28 | ug/kg | |
| 108-88-3 | Toluene | ND | 130 | 63 | ug/kg | |
| 100-41-4 | Ethylbenzene | ND | 130 | 31 | ug/kg | |
| 1330-20-7 | Xylene (total) | ND | 250 | 130 | ug/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 2037-26-5 | Toluene-D8 | 98% | | 61-130% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 80% | | 62-130% |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** BACKFILL MATERIAL
**Lab Sample ID:** D28945-1
**Matrix:** SO - Soil
**Method:** SW846 8015B
**Project:** PCU 197-33A

**Date Sampled:** 10/26/11
**Date Received:** 10/27/11
**Percent Solids:** 87.9

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | GB13656.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume | Methanol Aliquot |
|---|---|---|---|
| Run #1 | 5.1 g | 5.0 ml | 100 ul |
| Run #2 | | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 13 | 6.3 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 80% | | 60-140% |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis





**Client Sample ID:** BACKFILL MATERIAL
**Lab Sample ID:** D28945-1
**Matrix:** SO - Soil
**Method:** SW846-8015B SW846 3546
**Project:** PCU 197-33A

**Date Sampled:** 10/26/11
**Date Received:** 10/27/11
**Percent Solids:** 87.9

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | FD11134.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.0 g | 2.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | ND | 15 | 9.9 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 79% | | 61-142% |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY

PAGE 1 OF 1

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

FED-EX Tracking # | Bottle Order Control # D28945
Accutest Quote # | Accutest Job #

**Client / Reporting Information**

Company Name: KRW CONSULTING
Street Address: 8000 W 14TH AVE STE 200
City State Zip: LAKEWOOD CO 80214
Project Contact: DWAYNE KNUDSON E-mail:
Phone #: 970 756 4280 Fax #:
Sampler(s) Name(s): DAVID SANDERS Phone #:

**Project Information**

Project Name: PCU 197-33A
Street:
City:
Project#: 1103-03A
Client PO#:
Project Manager: JOE HESS

**Billing Information ( If different from Report to)**

Company Name:
Street Address:
City State Zip:
Attention: PO#:

**Requested Analysis ( see TEST CODE sheet)**

DRO, GRO, BTEX

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | Number of preserved Bottles: HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | Bisulfate | DRO | GRO | BTEX | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BACKFILL MATERIAL | | 10-26-11 | 9:00 | DLS | SO | 3 | | | | | X | | | | | X | X | X | 01 |

**Data Deliverable Information**

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" ( Level 2)
- [ ] Commercial "B" +Narrative
- [ ] FULLT1 ( Level 3+4 )
- [ ] State Forms
- [ ] EDD Format
- [x] PDF

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

**Comments / Special Instructions**

PLEASE EMAIL RESULTS TO XOM KRW DICEANCE FIELD TEAM

**Turnaround Time ( Business days)**

Approved By (Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| | Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|---|
| 1 | DAVID SANDERS | 10-26-11 | 1 Fedex Service Center | 2 | | 2 10/27 13:30 |
| 3 | | | 3 | 4 | | 4 |
| 5 | Relinquished by: | Date Time: | Received By: 5 | Custody Seal # HDLO | Intact / Not Intact | Preserved where applicable | On Ice | Cooler Temp. 5.9 |

**D28945: Chain of Custody**
**Page 1 of 2**

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** D28945 **Client:** KRW CONSULTING **Immediate Client Services Action Required:** No

**Date / Time Received:** 10/27/2011 1:50:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

**Project:** PCU-197-33A **Airbill #'s:** HDCO

| Cooler Security | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| Cooler Temperature | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | Infared gun | | |
| 3. Cooler media: | Ice (bag) | | |

| Quality Control Preservation | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☐ | | ☐ | |
| 2. Trip Blank listed on COC: | ☐ | | ☐ | |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☐ | | ☐ | ☑ |

| Sample Integrity - Documentation | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| Sample Integrity - Condition | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| Sample Integrity - Instructions | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume rec'd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

**D28945: Chain of Custody**
**Page 2 of 2**

Mountain States ACCUTEST LABORATORIES



## GC/MS Volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V5V1091-MB | 5V18228.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

D28945-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 50 | 22 | ug/kg | |
| 100-41-4 | Ethylbenzene | ND | 100 | 25 | ug/kg | |
| 108-88-3 | Toluene | ND | 100 | 50 | ug/kg | |
| 1330-20-7 | Xylene (total) | ND | 200 | 100 | ug/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 2037-26-5 | Toluene-D8 | 104% | 61-130% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | 62-130% |

# Blank Spike Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V5V1091-BS | 5V18229.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

D28945-1

| CAS No. | Compound | Spike ug/kg | BSP ug/kg | BSP % | Limits |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 50 | 55.5 | 111 | 70-130 |
| 100-41-4 | Ethylbenzene | 50 | 57.8 | 116 | 70-130 |
| 108-88-3 | Toluene | 50 | 55.4 | 111 | 70-130 |
| 1330-20-7 | Xylene (total) | 150 | 172 | 115 | 70-130 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 2037-26-5 | Toluene-D8 | 101% | 61-130% |
| 460-00-4 | 4-Bromofluorobenzene | 106% | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 88% | 62-130% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| D28910-1MS | 5V18231.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |
| D28910-1MSD | 5V18232.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |
| D28910-1 | 5V18230.D | 1 | 10/28/11 | DC | n/a | n/a | V5V1091 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260B

D28945-1

| CAS No. | Compound | D28910-1 ug/kg | Q | Spike ug/kg | MS ug/kg | MS % | MSD ug/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 71-43-2 | Benzene | 122 | | 3260 | 3770 | 112 | 3700 | 110 | 2 | 70-134/30 |
| 100-41-4 | Ethylbenzene | 58.5 | J | 3260 | 3810 | 115 | 3760 | 114 | 1 | 70-137/30 |
| 108-88-3 | Toluene | 382 | | 3260 | 3900 | 108 | 3900 | 108 | 0 | 70-130/30 |
| 1330-20-7 | Xylene (total) | 432 | | 9770 | 11900 | 117 | 11700 | 115 | 2 | 61-131/30 |

| CAS No. | Surrogate Recoveries | MS | MSD | D28910-1 | Limits |
|---|---|---|---|---|---|
| 2037-26-5 | Toluene-D8 | 99% | 97% | 98% | 61-130% |
| 460-00-4 | 4-Bromofluorobenzene | 110% | 109% | 93% | 53-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 83% | 84% | 82% | 62-130% |

Mountain States ACCUTEST LABORATORIES

## GC Volatiles



### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GGB773-MB | GB13645.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |

**The QC reported here applies to the following samples:** **Method:** SW846 8015B

D28945-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 10 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 80% | 60-140% |

# Blank Spike Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| GGB773-BS | GB13646.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |

**The QC reported here applies to the following samples:** **Method:** SW846 8015B

D28945-1

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 110 | 122 | 111 | 70-130 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 92% | 60-140% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| D28909-1MS | GB13648.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |
| D28909-1MSD | GB13649.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |
| D28909-1 | GB13647.D | 1 | 10/27/11 | SK | n/a | n/a | GGB773 |

**The QC reported here applies to the following samples:** **Method:** SW846 8015B

D28945-1

| CAS No. | Compound | D28909-1 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 5.86 | J | 121 | 135 | 106 | 136 | 107 | 1 | 70-130/30 |

| CAS No. | Surrogate Recoveries | MS | MSD | D28909-1 | Limits |
|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 93% | 88% | 93% | 60-140% |

Mountain States ACCUTEST LABORATORIES

## GC Semi-volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4740-MB | FD11124.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |

**The QC reported here applies to the following samples:** **Method:** SW846-8015B

D28945-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | ND | 13 | 8.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 110% | 61-142% |

# Blank Spike Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4740-BS | FD11125.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |

**The QC reported here applies to the following samples:** **Method:** SW846-8015B

D28945-1

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 667 | 648 | 97 | 60-130 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 98% | 61-142% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** D28945
**Account:** KRWCCOL KRW Consulting, Inc.
**Project:** PCU 197-33A

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP4740-MS | FD11126.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |
| OP4740-MSD | FD11127.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |
| D28910-1 | FD11128.D | 1 | 10/28/11 | CS | 10/28/11 | OP4740 | GFD553 |

**The QC reported here applies to the following samples:** **Method:** SW846-8015B

D28945-1

| CAS No. | Compound | D28910-1 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | ND | | 768 | 718 | 93 | 721 | 94 | 0 | 24-157/35 |

| CAS No. | Surrogate Recoveries | MS | MSD | D28910-1 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | 83% | 86% | 61-142% |