Environmental Consulting \& Technology, Inc.

## SCOPE OF WORK

## DATA GAPS

Available Sanborn fire insurance maps were reviewed in an effort to address concerns about possible data gaps in the subject property historical uses. Maps for the following years were available through Environmental Data Resources, Inc. (EDR): 1922, 1928, 1950 and 1965.

The 1922 Sanborn map indicated that Southeast $5^{\text {th }}$ Terrace (south Dell Street), Southeast $5^{\text {th }}$ Avenue (Middle Street), Southeast $6^{\text {th }}$ Street (north Dell Street) and Depot Avenue were all present. Sweetwater Branch was shown on the map, as well as the Municipal Light \& Water Plant (adjacent existing GRU water plant). At that time, the subject properties contained vacant land and multiple residential dwellings. The railroad line was shown located to the adjacent south, in the middle of Depot Avenue.

In the 1928 map, the properties looked very similar. However, one new structure was noted. A storage building was located along Southeast $5^{\text {th }}$ Terrace (south Dell Street, with an associated gasoline tank shown. A general warehouse and a cement products plant (concrete bulk plant and kiln) had been constructed just east of the subject properties. The 1950 fire insurance map indicated that the warehouse building located at the site (original warehouse for the Operations Center) has been constructed and was currently being used by a general contractor. The storage building was still located along Southeast $5^{\text {th }}$ Terrace (south Dell Street). The map indicated that the small storage building was also used as a garage for vehicle storage. Residential structures were still located on the remaining

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sections of what is now known as Parcel 2. Additional residential dwellings were also shown both east and west of Southeast $6^{\text {th }}$ Street (north Dell Street), on the current Parcel 1 property.

Significant changes to the properties had occurred by the time the 1965 Sanborn map was drawn. On Parcel 1, a small commercial building had been built and the west section of the property was labeled as Municipal Parking. Multiple residential dwellings were still located west of Southeast $6^{\text {th }}$ Street and at least one residential dwelling remained west of $6^{\text {th }}$ Terrace. On Parcel 2, a building addition to the Operation Center warehouse building had been constructed and the building was actually labeled "Utility Dept. Operations Center". The map indicated that a gasoline tank had been located along the east side of the warehouse at that time. A large section of Parcel 2 was labeled as parking and storage. Two storage buildings were shown near the southwest corner of the parcel, and a third storage building located adjacent to Southeast Depot Avenue. Multiple residential dwellings were still located adjacent to Southeast $7^{\text {th }}$ Street (Roper Avenue) and Southeast Depot Avenue. The railroad line was still shown running through Depot Avenue.

## Copies of the available Sanborn Maps are provided in Appendix A.

Based on the review of the available Sanborn Maps, the property uses were documented back to 1922 . The 1922 map indicated that the subject property contained undeveloped land and residential property. This indicated that the subject property was first developed for residential use prior to 1922. The 1928 Sanborn map showed the first commercial structure (a storage building and gasoline tank), and the 1950 Sanborn map indicated the first major commercial development with the construction of the Operations Center warehouse. Based on the historical information, a data gap would exist from 1922 until first development. However, this data gap does not appear to be an environmental concern based on the documented property uses in 1922.

## Lead Testing Survey

On April 13, 2011, American Management Resources Corporation (AMRC) conducted onsite testing of building components for the presence of lead-based paint. Testing was performed using an X-Ray Florescence (XRF) instrument, which provided instant concentration readings. A total of 325 samples were tested throughout the following buildings:

- Operations Center and Warehouse (Warehouse \#1)
- Warehouse \#2
- Wastewater Building
- Field Service Building
- Field Services Technician Building

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Twenty of the samples tested indicated lead at concentrations above the EPA standard of 1.0 milligrams per centimeters squared $\left(\mathrm{mg} / \mathrm{cm}^{2}\right)$. A summary of these sample results is as follows:

| Sample No. | Building | Sample Results $\mathrm{mg} / \mathrm{cm}^{2}$ | Material Description |
| :---: | :---: | :---: | :---: |
| 7 | Warehouse \#2 | 1.7 | Ramp Frame - metal |
| 8 | Warehouse \#2 | 1.8 | Ramp Hand Rail - metal |
| 9 | Warehouse \#2 | 1.0 | Ramp Wall/Curb - concrete |
| 26 | Warehouse \#2 | 1.0 | Safety Hand Rail - metal |
| 29 | Warehouse \#1 (OC) | 1.0 | Door Frame, metal - SE Corner Door |
| 31 | Warehouse \#1 (OC) | 1.0 | Structural Steel, metal - SE Corner Door |
| 32 | Warehouse \#1 (OC) | 1.7 | Driveway Safety Post - metal |
| 34 | Warehouse \#1 (OC) | 1.0 | Structural Steel, shade cover, metal - East side |
| 47 | Warehouse \#1 (OC) | $>9.9$ | Safety stripes on Warehouse floor - concrete |
| 50 | Warehouse \#1 (OC) | 1.0 | Door frame, metal - West side door with "not an exit sign" over it |
| 53 | Warehouse \#1 (OC) | 2.4 | Stair Frame, metal - to north side overhead storage |
| 54 | Warehouse \#1 (OC) | 1.4 | Stair Tread, metal - to north side overhead storage |
| 55 | Warehouse \#1 (OC) | 1.0 | Stair Hand Rail - to north side overhead storage |
| 59 | Warehouse \#1 (OC) | 1.0 | Safety Railing, metal - upstairs storage NE |
| 196 | Operations Center | 1.0 | Door Lintle, metal - NW door |
| 238 | Wastewater Bldg | 1.0 | Door Frame, metal - to exterior SW corner |
| 242 | Wastewater Bldg | 7.3 | Foyer Floor - ceramic |
| 247 | Wastewater Bldg | 6.2 | Rear Foyer Floor - ceramic |
| 248 | Wastewater Bldg | 6.5 | Men's Bathroom Floor ceramic |
| 292 | Field Service Tech Bldg | 3.2 | Door frame, metal - back door |

Notes: OC - Operation Center Warehouse
However, detectable lead concentrations were measured in a majority of the samples tested. Therefore, the Occupational Safety and Health Administration (OSHA) lead in

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construction standard (29 Code of Federal Regulation [CFR] 1926.62) applies if any type of demolition, remodeling, or construction activities will be conducted that may disturb any detectable lead concentration. A copy of the full report from AMRC is included in Appendix B.

ECT recommends that if any demolition, remodeling, or construction activities will be conducted in the areas where detectable lead concentrations were documented, the contractor uses appropriate work practices to ensure that lead exposures are not created. An air monitoring and sampling plan would also be advised.

## ASBESTOS CONTAINING MATERIALS SURVEY

On May 25, 2011, ECT performed a limited Asbestos Containing Materials (ACM) Survey. The survey was performed in general accordance with the EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) survey requirements and using the EPA Asbestos Hazard Emergency Response Act sampling protocols. A total of 139 samples were collected throughout the following buildings:

- Operations Center and Warehouse (Warehouse \#1)
- Wastewater Building
- Field Service Building
- Field Services Technician Building

Any material containing more than one percent asbestos is considered to be an ACM according to the EPA asbestos regulations ( 40 CFR Part 763) and OSHA standards (29 CFR 1926.1101 and 1910.1001). Five of the 139 samples collected indicated asbestos above the 1 percent limit:

| Sample <br> No. | Building | Sample Results | Material Description |
| :---: | :---: | :---: | :---: |
| 51 | Field Services | $25 \%$ Chrysotile | Unknown color vinyl floor tile <br> (bottom layer), front doorway |
| 72 | Field Services | $3 \%$ Chrysotile | Grey window caulking on the front <br> exterior of building |
| 74 | Operations Center $\&$ <br> Warehouse in the rear bathroom | $40 \%$ Chrysotile under the |  |
| 85 | $10 \%$ Amosite | White pipe insulation with white wrap <br> in main mechanical room |  |
| 96 |  <br> Warehouse | $10 \%$ Chrysotile | Black condensation barrier under the <br> sink in west kitchenette area |

Note: Duplicate samples from the areas that indicated positive results were not analyzed.

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The asbestos detected in the window caulk, floor tile, and condensation barrier was considered to be an EPA NESAHP Category II, non-friable material. However, the asbestos detected in the white pipe insulation with white wrap was considered to be friable, and is therefore a regulated ACM (RACM). All materials were observed to be in good condition. A copy of the full ACM Survey report is included in Appendix C.

ECT recommends that should any renovation, construction or demolition activities be conducted, an accredited asbestos abatement contractor be consulted prior to beginning activities. The ACM detected during the survey would have a high damage potential, which could result in non-friable material becoming recategorized as friable material, and would therefore be considered an RACM.

## SOIL AND GROUNDWATER INVESTIGATIONS

## FIELD METHODOLOGIES

On April 13 and 14, 2011, ECT mobilized to the site to conduct subsurface soil and groundwater investigations. A total of 29 soil borings (SB-1 through SB-29) were installed on Parcel 1 and Parcel 2. Along with the soil samples collected at each boring location, five of the borings were utilized to collected groundwater samples. A site plan, providing an aerial view of the subject properties, is provided in Figure 1. Figure 2 presents a boring location plan and indicates the various areas of concern on each parcel.

The soil borings were completed to depths ranging from 0.5 to 15 feet. Soil samples were collected from the borings at 1 - or 2 -foot intervals, depending on the area of concern, and screened using an organic vapor analyzer equipped with a flame ionization detector (OVA-FID). The samples were also inspected for visual and olfactory evidence of impact.

One soil sample in each boring was collected for laboratory analysis from the sample that generally indicated the highest OVA concentration in the vadose zone (above the estimated groundwater table). Soil borings SB-16 and SB-17 were used to evaluate both the aboveground storage tank (AST) area and the former railroad corridor. Therefore, two soil samples were collected from these borings: one sample at 0.5 feet for railroad corridor analytes and one deeper sample selected based on OVA measurements for the AST area analytes.

The soil samples were shipped to Alpha Analytics, Inc. in Orlando, Florida, for various analyses depending on the area of concern. The following is a summary of the analyses performed:

- Parcel 1 Parking Area: volatile organic carbons (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310, total recoverable petroleum hydrocarbons (TRPH) by the FL-PRO Method, 8 Resource Conservation and Recovery Act (RCRA) metals by EPA Method 6010B
- West Property Boundary: VOCs, PAHs, TRPH, and RCRA metals

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- Operations Center: VOCs, PAHs, TRPH, and RCRA metals
- Generator Area: VOCs, PAHs, TRPH and RCRA metals
- AST Area: VOCs, PAHs, TRPH and RCRA metals
- Railroad Corridor: PAHs and RCRA metals
- Parcel 2 Parking Area: VOCs, PAHs, TRPH, RCRA metals, and polychlorinated biphenyls (PCBs) by EPA Method 608
- PCB Building: VOCs, PAHs, TRPH, RCRA metals, and PCBs


## FIELD RESULTS

Organic vapor concentrations were recorded at each sample interval in each of the 29 soil borings. The concentrations ranged from 0 to 2,544 parts per million ( ppm ) unfiltered. After a carbon filter was applied, the concentrations ranged from 0 to $1,398 \mathrm{ppm}$ (net concentration). The soils encountered during the soil borings mainly consisted of gray, brown and yellow sand; silty sand; clayey sands; and occasional peat. Some soil staining was observed, but it appeared to be related to the naturally occurring organic peat material in the soil.

Four of the soil borings indicated soil vapor concentrations above $10 \mathrm{ppm}: \mathrm{SB}-4, \mathrm{SB}-5$ SB-6 and SB-7. Soil boring SB-4 indicated elevated OVA measurements at the 4 -to 6 - ft sample $(1,398 \mathrm{ppm}$ ) and the 6 to 8 ft sample ( 146 ppm ). Moderate to low vapor concentrations were recorded the full length ( 10 ft ) of SB-5, with the highest reading ( $1,280 \mathrm{ppm}$ ) measured in the 8 to 10 ft sample. The highest vapor concentration in SB-6 occurred at a depth of 6 to 8 feet ( 106 ppm ). In each of these sample locations, the elevated OVA measurements also coincided with a layer of black, peat material. SB-7 exhibited very low vapor concentrations in the 10 to 12 ft sample ( 12 ppm ). The OVA measurements for each boring are summarized in Table 1. A copy of the field notes and soil boring logs are provided in Appendix D.

## ANALYTICAL RESULTS

The analytical results of the soil and groundwater samples collected from the various areas of the subject properties did indicate concentrations above soil and groundwater cleanup target levels (SCTLs and GCTLs) as outlined in Chapter 62-777 of the Florida Administrative Code (F.A.C.).

No VOCs (Method 8260) or PCBs above detectable levels were observed in any of the samples submitted for analysis. TRPH was detected in one sample, SB-23 above the SCTL. All other samples were below detectable limits for TRPH. However, various PAH compounds were detected in multiple soil samples and in one groundwater sample. Three of these soil samples (SB-19, SB-21, and SB-23) exhibited PAH concentrations above SCTLs. Two of these soil samples also exceeded the residential direct exposure limit for Benzo(a)Pryene (BaP) Equivalent. The BaP Equivalent is an FDEP methodology that calculates a weighted average for seven specific PAHs. FDEP has established the residential direct exposure cleanup target level (CTL) at $0.1 \mathrm{mg} / \mathrm{kg}$ and the industrial direct exposure CTL at $0.7 \mathrm{mg} / \mathrm{kg}$. Because the future land uses for the subject properties

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are undetermined, FDEP will require that the lower residential limit of 0.1 milligrams per
 indicated at least one PAH compound concentration above GCTLs. Multiple RCRA metals were detected in both soil and groundwater samples, with only two soil samples (SB-13 and SB-19) indicating exceedances.

The following is a summary of the SCTL and GCTL exceedances, along with recommendations for each area:

- SB-4: benzo(a)anthracene in groundwater ( 0.64 micrograms liter $[\mu \mathrm{g} / \mathrm{L}]$ ) at a concentration above the GCTL $(0.05 \mu \mathrm{~g} / \mathrm{L})$. This was the only contamination detected above regulatory limits on Parcel 1. This will require the installation of up to three permanent groundwater monitoring wells to complete the assessment of groundwater quality in this area.
- SB-13: arsenic in soil ( $2.9 \mathrm{mg} / \mathrm{kg}$ ) at a concentration above the direct exposure SCTL ( $2.1 \mathrm{mg} / \mathrm{kg}$ ). This was a shallow sample collected at 5 feet. This will require an additional deeper soil sample to be collected to complete the vertical assessment of the arsenic. Several additional shallow soil borings to the south may be necessary to determine if this contamination was concentrated at SB-13 (SB-14 to the north did not exhibit any exceedances).
- SB-19: BaP Equivalent in soil $(0.4 \mathrm{mg} / \mathrm{kg})$ at a concentration above the CTL ( $0.1 \mathrm{mg} / \mathrm{kg}$ ). Arsenic was also measured at $3.9 \mathrm{mg} / \mathrm{kg}$, above the $2.1 \mathrm{mg} / \mathrm{kg}$ limit. These contaminants are often found in historical railroad corridors. The presence of both of these contaminants will require additional soil samples in the area to complete the vertical and horizontal definition.
- SB-21: BaP Equivalent ( $1.0 \mathrm{mg} / \mathrm{kg}$ ), benzo(a)anthracene ( $1.5 \mathrm{mg} / \mathrm{kg}$ ) and dibenzo-( $\mathrm{a}, \mathrm{h}$ ) anthracene $(0.83 \mathrm{mg} / \mathrm{kg})$ were detected above soil CTLs $(0.1 \mathrm{mg} / \mathrm{kg}, 0.8 \mathrm{mg} / \mathrm{kg}$ and $0.7 \mathrm{mg} / \mathrm{kg}$, respectively). Benzo(a)anthracene and dibenzo( $\mathrm{a}, \mathrm{h}$ )anthracene are two of the compounds in the BaP calculation, so the BaP exceedance is the overriding factor. Again, additional soil samples will be required to complete the assessment at this sample location.
- SB-23: TRPH in soil ( $520 \mathrm{mg} / \mathrm{kg}$ ) at a concentration above the CTL $(340 \mathrm{mg} / \mathrm{kg})$. This will require additional soil samples in the area and a groundwater sample to complete the vertical and horizontal assessment of this area.

The soil analytical results are summarized in Tables 2 through 5, and groundwater analytical results are summarized in Tables 6 through 8. Figures 3, 4, and 5 present soil
and groundwater results exceedances. A copy of complete laboratory reports are included in Appendix E. Copies of the FDEP BaP Conversion tables used to calculate the BaP equivalent for each sample that indicated detectable concentrations of BaP compounds are presented in Appendix F.

## SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Based on a review of available Sanborn Fire Insurance Maps and previously reviewed historical aerial photographs and topographical maps, a data gap was encountered from the time of first development until 1922. Site uses can only documented back to 1922, when the properties contained multiple residential dwellings. Based on the property uses in 1922, it does not appear that the data gap represents an environmental concern. However, the 1928 map did indicate that a gasoline tank had been located near a storage building located adjacent to $5^{\text {th }}$ Terrace (south Dell Street). ECT would recommend that a soil boring, for the collection of a soil sample and possible groundwater sample, be installed in the approximate area of this former gasoline tank.

A second gasoline tank was noted on the 1965 map, adjacent to the Operations Center warehouse. During the recent soil and groundwater sampling activities, SB-10 was installed in proximity to the estimated location of this former gasoline tank. The soil and groundwater samples collected in this sample location did not exhibit contamination concentrations above CTLs. Therefore, no additional assessment is recommended in this area.

The Lead Testing Survey performed did document building components with detectable lead concentrations. A total of 20 sample locations indicated building components with concentrations above the EPA limit of $1.0 \mathrm{mg} / \mathrm{cm}^{2}$. ECT would recommend that the results of this survey be provided to any contractor that will be performing construction activities that could disturb any building component that exhibited a detectable concentration of lead.

The ACM Survey did document building components with greater than 1 percent asbestos. Five of the sample submitted indicated analytical results ranging from 3 to 50 percent asbestos. ECT recommends that an accredited asbestos abatement contractor be consulted prior to performing construction activities that could disturb any building component that was determined to be an asbestos containing material or regulated asbestos containing material.

The analytical results of the soil and groundwater sampling performed on Parcels 1 and 2 indicated five sampling locations that will require additional assessment activities. ECT recommends the installation of three permanent groundwater monitoring wells in the vicinity of SB-4, located along the west property boundary on Parcel 1, to provide additional groundwater quality data in this area. In the area of SB-13, we would recommend the installation of three additional soil borings, with soil samples collected in

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each boring for the analysis of arsenic. With respect to the BaP and arsenic exceedances encountered at SB-19 and SB-21, ECT would recommend collecting additional soil samples at both locations, at depths of $0.5,1.0,1.5,2.0$, and 5.0 feet, to determine the final depth of the contamination. We would also recommend installing additional soil borings to the west and east sides of SB-19, and to the north and south of SB-21 to verify that the BaP and arsenic contamination does not extend horizontally. Based on the PAH and TRPH exceedances exhibited in the soil sample from SB-23, ECT would recommend installing three additional soil boring around SB-23 to assist in completing the horizontal delineation of these compounds. Because the soil sample collected in SB-23 was just above the groundwater table, a groundwater sample should also be collected in at least one of the new soil boring locations to determine the groundwater quality in this area.

If you have any questions please contact either of us at 352.332 .0444 .
Sincerely,

## ENVIRONMENTAL CONSULTING \& TECHNOLOGY, INC.



Stephanie H. Emerson
Senior Associate Engineer


Perry Hubbard, P.G. Principal Scientist

SHE/saw

## APPENDICES

APPENDIX A - SANBORN MAPS
APPENDIX B - LEAD TESTING SURVEY REPORT
APPENDIX C - ACM SURVEY REPORT
APPENDIX D - FIELD NOTES AND BORING LOGS
APPENDIX E - LABORATORY ANALYTICAL REPORT
APPENDIX F - BENZO(A)PYRENE CONVERSION TABLES

## FIGURES

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S.E. 4th AVE.

S.E. 5th AVE.

S.E. 4th AVE.

S.E. 5th AVE.
$\qquad$ $x \underbrace{}_{x}$


## LEGEND

$\oplus$ SOIL BORING
TEMPORARY GROUNDWATER SAMPLE
SOIL BORING SUFFIX DENOTATION:
(PK1) PARCEL 1 PARKING AREAS
(OC) OPERATIONS CENTER
(G) GENERATOR
(PCB) PCB BUILDING
(AST) AST AREA
(PK2) PARCEL 2 PARKING AREAS (RR) RALLROAD CORRIDOR
S.E. 4th AVE.


## ANALYTICAL LEGEND

S.E. 5th AVE.


S.E. 5th AVE.


FIGURE 5.
GROUNDWATER EXCEEDANCE SUMMARY
APRIL 13 AND 14, 2011
Sources: GRU, 2011; ECT, 2011.

TABLES

TABLE 1. SOIL OVA DATA SUMMARY

Facility Name: GRU Facilities Properties (Parcel 1 \& Parcel 2)
ppm = parts per million
ft bls = feet below hand surface

| SAMPLE |  |  |  | OVA Screening Results |  |  | Laboratory Analyses |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Boring } \\ & \text { Number } \end{aligned}$ | Date | $\begin{gathered} \hline \text { Depth } \\ \text { to } \\ \text { Water* } \end{gathered}$ | Sample Interval (ft bls) | Total Reading (ppm) | Carbon <br> Filtered (ppm) |  | Total voas (ppm) | Total <br> PAHs <br> (ppm) | $\begin{aligned} & \text { TRPH } \\ & (\mathrm{ppm}) \end{aligned}$ | COMMENTS |
| SB-1 | 04/13/11 | 9 | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | --- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 | 0.0007 U | 0.01 U | 7.41 | Sample Collected |
|  |  |  | 8 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |
| SB-2 | 04/13/11 | 8 | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
|  |  |  | 10 | 0 | .. | 0 |  |  |  |  |
| SB-3 | 04/13/11 | 9 | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 1 | -- | 1 | 0.007 U | 0.029 | 3.3 U | Sample Collected |
|  |  |  | 10 | 1 | -- | 1 |  |  |  |  |
| SB-4 | 04/13/11 |  | 2 | 53 | 30 | 23 |  |  |  |  |
|  |  |  | 4 | 41 | 29 | 12 |  |  |  |  |
|  |  |  | 6 | 2,544 | 1,146 | 1,398 | 0.0008 U | 0.01 U | 3.8 U | Sample Collected |
|  |  |  | 8 | 252 | 106 | 146 |  |  |  |  |
|  |  |  | 10 | 32 | 15 | 17 |  |  |  |  |
|  |  |  | 12 | 18 | 10 | 8 |  |  |  |  |
|  |  |  | 14 | 13 | 6 | 7 |  |  |  |  |
| SB-5 | 04/13/11 |  | 2 | 143 | 48 | 95 |  |  |  |  |
|  |  |  | 4 | 196 | 78 | 118 |  |  |  |  |
|  |  |  | 6 | 75 | 51 | 24 |  |  |  |  |
|  |  |  | 8 | 1,546 | 568 | 978 | 0.0007 U | 0.32 | 11 | Sample Collected |
|  |  |  | 10 | 1,888 | 608 | 1,280 |  |  |  |  |
| SB-6 | 04/13/11 |  | 2 | 5 | 0 | 5 |  |  |  |  |
|  |  |  | 4 | 47 | 15 | 32 |  |  |  |  |
|  |  |  | 6 | 3 | 0 | 3 |  |  |  |  |
|  |  |  | 8 | 134 | 28 | 106 | 0.001 U | 0.81 | 28 | Sample Collected |
|  |  |  | 10 | 32 | 13 | 19 |  |  |  |  |
| SB-7 | 04/13/11 |  | 2 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 | 0.0006 U | 0.24 | 3.6 U | Sample Collected |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 12 | 25 | 13 | 12 |  |  |  |  |
|  |  |  | 14 | 3 | 0 | 3 |  |  |  |  |
| SB-8 | 04/13/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 | 0.0007 U | 0.45 | 11 | Sample Collected |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |

TABLE 1. SOIL OVA DATA SUMMARY
Facility Name: GRU Facilities Properties (Parcel $1 \&$ Parcel 2)
ppm = parts per milion
ft bls = feet below land surface

| SAMPLE |  |  |  | OVA Screening Results |  |  | Laboratory Analyses |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boring Number | Date | $\begin{gathered} \text { Depth } \\ \text { to } \\ \text { Water } \end{gathered}$ | Sample Interval (ft bls) | Total <br> Reading (ppm) | Carbon <br> Filtered (ppm) | Net Reading (ppm) | $\begin{aligned} & \text { Total } \\ & \text { VoAs } \\ & (\mathrm{ppm}) \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Total } \\ & \text { PAHs } \\ & (\mathrm{ppm}) \end{aligned}$ | $\begin{aligned} & \text { TRPH } \\ & (\mathrm{ppm}) \end{aligned}$ | COMMENTS |
| SB-9 | 04/14/11 |  | 2 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.4 U | Sample Collected |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |
| SB-10 | 04/14/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
|  |  |  | 8 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 12 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 14 | 0 | -- | 0 |  |  |  |  |
| SB-11 | 04/14/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 2 | 0 | 2 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
|  |  |  | 10 | 2 | 0 | 2 |  |  |  |  |
| SB-12 | 04/14/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 10 | 0 | --- | 0 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
| SB-13 | 04/13/11 |  | 1 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 3 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 5 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
| SB-14 | 04/13/11 |  | 1 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 3 | 0 | -- | 0 | 0.0006 U | 0.01 U | 3.2 U | Sample Collected |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 5 | 0 | -- | 0 |  |  |  |  |
| SB-15 | 04/13/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.60 | Sample Collected |
|  |  |  | 8 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |
| SB-16 | 04/13/11 |  | 2 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 4 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 | 0.0007 U | 0.06 | 8.81 | Sample Collected |
|  |  |  | 8 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |

TABLE 1. SOIL OVA DATA SUMMARY

Facility Name: GRU Facilities Properties (Parcel 1 \& Parcel 2)
ppm $=$ patts per million
f bls $=$ feet below land surface


TABLE 1. SOIL OVA DATA SUMMARY

Facility Name: GRU Facilities Properties (Parcel $1 \&$ Parcel 2)
$\mathrm{ppm}=$ parts per mithon
fols = feet below land surface

| SAMPLE |  |  |  | OVA Screening Results |  |  | Laboratory Analyses |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boring Number | Date | Depth to Water* |  | Total <br> Reading (ppm) | Carbon <br> Filtered (ppm) |  | Total VOAs (ppm) | $\begin{aligned} & \text { Total } \\ & \text { PAHs } \\ & (\mathrm{ppm}) \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { TRPH } \\ & (\mathrm{ppm}) \end{aligned}$ | COMMENTS |
| SB-28 | 04/14/11 |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 6 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 8 | 3 | 0 | 3 | 0.0007 U | 0.01 U | 3.3 U | Sample Collected |
|  |  |  | 10 | 3 | 0 | 3 |  |  |  |  |
| SB-23 | $04 / 14 / 1$ |  | 2 | 0 | -- | 0 |  |  |  |  |
|  |  |  | 4 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 6 | 0 | $\cdots$ | 0 |  |  |  |  |
|  |  |  | 8 | 0 | -- | 0 | 0.0007 U | 0.01 U | 3.5 U | Sample Collected |
|  |  |  | 10 | 0 | -- | 0 |  |  |  |  |

TABLE 2: VCO/TRPH SOIL ANALYTICAL SUMMARY
Facility Name: $\quad$ GRU Facilities Properties (Parcell 1 \& Parcel 2)
BDI = telow detecion limits
Anatyical Results $=\mathrm{mg} / \mathrm{kg} \quad \mathrm{NS}=$ not sampled

| Lecation | Date | Depth (f) | Net Organic Vapor (ppm) | Bearene | Teluene | Ethy1 Benzene | Total Xylenes | mtbe | Carbon Tetrachloride | Isopropylbenzene | Methylene Chloride | Trichloroethene | Viny! Chloride | TRPH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FDEP Direct Exposure |  |  |  | 1.2 | 7,500 | 1,500 | 130 | 4,400 | 0.5 | 220 | 17 | 6.4 | 0.2 | 460 |
| FDEP Commercial Exposure |  |  |  | 1.7 | 60,000 | 9,200 | 700 | 24,000 | 1 | 1,200 | 26 | 9 | 1 | 2,700 |
| FDEP Leachability |  |  |  | 0.007 | 0.5 | 0.6 | 0.2 | 0.09 | 0.04 | 0.2 | 0.02 | 0.03 | 0.007 | 340 |
| SB-1 | 6-8 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 7.41 |
| SB-2 | 6.8 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-3 | 6.8 | 04/13/11 | 1 | 0.0005 U | 0.0007 U | 0.0007 U | 0.0004 U | 0.0005 U | 0.0004 U | 0.0005 U | 0.0008 U | 0.0004 U | 0.0007 U | 3.3 U |
| SB-4 | 4-6 | 04/13/11 | 1,398 | 0.0006 U | 0.0008 U | 0.0008 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0009 U | 0.0005 U | 0.0008 U | 3.8 U |
| SB-5 | 6-8 | 04/13/11 | 978 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 11 |
| SB-6 | 6-8 | 04/13/11 | 106 | 0.0008 U | 0.001 U | 0.001 U | 0.0006 U | 0.0008 U | 0.0006 U | 0.0008 U | 0.0011 U | 0.0006 U | 0.0010 U | 28 |
| SB-7 | 6-8 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.6 U |
| SB-8 | 6-8 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0009 U | 0.0005 U | 0.0005 U | 11 |
| SB-9 | 6-8 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.4 U |
| SB-10 | 4-6 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-11 | 6-8 | 04/14/11 | 2 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-12 | 8-10 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-13 | 4-5 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0,0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-14 | 2-3 | 04/13/11 | 0 | 0.0005 U | 0.0006 U | 0.0006 U | 0.0004 U | 0.0005 U | 0.0004 U | 0.0005 U | 0.0007 U | 0.0004 U | 0.0006 U | 3.2 U |
| SB-15 | 4-6 | 04/13/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.6 U |
| SB-16 | 4-6 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 8.81 |
| SB-17 | 2-4 | 04/13/11 | 0 | 0.0005 U | 0.0007 U | 0.0007 U | 0.0004 U | 0.0006 U | 0.0004 U | 0.0005 U | 0.0008 U | $0.0004 \mathrm{U}^{\text {d }}$ | 0.0007 U | 3.3 U |
| SB-22 | 8-10 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-23 | 6-8 | 04/14/11 | 5 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 520 L |
| SB-24 | 4-6 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0009 U | 0.0005 U | 0.0008 U | 3.7 U |

TABLE 2: VCO/TRPH SOIL ANALYTICAL SUMMARY
Facility Name: GRU Facilities Properties (Parcel 1 \& Parcel 2)
BDL $w$ below detection limits
Analytical Resulss $=\mathrm{mg} / \mathrm{kg} \quad \mathrm{NS}$ a not sampled

| Sample |  | Deph (fi) | Net Organie <br> Vapor (ppin) | Benzene | Toluene | Ethyl Beazene | Total Xylenes | mtbe | Carbon Tetrachloride | Isopropylbenzene | Metlylene Chloride | Trichloreethene | Vinyl Choride | TRPH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lecation | Date |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SB-25 | 4-6 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-26 | 6-8 | 04/14/11 | 4 | 0.0005 U | 0.0007 U | 0.0007 U | 0.0004 U | 0.0005 U | 0.0004 U | 0.0005 U | 0.0008 U | 0.0004 U | 0.0007 U | 33 U |
| SB-27 | 6-8 | 04/14/11 | 5 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.5 U |
| SB-28 | 6-8 | 04/14/11 | 3 | 0.0005 U | 0.0007 U | 0.0007 U | 0.0004 U | 0.0005 U | 0.0004 U | 0.0005 U | 0.0008 U | 0.0004 U | 0.0007 U | 3.30 |
| SB-29 | 6-8 | 04/14/11 | 0 | 0.0006 U | 0.0007 U | 0.0007 U | 0.0005 U | 0.0006 U | 0.0005 U | 0.0006 U | 0.0008 U | 0.0005 U | 0.0007 U | 3.50 |

Notes: U - The qualifier denotes that the analyte was not detected, with the value preceeding the " U " being the Method Detection Limit (MDL).
1- This quailifer denotes that the reported value is between the MDL and the Practical Quantitation Limit (PQL)
L - This qualifier denotes that the value reported is above the calibration curve
Bold and highligth values indicated values above the regulatory limits.

## TABLE 3: SOIL PAH ANALYTICAL SUMMARY

Facility Name: GRU Facilities Properties (Parcel 1 and Parcel 2)

| Sample |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Depth (f) | Date | Net Organic Vapor (ppm) |  | 1-Methyl naphtha- |  |  |  |  |  |  |  | $\frac{0}{6}$ |  |  |  |  |  |  |  |  |  |
| SCTLs |  |  |  | 55 | 200 | 210 | 1,800 | 2,400 | 2,600 | 2,200 | 21,000 | 3,200 | 2,400 | \# | \# | \# | \# | 0.1 | \# | 2,500 | \# | 0.1 |
| Leachability |  |  |  | 1.2 | 3.1 | 8.5 | 27 | 2.1 | 160 | 250 | 2,500 | 1,200 | 880 | 0.8 | 77 | 2.4 | 24 | 8 | 0.7 | 32,000 | 6.6 | - |
| SB-1 | 6-8 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-2 | 6-8 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | NA |
| SB-3 | 6-8 | 04/13/11 | 1 | 0.007 U | 0.007 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.01 | 0.002 U | 0.002 U | 0.01 | 0.002 U | 0.009 | 0.002 U | 0.003 U | 0.0 |
| SB-4 | 4.6 | 04/13/11 | 1398 | 0.008 U | 0.008 U | 0.005 U | 0.005 U | 0.01 U | 0.003 U | 0.004 U | 0.003 U | 0.004 U | 0.004 U | 0.003 U | 0.003 U | 0.003 U | 0.003 U | 0.003 U | 0.004 U | 0.003 U | 0.004 U | NA |
| SB-5 | 6-8 | 04/13/11 | 978 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.05 | 0.02 | 0.01 | 0.11 | 0.01 | 0.08 | 0.02 | 0.02 | 0.002 U | 0.004 U | 0.0 |
| SB-6 | 6.8 | 04/13/11 | 106 | 0.01 U | 0.46 | 0.006 U | 0.006 U | 0.01 U | 0.14 | 0.005 U | 0.003 U | 0.05 | 0.005 U | 0.11 | 0.02 | 0.03 | 0.003 U | 0.003 U | 0.005 U | 0.003 U | 0.005 U | 0.0 |
| S8-7 | 6.8 | 04/13/11 | 0 | 0.007 U | 0.18 | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.06 | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.0 |
| SB-8 | 6.8 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.05 | 0.004 U | 0.40 L | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.0 |
| SB-9 | 6.8 | 04/14/11 | 0 | 0.006 U | 0.006 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-10 | 4.6 | 04/14/11 | 0 | 0.006 U | 0.006 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-11 | 6.8 | 04/14/11 | 2 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | NA |
| S8-12 | $8 \cdot 10$ | 04/14/11 | 0 | 0.006 U | 0.006 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-13 | 4.5 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | NA |
| SB-14 | $2 \cdot 3$ | 04/13/11 | 0 | 0.006 U | 0.006 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-15 | 4.6 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | NA |
| S8-16 | 0.5 | 04/13/11 | NS | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
|  | 4.6 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.06 | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.0 |
| SB-17 | 0.5 | 04/13/11 | NS | 0.007 U | 0.007 U | 0.004 U | 0.004 U | 0.09 | 0.002 U | 0.003 U | 0.002 U | 0.07 | 0.05 | 0.02 | 0.002 U | 0.16 | 0.03 | 0.10 | 0.003 U | 0.002 U | 0.003 U | 0.1 |
|  | 2.4 | 04/13/11 | 0 | 0.007 U | 0.007 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| S8-18 | 0.5 | 04/14/11 | NS | 0.008 U | 0.008 U | 0.005 U | 0.005 U | 0.01 U | 0.003 U | 0.004 U | 0.003 U | 0.23 L | 0.09 | 0.05 | 0.06 | 0.05 | 0.04 | 0.04 | 0.03 | 0.05 | 0.04 | 0.1 |
| SB-19 | 0.5 | 04/14/11 | NS | 0.006 U | 0.006 U | 0.12 | 0.004 U | 0.53 | 0.002 U | 0.25 | 0.002 U | 0.46 L | 0.23 L | 0.14 | 0.25 L | 0.20 L | 0.10 L | 0.15 L | 0.16 | 0.18 L | 0.11 | 0.4 |
| SB-20 | 1.2 | 04/14/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-21 | 0.5 | 04/14/11 | NS | 0.15 | 0.22 | 1.1 | 0.006 U | 0.88 | 0.003 U | 1.8 | 0.33 | 1.11 | 0.004 U | 1.5L | 0.003 U | 0.43 L | 0.003 U | 0.003 U | 0.83 L | 1.8 L | 0.004 U | 1.0 |

TABLE 3: SOIL PAH ANALYTICAL SUMMARY

| Facility Name: |  | GRU Facilities Properties (Parcel 1 and Parcel 2) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Analytical Results $=\mathrm{mg} / \mathrm{kg}$ Not Reported = NR |  |  | Not Applicable $=N A$ <br> Not Samplen $=$ NS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Location | Depth (ft) | Date | Net Organic Vapor (ppm) |  | Methyl naphtha- |  |  |  |  |  |  |  | $\stackrel{0}{5}$ |  | $\begin{aligned} & \text { O} \\ & 0 \\ & 0 \\ & 0 \\ & \hline 0 \end{aligned}$ |  |  |  |  |  |  |  |
| SCTLS |  |  |  | 55 | 200 | 210 | 1,800 | 2,400 | 2,600 | 2,200 | 21,000 | 3,200 | 2,400 | \# | \# | \# | \# | 0.1 | \# | 2,500 | \# | 0.1 |
| Leachability |  |  |  | 1.2 | 3.1 | 8.5 | 27 | 2.1 | 160 | 250 | 2,500 | 1,200 | 880 | 0.8 | 77 | 2.4 | 24 | 8 | 0.7 | 32,000 | 6.6 | - |
| S8-22 | 8-10 | 04/14/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-23 | 6-8 | 04/14/11 | 5 | 0.007 U | 0.86 | 0.005 U | 0.11 | 0.21 | 0.02 | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 2.8 L | 0.002 U | 0.53 L | 0.35 L | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.3 |
| S8-24 | 4-6 | 04/4/411 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.21 L | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.0 |
| SB-25 | 4-6 | 04/14/11 | 0 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-26 | 6-8 | 04/14/11 | 4 | 0.007 U | 0.007 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| SB-27 | 6.8 | 04/14/11 | 5 | 0.007 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | 0.004 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.004 U | 0.002 U | 0.004 U | NA |
| S8-28 | 6-8 | 04/14/11 | 3 | 0.007 U | 0.007 U | 0.004 U | 0.004 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |
| S8-29 | 6-8 | 04/14/11 | 0 | 0.907 U | 0.007 U | 0.005 U | 0.005 U | 0.01 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | 0.003 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.002 U | 0.003 U | 0.002 U | 0.003 U | NA |

Notes: $U$ - This qualifier denotes that the analyte was not detected, with the value preceding the " $U$ " being the Method Detection Limit (MDL)

- This qualifier denotes that the reported value is between the MDL and the Practical Quantitation Limit (PQL)
$L$. This qualifier denotes the value reported is above the calibration curve

TABLE 4: RCRA METALS SOIL ANALYTICAL SUMMARY
Facility Name: GRU Facilities Properties
Not Sampled $=$ NS
Parcel 1 and Parcel 2

| Sample |  |  | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Depth | Date |  |  |  |  |  |  |  |  |
| Cleanup Target Levels |  |  | 2.1 | 120 | 82 | 210 | 400 | 3 | 440 | 410 |
| Leachability |  |  | * | 130,000 | 1,700 | 470 | 1,400 | 17 | 11,000 | 8,200 |
| SB-1 | 6-8 | 04/13/11 | 0.271 | 5.0 I | 0.041 U | 5.3 | 9.1 | 0.0211 | 0.16 U | 0.041 U |
| SB-2 | $6-8$ | 04/13/11 | 0.69 | 39.0 | 0.051 U | 4.2 | 7.3 | 0.068 I | 0.38 I | 0.51 U |
| SB-3 | $6-8$ | 04/13/11 | 0.67 | 32.4 | 0.041 U | 5.5 | 9.3 | 0.0090 U | 0.17 U | 0.041 U |
| SB-4 | 4-6 | 04/13/11 | 0.080 U | 4.21 | 0.040 U | 0.81 | 1.5 | 0.0095 U | 0.16 U | 0.040 U |
| SB-5 | 6-8 | 04/13/11 | 0.49 | 22.3 | 0.141 | 4.1 | 26.4 | 0.077 I | 0.19 U | 0.046 U |
| SB-6 | $6-8$ | 04/13/11 | 0.95 | 31.1 | 0.056 U | 3.8 | 12.0 | 0.13 | 0.991 | 0.056 U |
| SB-7 | 6-8 | 04/13/11 | 0.55 | 27.8 | 0.0701 | 4.4 | 28.4 | 0.21 | 0.311 | 0.053 U |
| SB-8 | 6-8 | 04/13/11 | 0.11 U | 1.81 | 0.054 U | 0.261 | 0.501 | 0.012 U | 0.22 U | 0.054 U |
| SB-9 | 6-8 | 04/14/11 | 0.241 | 6.01 | 0.043 U | 5.8 | 8.1 | 0.13 | 0.17 U | 0.043 U |
| SB-10 | $4 \cdot 6$ | 04/14/11 | 0.241 | 5.31 | 0.044 U | 4.6 | 9.0 | 0.40 | 0.17 U | 0.044 U |
| SB-11 | 6-8 | 04/14/11 | 0.171 | 2.91 | 0.040 U | 9.2 | 6.3 | 0.15 | 0.16 U | 0.040 U |
| SB-12 | 8-10 | 04/14/11 | 0.82 | 23.3 | 0.049 U | 7.9 | 10.0 | 0.24 | 0.20 U | 0.049 U |
| SB-13 | 4-5 | 04/13/11 | 2.9 | 6.91 | 0.042 U | 8.9 | 7.0 | 0.0093 U | 0.531 | 0.042 U |
| SB-14 | 2-3 | 04/13/11 | 0.092 U | 1.41 | 0.046 U | 0.49 | 0.49 I | 0.0090 U | 0.18 U | 0.046 U |
| SB-15 | 4-6 | 04/13/11 | 0.161 | 4.41 | 0.046 U | 2.3 | 3.0 | 0.0241 | 0.18 U | 0.046 U |
| SB-16 | 0.5 | 04/13/11 | 0.61 | 10.5 | 0.048 U | 3.0 | 4.9 | 0.0311 | 0.19 U | 0.048 U |
|  | 4-6 | 04/13/11 | 0.58 | 25.4 | 0.053 U | 3.9 | 15.7 | 0.12 | 0.21 U | 0.053 U |
| SB-17 | 0.5 | 04/13/11 | 0.79 | 23.6 | 0.131 | 5.9 | 29.1 | 0.11 | 0.64 U | 0.040 U |
|  | 2-4 | 04/13/11 | 0.73 | 11.4 | 0.050 U | 5.7 | 3.5 | 0.0090 U | 0.20 U | 0.050 U |

TABLE 4: RCRA METALS SOIL ANALYTICAL SUMMARY

Facility Name: GRU Facilities Properties
Parcel 1 and Parcel 2

| Sample |  |  | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Depth | Date |  |  |  |  |  |  |  |  |
| Cleanup Target Levels |  |  | 2.1 | 120 | 82 | 210 | 400 | 3 | 440 | 410 |
| SB-18 | 0.5 | 04/14/11 | 1.6 | 35.4 | 0.0791 | 4.7 | 48.5 | 0.11 | 0.291 | 0.053 U |
| SB-19 | 0.5 | 04/14/11 | 3.9 | 20.8 | 1.8 | 22.0 | 36.9 | 0.093 I | 1.81 | 0.11 U |
| SB-20 | 1-2 | 04/14/11 | 0.61 | 9.6 | 0.036 U | 5.3 | 4.1 | 0.0171 | 0.161 | 0.036 U |
| SB-2I | 0.5 | 04/14/11 | 1.61 | 102 | 0.50 U | 26.0 | 6.9 | 0.0089 U | 2.0 U | 0.50 U |
| SB-22 | 8-10 | 04/14/11 | 0.97 | 39.2 | 0.044 U | 8.4 | 7.1 | 0.0781 | 0.18 U | 0.044 U |
| SB-23 | 6-8 | 04/14/11 | 0.261 | 8.11 | 0.056 U | 3.4 | 9.0 | 0.0791 | 0.381 | 0.056 U |
| SB-24 | 4-6 | 04/14/11 | 0.481 | 9.21 | 0.060 U | 11.6 | 14.0 | 0.50 | 0.24 U | 0.060 U |
| SB-25 | 4-6 | 04/14/11 | 0.64 | 6.91 | 0.045 U | 13.3 | 13.4 | 0.85 | 0.201 | 0.045 U |
| SB-26 | $6-8$ | 04/14/11 | 0.48 | 11.9 | 0.042 U | 7.0 | 21.4 | 0.24 | 0.17 U | 0.042 U |
| SB-27 | 6-8 | 04/14/11 | 0.141 | 1.81 | 0.041 U | 8.3 | 3.9 | 0.13 | 0.16 U | 0.041 U |
| SB-28 | 6-8 | 04/14/11 | 0.191 | 3.31 | 0.038 U | 6.2 | 7.7 | 0.12 | 0.15 U | 0.038 U |
| SB-29 | 6-8 | 04/14/11 | 0.15 I | 3.81 | 0.046 U | 8.0 | 12.8 | 0.30 | 0.18 U | 0.046 U |

Notes: * Denotes that the leachability must be determined using the SPLP method for site specific evaluation.
U-This quailifier denotes that the analyte was not detected, with the value preceding the "U" being the Method Detection Limit (MDL)
I- This quailifier denotes that the reported value is between the MDL and Practical Quantitation Limit (PQL)

TABLE 5: PCB SOIL ANALYTICAL SUMMARY
Facility Name: GRU Facilities Properties
Parcel 1 and Parcel 2
Not Sampled = NS
Not Analyzed = NA
Analytical Results $=u g / \mathrm{kg}$

| Sample |  |  |  |  |  |  | Aroclor 1016 | Aroclor $\mathbf{1 2 2 1}$ | Aroclor $\mathbf{1 2 3 2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Depth | Date |  | Aroclor <br> $\mathbf{1 2 4 2}$ | Aroclor $\mathbf{1 2 5 4}$ | Aroclor $\mathbf{1 2 6 0}$ |  |  |  |
| Cleanup Target Levels |  |  |  |  |  |  |  |  |  |
| SB-22 | $8-10$ | $04 / 14 / 11$ | 7.8 U | 9.7 U | 9.7 U | 7.8 U | 7.8 U | 7.8 U | 7.8 U |
| SB-23 | $6-8$ | $04 / 14 / 11$ | 7.8 U | 9.8 U | 9.8 U | 7.8 U | 7.8 U | 7.8 U | 7.8 U |
| SB-24 | $4-6$ | $04 / 14 / 11$ | 8.0 U | 10 U | 10 U | 8.0 U | 8.0 U | 8.0 U | 8.0 U |
| SB-25 | $4-6$ | $04 / 14 / 11$ | 7.9 U | 9.9 U | 9.9 U | 7.9 U | 7.9 U | 7.9 U | 7.9 U |
| SB-26 | $6-8$ | $04 / 14 / 11$ | 7.4 U | 9.3 U | 9.3 U | 7.4 U | 7.4 U | 7.4 U | 7.4 U |
| SB-27 | $6-8$ | $04 / 14 / 11$ | 7.7 U | 9.6 U | 9.6 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U |
| SB-28 | $6-8$ | $04 / 14 / 11$ | 7.5 U | 9.4 U | 9.4 U | 7.5 U | 7.5 U | 7.5 U | 7.5 U |
| SB-29 | $6-8$ | $04 / 14 / 11$ | 7.7 U | 9.6 U | 9.6 U | 7.7 U | 7.7 U | 7.7 U | 7.7 U |

Notes: U-This quailifier denotes that the analyte was not detected, with the value preceding the " $U$ " being the Method Detection Limit (MDL)

TABLE 6: VOC/TRPH GROUND WATER ANALYTICAL SUMMARY

Facility Name: GRU Facilities Properties
Parcel 1 \& Parcel 2

Analytical Results $=u g / L$
Not Sampled = NS

| Sample |  | Benzene | Toluene | Ethyl <br> Benzene | Total Xylenes | Total VOA | MTBE | Carbon Tetrachloride | Isopropylbenzene | Methylene Chloride | Trichlorocthene | Vinyl Chloride | TRPH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Date |  |  |  |  |  |  |  |  |  |  |  |  |
| Cleanup Targel Levels |  | 1 | 40. | 30 | 20 | NA | 50 | 30 | 1 | 2,7 | 3 | 1 | 5.000 |
| Natural Attenuation Levels |  | 100 | 400 | 300 | 200 | NA | 500. | - | $\square$ | - | $\underline{4}$ | - | 50,000 |
| SB-4 | 04/13/11 | 0.2 U | 0.2 U | 0.3 U | 0.3 U | 0.3 U | 0.2 U | 0.3 U | 0.5 U | 0.4 U | 0.30 | 03 U | 200 U |
| SB-7 | 04/13/11 | 0.2 U | 0.2 U | 0.3 U | 0.3 U | 0.3 U | 0.2 U | 0.3 U | 0.5 U | 0.4 U | 0.30 | 0.30 | 200 U |
| SB-10 | 04/14/11 | 0.2 U | 0.2 U | 0.3 U | 0.3 U | 0.3 U | 0.2 U | 0.3 U | 0.5 U | 0.4 U | 0.3 U | 030 | 200 U |
| SB-17 | 04/13/11 | 0.2 U | 0.2 U | 0.3 U | 0.3 U | 0.3 U | 0.2 U | 0.3 U | 0.5 U | 0.4 U | 0.34 | 0.3 U | 200 U |
| SB-24 | 04/14/11 | 0.2 U | 0.2 U | 0.3 U | 0.3 U | 0.3 U | 0.2 U | 0.3 U | 0.5 U | 0.4 U | 0.3 U | 03 U | 200 U |

## TABLE 7：GROUNDWATER PAH ANALYTICAL SUMMARY

## Facility Name：GRU Facilities Properties（Parcel 1 and Parcel 2）

Analytical Results $=\mu \mathrm{g} /$
Not Applicable $=N A$
Not Sampled $=N S$

| Sample |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Date |  |  | 2－Methyl naphtha－lene |  |  |  | $\begin{aligned} & \text { L } \\ & \text { E } \\ & \text { E } \\ & \text { E } \\ & \frac{E}{2} \end{aligned}$ | $\begin{aligned} & \text { U } \\ & \text { E } \\ & \text { E } \\ & \text { E } \end{aligned}$ |  | $\frac{y}{2}$ |  | 药 | 亲 | 年 |  |  | 嶪 |  |
| GCTLs |  | 14 | 28 | 28 | 210 | 20 | 280 | 210 | 2，100 | 280 | 210 | 0.05 | 4.8 | 0.05 | 0.5 | 0.2 | 0.005 | 2，500 | 0.05 |
| SB－4 | 04／13／11 | 0.15 U | 0.71 U | 0.63 U | 0.58 U | 0.68 U | 0.17 U | 0.09 U | 0.06 U | 0.22 U | 0.20 U | 0.64 | 0.16 U | 0.10 U | 0.08 U | 0.12 U | 0.10 U | 0.18 U | 0.15 U |
| SB－7 | 04／13／11 | 0.15 U | 0.71 U | 0.63 U | 0.58 U | 0.68 U | 0.17 U | 0.09 U | 0.06 U | 0.22 U | 0.20 U | 0.12 U | 0.16 U | 0.10 U | 0.08 U | 0.12 U | 0.10 U | 0.18 U | 0.15 U |
| SB－10 | 04／14／11 | 0.15 U | 0.71 U | 0.63 U | 0.58 U | 0.68 U | 0.17 U | 0.09 U | 0.06 U | 0.22 U | 0.20 U | 0.12 U | 0.16 U | 0.10 U | 0.08 U | 0.12 U | 0.10 U | 0.18 U | 0.15 U |
| SB－17 | 04／13／11 | 0.15 U | 0.71 U | 0.63 U | 0.58 U | 0.68 U | 0.17 U | 0.09 U | 0.06 U | 0.22 U | 0.20 U | 0.12 U | 0.16 U | 0.10 U | 0.08 U | 0.12 U | 0.10 U | 0.18 U | 0.15 U |
| SB－24 | 04／14／11 | 0.15 U | 0.71 U | 0.63 U | 0.58 U | 0.68 U | 0．17 U | 0.09 U | 0.06 U | 0.22 U | 0.20 U | 0.12 U | 0.16 U | 0.10 U | 0.08 U | 0.12 U | 0.10 U | 0.18 U | 0.15 U |

Notes：U－This qualifier denotes that the analyte was not detected，with the value preceding the＂U＂being the Method Detection Limit（MDL）

TABLE 8: RCRA METALS GROUNDWATER ANALYTICAL SUMMARY

Facility Name: GRU Facilities Properties
Parcel 1 and Parcel 2

Not Sampled $=$ NS
Not Analyzed =NA

Analytical Results $=\mathrm{ug} / \mathrm{L}$

| Sample |  | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Date |  |  |  |  |  |  |  |  |
| Cleanup Target Levels | $\mathbf{1 0}$ | $\mathbf{2 0 0 0}$ | $\mathbf{5}$ | $\mathbf{1 0 0}$ | $\mathbf{1 5}$ | $\mathbf{2}$ | $\mathbf{5 0}$ | $\mathbf{1 0 0}$ |  |
| SB-4 | $04 / 13 / 11$ | 2.0 U | 62.81 | 1.0 U | 11.3 | 12.8 | 0.085 I | 2.0 U | 1.0 U |
| SB-7 | $04 / 13 / 11$ | 2.0 U | 17.41 | 1.0 U | 4.31 | 1.01 | 0.050 U | 3.41 | 1.0 U |
| SB-10 | $04 / 14 / 11$ | 20 U | 42.81 | 1.0 U | 20.9 | 11.9 | 0.111 | 2.0 U | 1.0 U |
| SB-17 | $04 / 13 / 11$ | 2.0 U | 19.41 | 1.0 U | 43.2 | 5.2 | 0.33 I | 2.0 U | 1.0 U |
| SB-24 | $04 / 14 / 11$ | 2.0 U | 52.61 | 1.0 U | 31.1 | 1.51 | 0.241 | 2.0 U | 1.0 U |

Notes: $\quad U$ - This quailifier denotes that the analyte was not detected, with the value preceding the " $U$ " being the Method Detection Limit (MDL)
I- This quailifier denotes that the reported value is between the MDL and Practical Quantitation Limit (PQL)

## APPENDIX A -

 SANBORN MAPSGRU Facilities Properties<br>555 SE 5th Avenue<br>Gainesville, FL 32601<br>Inquiry Number: 3067961.1<br>May 16, 2011

## Certified Sanhorn® Map Report

## Certified Sanborn® Map Report

## Site Name:

GRU Facilities Properties
555 SE 5th Avenue
Gainesville, FL 32601
EDR Inquiry \# 3067961.1

## Client Name:

ECT Env. Consulting \& Tech
3701 NW 98th Street
Gainesville, FL 32606
Contact: Stephanie Emerson

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by ECT Env. Consulting \& Tech Inc were identified for the years listed below. The cerified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

## Certified Sanborn Results:

| Site Name: | GRU Facilities Properties |
| :--- | :--- |
| Address: | 555 SE 5th Avenue |
| City, State, Zip: | Gainesville, FL 32601 |
| Cross Street: |  |
| P.O. \# | NA |
| Project: | 110059-0100 |
| Certification \# | 64AE-4170-8C6D |



Sanborm ${ }^{2}$ Library search results Cerification \# 64AE-4170-8C6D

## Maps Provided:

1965
1950
1928
1922

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:


The Sanbom Library LLC Since $1866^{7 \pi}$

## Limited Permission To Make Copies

ECT Env. Consulting \& Tech Inc (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

[^0]Sanborn Sheet Thumbnails
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.


1965 Source Sheets


Volume 1 , Sheet 27

1950 Source Sheets


Volume 1, Sheet 27

1928 Source Sheets


Volume 1, Sheet 27

1922 Source Sheets


Volume 1, Sheet 23


1928 Certified Sanborn Map


This Certified Sanborn Map combines the following sheets. led areas indicate map sheets within the collection.

4

1950 Certified Sanborn Map


1965 Certified Sanborn Map


[^1]led areas indicate map sheets within the collection.

|  |  |  |  |
| :--- | :--- | :--- | :--- |
| 0 Feet | 150 | 300 | 60 |



APPENDIX B -
LEAD TESTING SURVEY REPORT

## AMERICAN MANAGEMENT RESOURCES CORPORATION

P.O. Box 142653 • Gainesville, Florida 32614 • (352) 495-8266 • Fax (425) 732-9785

April 14, 2011
Ms,. Stephanie Emerson
ECT, Inc.
3701 NW 98 St.
Gainesville, FL 32606

RECEIVED
APR 202011

RE: Lead Testing GRU Facilities, Gainesville, Florida

Dear Ms. Emerson,
American Management Resources Corporation (AMRC) is providing you the report from our "Lead Testing" efforts conducted at the GRU Facilities, Gainesville, Florida on April 13, 2011.

The purpose of the task was to test building components for the presence of lead-based paint.
Areas Tested:
Warehouse Number 2
Warehouse Number 1
Operations Center
Water/Wastewater - Office, Building 528
Field Service Office - Behind Building 528
Field Service Technician Facility - Building 532

## Lead-Based Paint was detected as highlighted on the attached table.

Testing was performed with a properly calibrated XRF instrument manufactured by RMD, Inc., Model LPA-1, Serial Number 3319 operated by a trained person certified by the EPA.

AMRC appreciates this chance to perform lead testing services for ECT. Please do not hesitate to contact us if you need further clarification of the information provided in this report.

Respectively Submitted,
Perry Brake (e-signature)
Perry Brake
Senior Consultant
EPA Certified Risk Assessor, FL-R-940-3

GRU Facilities, Gainesville, Florida Lead Testing

## Lead Paint Was Detected $1.0 \mathrm{mg} / \mathrm{cm}^{2}$ and greater

Areas Tested as directed:
Warehouse Number 2
Warehouse Number 1
Operations Center
Water/Wastewater - Office, Building 528
Field Service Office - Behind Building 528
Field Service Technician Facility - Building 532

| Testing Area | Sample Number | Component Tested | Test Result $\mathrm{mg} / \mathrm{cm}^{2}$ |
| :---: | :---: | :---: | :---: |
| Calibrations | 1,2,3 | Calibration Standard | Acceptable |
| Warehouse Number 2Exterior | 4 | Wall - Concrete | -0.2 |
|  | 5 | Door-metal | -0.1 |
|  | 6 | Safety Post - metal | -0.1 |
|  | 7 | Ramp Frame - metal | 1.7 |
|  | 8 | Ramp Hand Rail - metal | 1.8 |
|  | 9 | Ramp wall/curb - concrete | 1.0 |
|  | 10 | Breezway Structural Steel - metal | 0.0 |
|  | 11 | Breezway Structural Steel - | -0.1 |
|  | 12 | Wall - concrete | 0.3 |
|  | 13 | Wall - concrete | 0.3 |
|  | 14 | Wall - concrete | 0.1 |
|  | 15 | Door - metal | 0.1 |
|  | 16 | Door Frame - metal | 0.0 |
|  | 17 | Rolling Door Frame - metal | 0.3 |


| Warehouse Number 2 <br> Interior | 18 | Structural Steel - metal | 0.0 |
| :---: | :---: | :--- | :---: |
|  | 19 | Door Frame - metal | -0.1 |
|  | 20 | Door - Metal | 0.0 |
|  | 21 | Structural Steel - metal | 0.4 |
| 22 | Stair Frame - metal | 0.3 |  |
| 23 | Stair Frame Support - metal | 0.2 |  |
| 24 | Ceiling Joists - metal | 0.1 |  |
| 25 | Ceiling Joists - metal | 0.1 |  |
| 26 | Safety Hand Rail - metal | 1.0 |  |
|  |  |  |  |


| Warehouse Number I Exterior | 27 | Wall - concrete | -0.1 |
| :---: | :---: | :---: | :---: |
|  | 28 | Handrail - metal | -0.1 |
|  | 29 | Door Frame - metal - SE Corner Door | 1.0 |
|  | 30 | Door-metal | 0.0 |
|  | 31 | Structural Steel - metal - SE Corner | 1.0 |
|  | 32 | Driveway Safety Post - metal | 1.7 |
|  | 33 | Wall - concrete | 0.1 |
|  | 34 | Structural Steel - Shade Cover - metal - East side | 1.0 |
|  | 35 | Wall - concrete | 0.2 |
|  | 36 | Sliding door - metal - East Side | -0.2 |
|  | 37 | Door Frame - metal | 0.6 |
|  | 38 | Door - metal | -0.1 |
|  | 39 | Upper Wall - metal - East side | 0.0 |
|  | 40 | Gutter - metal | 0.0 |
|  | 41 | Window Framing - wood - East side | -0.2 |
|  | 42 | Gutter downspout - metal | 0.0 |
|  | 43 | Wall - concrete | 0.0 |
| Warehouse Number 1 Interior | 44 | Wall - concrete | 0.0 |
|  | 45 | Wall - wood | -0.2 |
|  | 46 | Wall - drywall | -0.1 |
|  | 47 | Safety stripes on Warehouse floor - concrete | $>9.9$ |
|  | 48 | Wall - concrete | 0.1 |
|  | 49 | Structural Steel - metal | -0.1 |
|  | 50 | Door frame - metal - West side door with "not an exit" sign" over it | 1.0 |
|  | 51 | Door - metal | 0.3 |
|  | 52 | Wall - concrete | 0.1 |


| 53 | Stair Frame - metal - to north side overhead <br> storage | 2.4 |  |
| :---: | :---: | :--- | :---: |
|  | 54 | Stair Tread - metal - to north side overhead <br> storage | 1.4 |
| 55 | Stair Hand Rail - to north side overhead storage | 1.0 |  |
| 56 | Ceiling - wood | -0.2 |  |
| 57 | Ceiling rafter - wood | 0.0 |  |
| 58 | Ceiling joists - metal | 0.3 |  |
| 59 | Safety Railing - metal - upstairs storage - NE | 1.0 |  |
| 60 | Upper Wall - wood | 0.2 |  |
| 61 | Upper wall - metal | 0.1 |  |
| 62 | Door frame - metal | 0.6 |  |
| 63 | Door - metal | 0.1 |  |
| 64 | Window frame - wood | -0.1 |  |
| 65 | Wall - drywall | -0.1 |  |
| 66 | Wall - drywall | 0.1 |  |
| 67 | Structural steel - metal | 0.2 |  |
| 68 | Ceiling joist - metal | 0.3 |  |


| Gas/Electrical Measurement Area Interior | 69 | Wall - drywall | -0.2 |
| :---: | :---: | :---: | :---: |
|  | 70 | Wall - drywall | -0.2 |
|  | 71 | Wall - drywall | -0.1 |
|  | 72 | Wall - drywall | 0.0 |
|  | 73 | Wall - drywall | 0.0 |
|  | 74 | Wall - drywall | -0.2 |
|  | 75 | Wall - drywall | -0.2 |
|  | 76 | Baseboard - wood | 0.2 |
|  | 77 | Door Frame - wood | 0.0 |
|  | 78 | Door - wood | 0.1 |
|  | 79 | Door Frame - metal | 0.0 |
|  | 80 | Door-metal | 0.1 |
|  | 81 | Baseboard - wood | 0.1 |
|  | 82 | Door frame - wood | 0.0 |
|  | 83 | Door - wood | 0.1 |
|  | 84 | Ceiling tile | -0.1 |
|  | 85 | Ceiling tile | 0.3 |
|  | 86 | Door - wood | -0.3 |
|  | 87 | Wall - drywall/papered | -0.3 |
|  | 88 | Door frame - metal | -0.1 |
|  | 89 | Door - wood | -0.1 |
|  | 90 | Baseboard - wood | 0.0 |
|  | 91 | Column - drywall | -0.1 |
|  | 92 | Wall - drywall | -0.1 |
|  | 93 | Window frame - wood | 0.2 |
|  | 94 | Window frame - wood | 0.1 |
| Calibration | 95 | Calibration | Acceptable |


| Operations Center Interior | 96 | Wall - drywall/papered | -0.2 |
| :---: | :---: | :---: | :---: |
|  | 97 | Wall - drywall/papered | -0.1 |
|  | 98 | Wall - drywall/papered | 0.0 |
|  | 99 | Ceiling tile | 0.1 |
|  | 100 | Window sill - wood | 0.1 |
|  | 101 | Baseboard - wood | 0.1 |
|  | 102 | Door frame - wood | 0.2 |
|  | 103 | Door - wood | -0.2 |
|  | 104 | Door frame - metal | 0.6 |
|  | 105 | Door-metal | -0.1 |
|  | 106 | Support post - metal | 0.1 |
|  | 107 | Wall - ceramic | -0.2 |
|  | 108 | Wall - drywall/papered | -0.1 |
|  | 109 | Ceiling Tile | -0.1 |
|  | 110 | Door frame - wood | 0.2 |
|  | 111 | Door - wood | 0.1 |
|  | 112 | Wall - drywall/papered | -0.1 |
|  | 113 | Baseboard - wood | 0.0 |
|  | 114 | Door frame - wood | 0.2 |
|  | 115 | Door - wood | 0.0 |
|  | 116 | Ceiling tile | 0.2 |


| Operations Center <br> Interior ( $\operatorname{con}$ 't) | 117 | Wall - drywall/papered | 0.1 |
| :---: | :---: | :---: | :---: |
|  | 118 | Wall - drywall/papered | 0.2 |
|  | 119 | Wall - drywall/papered | 0.0 |
|  | 120 | Wall - drywall/papered | -0.3 |
|  | 121 | Ceiling Tile | 0.1 |
|  | 122 | Ceiling Tile | 0.0 |
|  | 123 | Baseboard - wood | 0.0 |
|  | 124 | Baseboard - wood | 0.0 |
|  | 125 | Door - wood | -0.1 |
|  | 126 | Baseboard - wood | 0.0 |
|  | 127 | Door frame - wood | -0.1 |
|  | 128 | Door - wood | 0.0 |
|  | 129 | Wall - concrete | -0.4 |
|  | 130 | Wall - concrete | -0.2 |
|  | 131 | Ceiling Joists - metal | 0.0 |
|  | 132 | Door frame - wood | 0.0 |
|  | 133 | Door - wood | 0.0 |
|  | 134 | Wall - concrete | -0.2 |
|  | 135 | Door frame - wood | 0.0 |
|  | 136 | Door - wood | 0.0 |
|  | 137 | Wall - drywall/papered | 0.0 |
|  | 138 | Wall - drywall/papered | 0.3 |
|  | 139 | Wall - drywall/papered | 0.3 |
|  | 140 | Wall - drywall/papered | -0.2 |
|  | 141 | Baseboard - wood | -0.1 |
|  | 142 | Window Frame - wood | -0.2 |
|  | 143 | Walk-thru - wood | 0.0 |


| 144 | Door Frame - wood | 0.1 |
| :---: | :---: | :---: |
| 145 | Door - wood | 0.1 |
| 146 | Ceiling tile | 0.2 |
| 147 | Wall - ceramic | -0.3 |
| 148 | Floor - Ceramic | -0.3 |
| 149 | Wall - drywall | 0.0 |
| 150 | Wall-drywall | 0.0 |
| 151 | Door frame - wood | -0.1 |
| 152 | Doo-wood | -0.3 |
| 153 | Hand Rail - brass metal | 0.0 |
| 154 | Wall - drywall papered | -0.1 |
| 155 | Wall - drywall papered | 0.0 |
| 156 | Wall - drywall papered | -0.1 |
| 157 | Wall - drywall papered | -0.2 |
| 158 | Baseboard - wood | 0.0 |
| 159 | Door frame - wood | 0.0 |
| 160 | Door - wood | -0.1 |
| 161 | Wall - concrete | -0.1 |
| 162 | Ceiling - plaster | -0.2 |
| 163 | Door frame - wood | 0.1 |
| 164 | Door - wood | 0.0 |
| 165 | Door frame - wood | -0.1 |
| 166 | Door - wood | -0.1 |
| 167 | Closet door - wood | 0.1 |
| 168 | Wall - drywall papered | -0.2 |
| 169 | Baseboard - wood | 0.1 |
| 170 | Wall - drywall | -0.1 |


|  | 171 | Wall-drywall | -0.1 |
| :---: | :---: | :---: | :---: |
|  | 172 | Wall-drywall | -0.2 |
|  | 173 | Wall-drywall | -0.2 |
|  | 174 | Ceiling tile | -0.1 |
|  | 175 | Baseboard - wood | 0.2 |
|  | 176 | Door frame - wood | -0.1 |
|  | 177 | Door - wood | 0.0 |
|  | 178 | Window frame - wood | 0.0 |
|  | 179 | Wall - drywall papered | -0.4 |
|  | 180 | Wall - drywall papered | -0.2 |
|  | 181 | Baseboard - wood | 0.2 |
|  | 182 | Ceiling tile | 0.0 |
|  | 183 | Door frame - wood | 0.0 |
|  | 184 | Door - wood | -0.1 |
|  | 185 | Wall - drywall | 0.2 |
|  | 186 | Wall - drywall | 0.2 |
|  | 187 | Baseboard - wood | 0.2 |
|  | 188 | Baseboard - wood | 0.4 |
|  | 189 | Door frame - wood | 0.1 |
|  | 190 | Door - wood | 0.4 |


| Operations Center <br> Exterior | 191 | Soffit - cementitious | -0.1 |
| :--- | :---: | :--- | :---: |
|  | 192 | Wall - upper, Concrete | 0.0 |
|  | 193 | Gutter - metal | 0.1 |
|  | 194 | Door frame - metal | 0.2 |
|  | 195 | Door-metal | 0.3 |
|  | 196 | Door Lintle - metal - Northwest Door | 1.0 |
|  | 197 | Upper trim - metal | 0.2 |
| Calibrations | 198 | Door frame - metal | 0.4 |
|  | 199 | Door-metal | 0.0 |


| Water/Wastewater <br> Office, Bldg 528 <br> Exterior | 203 | Soffit | 0.2 |
| :--- | :---: | :--- | :---: |
|  | 204 | Upper Trim - metal | -0.1 |
|  | 205 | Wall - concrete | -0.1 |
|  | 206 | Window Lintle - metal | -0.1 |
|  | 207 | Door frame - metal | 0.5 |
| 2208 | Door - metal | 0.1 |  |
| 209 | Door lintle - metal | 0.0 |  |
| 210 | Wall - concrete | 0.1 |  |
| 2211 | Wall - concrete | 0.2 |  |
| 212 | Window Sill - concrete | -0.2 |  |
| 213 | Door frame - metal | 0.0 |  |
| 2214 | Door - metal | 0.3 |  |
|  | Wall - concrete | -0.1 |  |


| Water/Wastewater Office, Bldg 528 Interior | 216 | Wall - drywall | -0.2 |
| :---: | :---: | :---: | :---: |
|  | 217 | Wall - drywall | -0.2 |
|  | 218 | Wall - drywall | -0.3 |
|  | 219 | Wall - drywall | 0.1 |
|  | 220 | Wall - drywall | 0.1 |
|  | 221 | Wall - drywall | 0.2 |
|  | 222 | Wall - drywall | 0.0 |
|  | 223 | Wall - drywall | 0.0 |
|  | 224 | Wall - drywall | 0.1 |
|  | 225 | Wall - drywall | 0.1 |
|  | 226 | Wall - drywall | 0.0 |
|  | 227 | Wall - drywall | -0.1 |
|  | 228 | Wall - drywall | -0.3 |


|  | 229 | Wall - drywall | -0.3 |
| :---: | :---: | :---: | :---: |
|  | 230 | Wall - drywall | -0.1 |
|  | 231 | Wall - drywall | -0.1 |
|  | 232 | Door Frame - metal | -0.1 |
|  | 233 | Door - wood | 0.0 |
|  | 234 | Door frame - metal | -0.1 |
|  | 235 | Door - wood | 0.2 |
|  | 236 | Door frame - metal | 0.0 |
|  | 237 | Door - wood | 0.1 |
|  | 238 | Door frame - metal - To Exterior SW Corner | 1.0 |
|  | 239 | Door- metal | -0.2 |
|  | 240 | Door frame - wood | 0.0 |
|  | 241 | Door - wood | -0.1 |
|  | 242 | Foyer Floor - ceramic | 7.3 |
|  | 243 | Door frame - wood | -0.1 |
|  | 244 | Door - Wood | -0.2 |
|  | 245 | Door frame - metal | -0.1 |
|  | 246 | Door - wood | 0.0 |
|  | 247 | Rear Foyer Floor - ceramic | 6.2 |
|  | 248 | Men's Bathroom Floor - ceramic | 6.5 |
|  | 249 | Ceiling-drywall | -0.3 |
| Calibration | 250 | Calibration | Acceptable |


| Field Service Office Behind Building 528 Exterior | 251 | Wall - concrete | -0.1 |
| :---: | :---: | :---: | :---: |
|  | 252 | Wall - concrete | 0.1 |
|  | 253 | Windowsill - concrete | 0.2 |
|  | 254 | Door frame - metal | 0.3 |
|  | 255 | Door - metal | -0.2 |
|  | 256 | Wall - concrete | -0.1 |
|  | 257 | Wall - concrete | -0.1 |
| Field Service Office Behind Building 528 Interior | 258 | Garage door frame - Metal - small door | 0.0 |
|  | 259 | Garage door - metal | 0.0 |
|  | 260 | Garage door frame - metal | -0.1 |
|  | 261 | Ceiling joists - metal | 0.0 |
|  | 262 | Wall - drywall | -0.2 |
|  | 263 | Wall - drywall | -0.1 |
|  | 264 | Door frame - metal | 0.1 |
|  | 265 | Door metal | -0.1 |
|  | 266 | Ceiling tile | -0.1 |
|  | 267 | Main floor - ceramic | 0.1 |
|  | 268 | Wall - drywall | -0.1 |
|  | 269 | Wall - drywall | 0.0 |
|  | 270 | Wall - drywall | -0.2 |
|  | 271 | Wall - drywall | 0.1 |
|  | 272 | Handrail - metal | 0.1 |
|  | 273 | Floor - ceramic | 0.0 |
|  | 274 | Door frame - metal | 0.4 |
|  | 275 | Door - metal | 0.0 |
|  | 276 | Floor - ceramic - bathroom | -0.4 |
|  | 277 | Wall - concrete - bathroom | 0.0 |


|  | 278 | Wall - ceramic - bathroom | -0.2 |
| :--- | :---: | :--- | :---: |
|  | 279 | Wall - concrete | 0.0 |
|  | 280 | Wall - concrete | -0.1 |
|  | 281 | Ceiling Tile | -0.2 |
| Calibration | 282 | Calibration | Acceptable |


| Building 532 <br> Field Service <br> Technician Facility Exterior | 283 | Wall - concrete | -0.1 |
| :---: | :---: | :---: | :---: |
|  | 284 | Soffit - concrete | 0.0 |
|  | 285 | Upper Trim - metal | -0.1 |
|  | 286 | Wall - concrete | 0.1 |
|  | 287 | Window Slats - concrete | 0.2 |
|  | 288 | Gutter - metal | -0.2 |
|  | 289 | Wall - concrete | 0.0 |
|  | 290 | Ceiling Support - metal - rear | 0.0 |
|  | 291 | Fascia Support - Wood | 0.0 |
|  | 292 | Door frame - metal - back door | 3.2 |
|  | 293 | Door - metal - back door | 0.1 |
|  | 294 | Wall - concrete | 0.2 |
|  | 295 | Wall - wood | -0.2 |
|  | 296 | Door frame - metal | 0.5 |
|  | 297 | Door - metal | 0.0 |
|  | 298 | Window casing - wood | 0.1 |
| Building 532 <br> Field Service Technician Facility Interior | 299 | Wall - drywall - papered | -0.1 |
|  | 300 | Wall - drywall - papered | 0.2 |
|  | 301 | Wall - drywall - papered | 0.1 |
|  | 302 | Wall - drywall - papered | -0.1 |
|  | 303 | Wall - drywall - papered | 0.0 |
|  | 304 | Wall - drywall - papered | -0.2 |
|  | 305 | Wall - drywall - papered | -0.1 |
|  | 306 | Wall - drywall - papered | -0.1 |
|  | 307 | Wall - drywall - papered | -0.1 |
|  | 308 | Wall-drywall - papered | -0.1 |
|  | 309 | Wall-drywall - papered | -0.1 |


|  | 310 | Wall - drywall - papered | -0.1 |
| :---: | :--- | :--- | :---: |
|  | 311 | Wall - drywall - papered | 0.0 |
| 312 | Wall - drywall - papered | -0.2 |  |
| 313 | Ceiling Tile | -0.1 |  |
| 314 | Window Casing - wood | 0.2 |  |
| 315 | Door frame - wood | -0.1 |  |
| 316 | Door - wood | -0.2 |  |
| 317 | Baseboard - wood | 0.1 |  |
| 318 | Door frame - wood | -0.1 |  |
| 319 | Door - wood | 0.1 |  |
| 320 | Baseboard | 0.1 |  |
| 321 | Door frame - wood | 0.1 |  |
| 322 | Door - wood | 0.0 |  |
| 323 | Baseboard - wood | 0.1 |  |
| 324 | Walk-through - wood | 0.0 |  |
| 325 | Window frame - wood - dispatch area | -0.2 |  |
|  | Calibrations <br> 328 | Calibrations | Acceptable |

## Lead-Based Paint was detected in as indicated above.

Testing was performed with a properly calibrated XRF instrument manufactured by RMD, Inc., Model LPA-1, Serial Number 3319.

## APPENDIX C - <br> ACM SURVEY REPORT

## LIMITED ASBESTOS FACILITY SURVEY

## Gainesville Regional Utilities

## Parcel 1 (528 Southeast $5^{\text {th }}$ Avenue) \& Parcel 2 ( 555 Southeast $5^{\text {th }}$ Avenue)

Gainesville, Florida 32601
ECT No. 110059-0100

Prepared for:
Gainesville Regional Utilities
Post Office Box 147117; Station A-128
Gainesville, Florida 32614

Issue Date: June 21, 2011

James Spinnenweber
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## TABLE 1 ASBESTOS SURVEY AND ASSESSMENT FORM

## EXECUTIVE SUMMARY

Environmental Consulting \& Technology, Inc. (ECT), has completed a U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) limited survey of suspect asbestos-containing materials (ACM) at the Gainesville Regional Utilities (GRU) facilities located at Parcel 1 (528 Southeast $5^{\text {th }}$ Avenue) \& Parcel 2 ( 555 Southeast $5^{\text {th }}$ Avenue), in Gainesville, Florida. It is the understanding of ECT that this survey is for due diligence information only. No renovation activities are currently scheduled.

On May 25, 2011, ECT personnel conducted a limited survey of the onsite structures and collected bulk samples of suspect ACM for laboratory analysis, to determine asbestos content and type using polarized light microscopy (PLM). The following four buildings were included in the limited ACM survey:

Parcel 1-528 Southeast $5^{\text {th }}$ Avenue

- Field Services Technicians (FST) Building
- Wastewater Office (WO)
- Field Services (FS) Building

Parcel 2-555 Southeast $5^{\text {th }}$ Avenue

- Operations Center \& Warehouse (OCW)

One hundred and thirty nine bulk samples of suspect ACM were collected for laboratory analysis. Asbestos was detected in the following building materials:

- Gray caulking on the exterior window of the WO building;
- Unknown color vinyl floor tile (VTF) in the front doorway area of the FS building;
- Black condensation barrier under the sink in the rear bathroom of the FS building;
- White pipe insulation with white wrap in the main mechanical room of the OCW building; and
- Black condensation barrier under the sink in the west kitchenette area of the OCW building.

Please note: Not all areas were accessible at the time of survey due to operational status and/or damage potential. These areas include: a small office area and mechanical room of the FST; areas behind the paneling (including white wall paneling) in the FST (Copy Room, Men's Restroom, and Women's Restroom) and in the OCW building (West Wing Break Room and the West Wing Meter Room); area behind the restroom mirrors in the WO building; the HVAC ducts with white flashing in the FST and the OCW building, the roof decking and roofing material of all four buildings (FST, WO, FS, and OCW), and various HVAC gaskets and fire doors in the FST and the OCW buildings.

### 1.0 SURVEY PURPOSE AND PROCEDURES

ECT conducted a limited asbestos survey of suspect $A C M$ in the following four GRU buildings:

Parcel 1-528 Southeast $5^{\text {th }}$ Avenue

- Field Services Technicians (FST) Building
- Wastewater Office (WO)
- Field Services (FS) Building

Parcel 2-555 Southeast $5^{\text {th }}$ Avenue

- Operations Center \& Warehouse (OCW)

Several buildings located in the rear of the OCW property were not surveyed at the request of GRU. A site location map is provided as Figure 1.

The objective of the survey was to identify the suspect ACM that may be present in order to comply with the EPA NESHAP requirements and the requirements of the Occupational Safety and Health Administration (OSHA).

The survey was performed in general accordance with the EPA NESHAP survey requirements and using the EPA Asbestos Hazard Emergency Response Act (AHERA) sampling protocols to determine the number of bulk samples collected and to comply with OSHA regulations governing asbestos related activities. Appendix A contains ECT personnel asbestos certifications.

Mr. Ronald M. Noark and Mr. James Spinnenweber, EPA AHERA accredited asbestos inspectors, conducted a walk-through of the structure on May 25,2011 , in order to identify homogeneous areas (materials similar in color and texture) of suspect ACM. The survey was then performed on typical suspect building materials to investigate and/or determine the location, quantity, type, condition, and potential for damage of suspect friable and non-
friable ACM. EPA identifies friable materials as those which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

One hundred thirty nine samples of suspect ACM were collected from the structures and submitted for analysis to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory (Appendix B). A site location map is provided in Figure 1. Figures 2, 3,4 , and 5 present rough scale drawings of each building, indicating sample locations. Table 1 presents a description of all of the samples collected.

Photographic documentation of each sample location was also obtained. Photographs of the sample locations that indicated positive analytical results are provided in Appendix C. Photographs of additional sample locations can be provided upon request.

### 2.0 ASBESTOS SURVEY METHODOLOGY

The bulk samples of suspect ACM collected were analyzed by a laboratory accredited by NVLAP using PLM (EPA 600/R-93/116). This methodology identifies the quantity and type of asbestos, if any, in the sample being analyzed. Any material containing more than one percent ( $>1$ percent) asbestos is considered to be an ACM according to the EPA regulations (Chapter 40 Code of Federal Regulations [CFR] Part 763) and OSHA 29 CFR 1926.1101 and 29 CFR 1910.1001. In an effort to control analysis costs, ECT instructed the laboratory to discontinue analysis of additional samples within a homogeneous area when one sample within that homogeneous area tested positive.

### 3.0 FACILITY DESCRIPTION

The GRU facilities consists of the FST building, WO building, FS building, the OCW building, exterior material storage areas, and parking areas. The southern buildings of Parcel 2 were not included in this limited ACM survey at the request of GRU. The following suspect asbestos containing building materials (ACBM) were observed in the subject areas:

- FST Building: Grey floor grout and grey baseboard with tan glue in the main break room; ceramic tile with white grout in the men and women's bathrooms; grey and white interior window caulk, pink joint compound on the fire wall, ceiling board, wallboard, fire doors, flexible metal duct work and joint compound throughout the building; and black tar paper (exterior roof). Sample locations at the FST are presented on Figure 2.
- WO Building: Brown expansion joint material in the northeastern storage room; gray duct flashing and off white condensation barrier under sink in the kitchenette area; gray window caulk and tan surfacing on the exterior of the building; grey floor tile and grout in the men's and women's bathrooms; white tongue and groove ceiling tile (decorative) hanging on the entrance hallway; grey baseboard with yellow glue in the southwest hallway, yellow insulation with black batt, carpet glue, ceiling board, wallboard, flexible metal duct work, joint compound, and grey/white/green terrazzo flooring throughout the building; and black tar paper (exterior roof). Sample locations at the WO building are presented on Figure 3.
- FS Building: Tan-flaked floor tile with yellow glue in the men's and women's bathrooms; green VCT (bottom layer) in the men's bathroom; black masik, metal tape, and black condensation barrier under sink in kitchenette area; unknown color VCT at front doorway entrance; tan surfacing on the exterior of the building; yellow insulation with black batt, carpet glue, ceiling board, wallboard, flexible metal duct work, joint compound, and grey/white/green terrazzo flooring throughout the building;
and black tar paper (exterior roof). Sample locations at the FS building are presented on Figure 4.
- OCW Building: Gray/tan floor tile ( 12 -inch square) with yellow glue and the white condensation barrier under sink in the east wing kitchen area; white ceramic floor tile ( 2 -inch square) in the east wing men's and women's bathrooms; gray striped floor tile with yellow glue in the electric meter room; red ceramic floor tile with grey grout in the electric meter side room; light grey striped floor tile with yellow glue in the gas meter room; white pipe insulation with white wrap and pink/tan/gray terrazzo flooring in the main mechanical room; grey flaked floor tile with white glue in the warehouse office; black condensation barrier under sink in the west kitchenette area; grey condensation barrier under sink and tan/white floor tile (12-inches square) with yellow glue in the west wing breakroom, black felt paper under the mezzanine in the west wing office area, yellow insulation with black batt, carpet glue, ceiling board, wallboard, flexible metal duct work, joint compound, basecoat-sheetrock, skimcoat-sheetrock, and gray plaster with white skimcoat throughout the building. Sample locations at the OCW building are presented on Figure 5.

The suspect ACBMs appeared to be in good condition at the time of the survey. Any other unidentified suspect ACM found within the structures during any renovation activities, not specifically identified in this report, must be considered to be ACM until determined to be non-ACM by a licensed asbestos consultant and laboratory analysis.

### 4.0 LABORATORY RESULTS AND HAZARD ASSESSMENT

The laboratory results for the collected samples reported asbestos in the following building materials:

- Sample number 51 contained 5 percent Chrysotile asbestos in the grey window caulking on the front exterior of the WO building;
- Sample number 72 contained 25 percent Chrysotile asbestos in the unknown color VCT (bottom layer) at the front doorway area of the FS building;
- Sample number 74 contained 3 percent Chrysotile asbestos in the black condensation barrier under the sink in the rear bathroom of the FS building;
- Sample number 85 contained 40 percent Chrysotile and 10 precent Amosite asbestos in the white pipe insulation with white wrap in the main mechanical room of the OCW building; and
- Sample number 96 contained 10 percent Chrysotile asbestos in the black condensation barrier under the sink in the west kitchenette area of the OCW building.

Table 1 summarizes the asbestos survey and assessment results. Photographic documentation of each sample location which indicated ACM is provided in Appendix C. The asbestos detected in the gray window caulk, floor tiles, and condensation barrier is an EPA NESHAP Category II, non-friable material. These ACMs were observed to be in good condition at the time of the survey. The asbestos detected in the white pipe insulation with white wrap is friable, and is therefore regulated asbestos containing material (RACM). The white pipe insulation was observed to be in good condition.

Should any renovation activities occur, the ACM detected would likely have a high damage potential. Dependent upon the method of removal and waste consolidation practices used during renovation activities, the identified ACM could become regulated ACM under NESHAP; therefore, all ACM must be removed prior to renovation by an accredited
asbestos abatement contractor and disposed of at an appropriately permitted landfill prior to renovation activities.

A copy of the certified laboratory analytical report and the corresponding chain of custody are provided in Appendix D.

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSIONS

ECT has completed the EPA NESHAP limited asbestos survey of the Parcel 1 ( 528 Southeast $5^{\text {th }}$ Avenue) and Parcel 2 ( 555 Southeast $5^{\text {th }}$ Avenue) at the GRU facilities located in Gainesville, Florida. One hundred thirty nine bulk samples of suspect ACM were collected and submitted for laboratory analysis of asbestos content using PLM methodology. The laboratory results indicated asbestos is present in the grey window caulking on the front exterior of the WO building, the unknown color vinyl floor tile (bottom layer) at the front doorway area of the FS building, the black condensation barrier under the sink in the rear bathroom of the FS building; the white pipe insulation with white wrap in the main mechanical room of the OCW building; and the black condensation barrier under the sink in the west kitchenette area of the OCW building.

### 5.2 RECOMMENDATIONS

The limited asbestos survey was conducted for due diligence information only, and no renovation activities are currently scheduled. ECT recommends that the materials be removed by a licensed asbestos contractor should any renovation activities take place.

### 6.0 LIMITATIONS

All of the professional opinions presented in this limited asbestos survey report are based solely on the scope of work conducted and sources referred to in this report. The data presented by ECT in this report were collected and analyzed using generally accepted industry methods and practices at the time the report was generated. This report represents the conditions, locations, and materials that were observed at the time the fieldwork was performed.

## TABLES

## TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM

Client Name: Gainesville Regional Utilities - Parcel 1 \& 2

| Consultant: | ECT |
| ---: | :--- |
| ECT Project No.: | $110059-0100$ |
| Survey Date: | May 25,2011 |


| Sample No. | Material | HA | Functional Space | Quantity | Condition | Damage <br> Potential | $\begin{gathered} \text { Friable } \\ \text { Y/N } \end{gathered}$ | Asbestos Type\% | EPA NESHAP Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Grey Floor Grout | 1 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 2 | Grey Floor Grout | 1 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 3 a | Grey Baseboard | 2 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 3b | Tan Glue | 2 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 4a | Grey Baseboard | 2 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 4b | Tan Glue | 2 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 5 | Ceiling Tile Dot Fissures | 3 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | Yes | NAO |  |
| 6 | Ceiling Tile Dot Fissures | 3 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | Yes | NAO |  |
| 7 a | Wallboard | 4 | FSTF - Mens Bathroom |  | Good | Low | Yes | NAO |  |
| 7 b | Joint compound | 4 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 8 a | Wallboard | 4 | FSTF - Mens Bathroom |  | Good | Low | Yes | NAO |  |
| 8 b | Joint compound | 4 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 9 a | Ceramic Tile | 5 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 9 b | White Grout | 5 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 10a | Ceramic Tile | 5 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 10b | White Grout | 5 | FSTF - Mens Bathroom |  | Good | Low | No | NAO |  |
| 11 | Wallboard/Joint compound | 6 | FSTF - Hallway |  | Good | Low | Yes | NAO |  |
| 12a | Wallboard | 6 | FSTF - Hallway |  | Good | Low | Yes | NAO |  |
| 12b | Joint compound | 6 | FSTF - Hallway |  | Good | Low | No | NAO |  |
| 13 a | Wallboard | 7 | FSTF - Warehouse |  | Good | Low | Yes | NAO |  |
| 13 b | Joint compound | 7 | FSTF - Warehouse |  | Good | Low | No | NAO |  |

TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM
Client Name: Gainesville Regional Utilities - Parcel $1 \& 2$
Address: $\frac{528 \& 555 \text { Southeast Fifth Avenue }}{\text { Gain }}$

| Consultant: | ECT |
| ---: | :--- |
| ECT Project No.: | $110059-0100$ |
| Survey Date: | May 25,2011 |


| Sample No. | Material | HA | Functional Space | Quantity | Condition | Damage <br> Potential | Friable Y/N | Asbestos Type\% | EPA NESHAP Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 a | Wallboard | 7 | FSTF - Warehouse |  | Good | Low | Yes | NAO |  |
| 14 b | Joint compound | 7 | FSTF - Warehouse |  | Good | Low | No | NAO |  |
| 15 | Pink Joint Compound | 8 | FSTF - Warehouse |  | Good | Low | No | NAO |  |
| 16 | Pink Joint Compound | 8 | FSTF - Warehouse |  | Good | Low | No | NAO |  |
| 17 | Grey/White Window Caulk | 9 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 18 | Grey/White Window Caulk | 9 | FSTF - Water/Wastewater Tech Breakroom |  | Good | Low | No | NAO |  |
| 19 | Carpet glue | 10 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 20 | Carpet glue | 10 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 21 a | Grey Baseboard | 11 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 21 b | Yellow Glue | 11 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 22a | Grey Baseboard | 11 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 22b | Yellow Glue | 11 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 23a | Wallboard | 12 | WWO - Southwest Hallway |  | Good | Low | Yes | NAO |  |
| 23 b | Joint compound | 12 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 24 a | Wallboard | 12 | WWO - Southwest Hallway |  | Good | Low | Yes | NAO |  |
| 24 b | Joint compound | 12 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 25 a | Yellow Insulation | 13 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 25 b | Black Batt | 13 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 26a | Yellow Insulation | 13 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 26 b | Black Batt | 13 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 27 | 2X2 White Ceiling Tile | 14 | WWO - Southwest Hallway |  | Good | Low | Yes | NAO |  |
| 28 | 2X2 White Ceiling Tile | 14 | WWO - Southwest Hallway |  | Good | Low | Yes | NAO |  |
| 29 | White Wall Surfacing | 15 | WWO - Southwest Hallway |  | Good | Low | No | NAO |  |
| 30 | White Wall Surfacing | 15 | WWO - Kichenette Area |  | Good | Low | No | NAO |  |
| 31 | White Wall Surfacing | 15 | WWO - Northeast Hallway |  | Good | Low | No | NAO |  |
| 32 | Gray Dust Flashing | 16 | WWO - Kichenette Area |  | Good | Low | No | NAO |  |
| 33 | Gray Dust Flashing | 16 | WWO - Kichenette Area |  | Good | Low | No | NAO |  |

TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM

Client Name: | Gainesville Regional Utilities - Parcel $1 \& 2$ |
| :--- |
| Address: |
| $\frac{528 \& 555 \text { Southeast Fifth Avenue }}{\text { Gainesville, Alachua County, Florida }}$ |.

| Consultant: | ECT |
| ---: | :--- |
| Project No: | $110059-0100$ |
| Survey Date: | May 25,2011 |


| $\begin{gathered} \text { Sample } \\ \text { No. } \end{gathered}$ | Material | HA | Functional Space | Quantity | Condition | Damage <br> Potential | $\begin{gathered} \text { Friable } \\ \mathbf{Y} / \mathbf{N} \end{gathered}$ | Asbestos Type\% | EPA NESHAP Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 | Off White condensation barrier | 17 | WWO - Kichenette Area |  | Good | Low | No | NAO |  |
| 35 | Off White condensation barrier | 17 | WWO - Kichenette Area |  | Good | Low | No | NAO |  |
| 36 | Grey/White/Green Terrazzo Floor | 18 | WWO - Northeast Storage Room |  | Good | Low | No | NAO |  |
| 37 | Grey/White/Green Terrazzo Floor | 18 | WWO - Northeast Storage Room |  | Good | Low | No | NAO |  |
| 38 | Brown Expansion Joint | 19 | WWO - Northeast Storage Room |  | Good | Low | No | NAO |  |
| 39 | Brown Expansion Joint | 19 | WWO - Northeast Storage Room |  | Good | Low | No | NAO |  |
| 40 | 4X2 Dot Fissure Ceiling Tile | 20 | WWO - Northeast Storage Room |  | Good | Low | Yes | NAO |  |
| 41 | 4X2 Dot Fissure Ceiling Tile | 20 | WWO - Northeast Storage Room |  | Good | Low | Yes | NAO |  |
| 42 | Wallboard | 21 | WWO - Mens Bathroom |  | Good | Low | Yes | NAO |  |
| 43 | Wallboard | 21 | WWO - Mens Bathroom |  | Good | Low | Yes | NAO |  |
| 44a | Grey Tile | 22 | WWO - Womens Bathroon |  | Good | Low | No | NAO |  |
| 44 b | Grout |  | WWO - Womens Bathroon |  | Good | Low | No | NAO |  |
| 45 a | Grey Tile | 22 | WWO - Womens Bathroon |  | Good | Low | No | NAO |  |
| 45b | Grout | 22 | WWO - Womens Bathroon |  | Good | Low | No | NAO |  |
| 46 | White Tongue/Grove Ceiling Tile on Walls | 23 | WWO - Main Enterance Hallway |  | Good | Low | Yes | NAO |  |
| 47 | White Tongue/Grove Ceiling Tile on Walls | 23 | WWO - Main Enterance Hallway |  | Good | Low | Yes | NAO |  |
| 48 | Tan Exterior Surfacing | 24 | WWO - Exterior Front |  | Good | Low | No | NAO |  |
| 49 | Tan Exterior Surfacing | 24 | WWO- Exterior Front |  | Good | Low | No | $\mathrm{NAO}$ |  |
| 50 | Tan Exterior Surfacing | 24 | WWO- Exterior Front |  | Good | Low | No | NAO |  |
| 51 | Gray Window Caulk | 25 | WWO- Exterior Front |  | Good | Low | No | 5\% Chrysotile | Cat. II, NonFriable |
| 52 | Gray Window Caulk | 25 | WWO- Exterior Front |  | Good | Low | No | Stop Positive | Cat. II, NonFriable |
| $53 a$ | 12X12 Tan Flakes FT | 26 | FSO - Mens Bathroom |  | Good | Low | No | NAO |  |
| 53 b | Yellow Glue | 26 | FSO - Mens Bathroom |  | Good | Low | No | NAO |  |
| 54 a | 12X12 Tan Flakes FT | 26 | FSO - Mens Bathroom |  | Good | Low | No | NAO |  |
| 54 b | Yellow Glue | 26 | FSO - Mens Bathroom |  | Good | Low | No | NAO |  |

TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM


TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM

Client Name: Gainesville Regional Utilities - Parcel 1 \& 2
Address: $\quad 528 \& 555$ Southeast Fifth Avenue
Gainesville, Alachua County, Florida

| Consultant: | ECT |
| ---: | :---: |
| ECT Project No.: | $110059-0100$ |
| Survey Date: | May 25,2011 |


| Sample No. | Material | HA | Functional Space | Quantity | Condition | Damage <br> Potential | Friable Y/N | Asbestos Type$\%$ | EPA <br> NESHAP <br> Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 | Black condensation barrier | 36 | FSO - Rear Bathroom |  | Good | Low | No | Stop Positive |  |
| 76 | Tan Exterior Surfacing | 37 | FSO - Front Exterior |  | Good | Low | No | NAO |  |
| 77 | Tan Exterior Surfacing | 37 | FSO - Front Exterior |  | Good | Low | No | NAO |  |
| 78 | Tan Exterior Surfacing | 37 | FSO - Front Exterior |  | Good | Low | No | NAO |  |
| 79 | Pink Tan Gray Terrazzo Floor | 38 | OCW - Mechanical Room |  | Good | Low | No | NAO |  |
| 80a | Skimcoat - Sheetrock | 39 | OCW - Mechanical Room |  | Good | Low | No | NAO |  |
| 80b | Base Coat - Sheetrock | 39 | OCW - Mechanical Room |  | Good | Low | No | NAO |  |
| 81a | Skimcoat - Sheetrock | 39 | OCW - Mechanical Room |  | Good | Low | No | NAO |  |
| 81 b | Base Coat - Sheetrock | 39 | OCW - Mechanical Room |  | Good | Low | No | NAO |  |
| 82 | Wallboard | 40 | OCW - Mechanical Room |  | Good | Low | Yes | NAO |  |
| 83 | Wallboard | 40 | OCW - Mechanical Room |  | Good | Low | Yes | NAO |  |
| 84 | White Pipe Insulation with White Wrap | 41 | OCW - Mechanical Room |  | Good | Low | Yes | 40\% Chrysotile 10\% Amosite | RACM |
| 85 | White Pipe Insulation with White Wrap | 41 | OCW - Mechanical Room |  | Good | Low | Yes | Stop Positive | RACM |
| 86 | White Pipe Insulation with White Wrap | 41 | OCW - Mechanical Room |  | Good | Low | Yes | Stop Positive | RACM |
| 87 | 2X2 White Ceiling Tile | 42 | OCW - Office (Mr. David Sparks) |  | Good | Low | Yes | NAO |  |
| 88 | 2 X 2 White Ceiling Tile | 42 | OCW - Office (Mr. David Sparks) |  | Good | Low | Yes | NAO |  |
| 89 | Yellow Carpet Glue | 43 | OCW - Main Hallway Entrance |  | Good | Low | No | NAO |  |
| 90 | Yellow Carpet Glue | 43 | OCW - Main Hallway Entrance |  | Good | Low | No | NAO |  |
| 91 | 2X2 Dot Fissure Ceiling Tile | 44 | OCW - Main Hallway West Side |  | Good | Low | Yes | NAO |  |
| 92 | 2 X 2 Random Dot Ceiling Tile | 45 | OCW - Main Hallway West Side |  | Good | Low | Yes | NAO |  |
| 93 | 2X2 Random Dot Ceiling Tile | 45 | OCW - Main Hallway West Side |  | Good | Low | Yes | NAO |  |
| 94 a | Yellow Insulation | 46 | OCW - West Kichenette Area |  | Good | Low | No | NAO |  |
| 94 b | Black Batt | 46 | OCW - West Kichenette Area |  | Good | Low | No | NAO |  |
| 95 a | Yellow Insulation | 46 | OCW - West Kichenette Area |  | Good | Low | No | NAO |  |
| 95 b | Black Batt | 46 | OCW - West Kichenette Area |  | Good | Low | No | NAO |  |
| 96 | Black condensation barrier | 47 | OCW - West Kichenette Area |  | Good | Low | No | 10\% Chrysotile | Cat. II, NonFriable |

TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM
Client Name: Gainesville Regional Utilities - Parcel 1 \& 2
Address: $\frac{528 \& 555 \text { Southeast Fifth Avenue }}{\text { Gainesville Alach Coity Flore }}$
Consultant:
ECT Project No.: $\frac{\text { ECT }}{110059-0100}$
Survey Date:

| Sample No. | Material | HA | Functional Space | Quantity | Condition | Damage <br> Potential | Friable Y/N | Asbestos Type\% | EPA NESHAP Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 97 | Black condensation barrier | 47 | OCW - West Kichenette Area |  | Good | Low | No | Stop Positive | Cat. II, NonFriable |
| 98a | Gray Striped FT | 48 | OCW - Electric Meter Room |  | Good | Low | No | NAO |  |
| 98 b | Yellow Glue | 48 | OCW - Electric Meter Room |  | Good | Low | No | NAO |  |
| 99 a | Gray Striped FT | 48 | OCW - Electric Meter Room |  | Good | Low | No | NAO |  |
| 99 b | Yellow Glue | 48 | OCW - Electric Meter Room |  | Good | Low | No | NAO |  |
| 100a | Light Gray Striped FT | 49 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 100b | Yellow Glue | 49 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 101a | Light Gray Striped FT | 49 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 10 lb | Yellow Glue | 49 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 102a | Wallboard | 50 | OCW - Electric Meter Side Room |  | Good | Low | Yes | NAO |  |
| 102b | Joint compound | 50 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 103a | Wallboard | 50 | OCW - Electric Meter Side Room |  | Good | Low | Yes | NAO |  |
| 103b | Joint compound | 50 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 104a | Red Ceramic FT | 51 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 104b | Gray Grout | 51 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 105a | Red Ceramic FT | 51 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 105b | Gray Grout | 51 | OCW - Electric Meter Side Room |  | Good | Low | No | NAO |  |
| 106a | Wallboard | 52 | OCW - Gas Meter Room |  | Good | Low | Yes | NAO |  |
| $106 \mathrm{~b}$ | Joint compound | 52 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 107a | Wallboard | 52 | OCW - Gas Meter Room |  | Good | Low | Yes | NAO |  |
| 107b | Joint compound | 52 | OCW - Gas Meter Room |  | Good | Low | No | NAO |  |
| 108 | 2X4 Dot Fissure Ceiling Tile | 53 | OCW - Gas Meter Room |  | Good | Low | Yes | NAO |  |
| 109 | 2X4 Dot Fissure Ceiling Tile | 53 | OCW - Gas Meter Room |  | Good | Low | Yes | NAO |  |
| 110 | Black Felt Paper under Mezzanine | 54 | OCW - West Wing Office |  | Good | Low | No | NAO |  |
| 111 | Black Felt Paper under Mezzanine | 54 | OCW - West Wing Office |  | Good | Low | No | NAO |  |
| 112 | 2X2 Embossed Ceiling Tile | 55 | OCW - West Wing Mens Room |  | Good | Low | Yes | NAO |  |
| 113 | 2X2 Embossed Ceiling Tile | 55 | OCW - West Wing Mens Room |  | Good | Low | Yes | NAO |  |

TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM


TABLE 1. ASBESTOS SURVEY AND ASSESSMENT FORM


Notes: $\quad \mathrm{NAO}=$ No Asbestos Observed.
Stop Positive $=$ Not Analyzed (previous sample for HA tested positive).
$\mathrm{HA}=$ Homogenous Area.
$\mathrm{SF}=$ Square Feet.
$\mathrm{LF}=$ Linear Feet.
NS $=$ Not sampled.
RACM $=$ Regulated Asbestos Containing Material.

FSTF - Field Services Technicians Facility
WWO-Water-Wastewater Office
FSO - Field Services Office
OCW- Operations Center \& Warchouse

Source: ECT, 2011.

## FIGURES

Environmental Consulting \& Technology, inc.


FIGURE 1
SITE LOCATION MAP
GRU FACILITIES


Environmental Consulting \& Technology, Inc.



SCALE IN FEET
LEGEND

- ASBESTOS SAMPLE

FIGURE 2.
FIELD SERVICES TECHNICIAN BUILDING

S.E. 5th AVE.



FIGURE 4.


## APPENDIX A- <br> ENVIRONMENTAL CONSULTING \& TECHNOLOGY, INC. PERSONNEL CERTIFICATIONS

${ }^{\boldsymbol{E}} \mathrm{CO}^{\boldsymbol{\pi}}$


STATE OF FLORIDA
DEPRRTMANT OF BUSINESS AND PROFESSIONAL RRGULATION
ASBEGTO8 LICENSING UNIT 1940 HORTH MONROX STREDT

DUVALL MICHARL C
1712 CEYDESDALE DRIVE
LOXAHATCH:
FL 33407

Congratulational With this license you become one of the neerly one million Our profeetionsed by the Department of Buainese and Profescional Regulation. boxers to berbeque reethurants, range from architects to yacht brokern, from都
For information about aprove the way we do buanness in ordor to serve you better There you can find more information about our ditwions.myliordalicense.com. impact you, subscribe to depaitment nowt our divitions and the regulations that Department's infliativee.

Our miasion at the Department is: License Efficiantly, Regulato Fairly. We Tonatintly stitve to serve you better so that you can sorve your cuatomers. Thenk you for doing busineste in Florida, and congratulations on your new incensel


DETACH HERE
Acf. 543.9643


Named below Is rickisg orgnirgatyo
Under the IS LICHNSED
Expiration dates Mov of Chapter 30 , 2011 gig

ENVIROMMENTMI CON
MICBABL C. DUVANSULTING \& TECHNOLOCY
3701 NH 980
GAINESVILETE STREET
FL 32606-5004

## TREE CENTER

Center for Training, Research and Education for Environmental Occupations certifies

## James N. Spinnenweber

Environmental Consulting \& Technology, Inc., 3701 NW 98th SL. Gainesville, FL. 32606
Having passed a 25 -question exam with a score of $\mathbf{7 0 \%}$ or higher has successfully met training requirements for
Asbestos Refresher: Inspector
FDBPR Asbestos Licensing Unit: Provider \#0000995; Course *F L49-0004731 (1/2 Day; 3.40 Context Hours)
(Reaccreditation for Inspector under TSCA Title IIIAHERA)

## Conducted

04/26/2011

Certificate \#: 110406-1963
Exam Date: 04/26/2011
EPA accreditation expires: 04/26/2012
Principal Instructor: Brian Duchene, PE
CRUs: 4
FBPR LAC: \#00009995; Course \#0004731
FBPE PDHs: \#0004021: \#0003570/Educational Institutions: 4.052106
ABIH: CM Points 0.67


University of Florida TREF O Center
 $\qquad$ - What cover untadus


## UNIVERSITY OF

 FLORIDA
## TREE CENTER

Center for Training, Research and Education for Environmental Occupations certifies

## James N. Spinnenweber

Having passed a 25 -question ex um with \& Technology, Inc., 3701 NW 98th St. Gainesville, FL 32006
Asbestos Refresher: Management Planner
(Reaccreditation for Management Planner Under TSCA Title IIIAHERA)
conducted

Certificate \#: 110407-1971
Exam Date: 04/26/201I
EPA accreditation expires: 04/26/2012
Principal Instructor: Russell E. Staffer, P.E
CESs: . 35
FBPR LAC: \#0000995; Course \#0004732
FBPE PDHs: \#0004021: \#0003571/Educational Institutions: 3.552106
FBPR CILB: \#0000995; Full Day INS/MP Ref Only; Course \#0003511,
ABIH: CM Pts 1.34; Full Day Inspector/MP Ref
FBPR ARCH: \#1790; Full Day INS/MP Ref; Course \#A R.04.318A (0007371); Hours: 8.0 (Intermediate)


Cant Hater
Assemble Director

[^2]

Vern Roberts Environmental Training, Inc. $1398794^{\text {th }}$ Avenue $N$ Seminole, FL 33776 727-593-3067
Asbestos Survey \& Mechanical (inspector) Refresher Training

This is to certify that Ronald M. Noark

Has completed the requisite training for asbestos accreditation under TSCA TITLE I
Date of Examination 11/11/10

Date of Course: 11/11/10 Expiration Date 11/11/11 Certificate \# 1111104
course \#FL49-0006322 Provider \#FY49-0003810


Vern Roberts Environmental Training, Inc. $1398794^{\text {th }}$ Avenue $N$ Seminole, FL 33776 727-593-3067 Asbestos Contractor Supervisor Refresher Training

This is to certify that
Ronald M. Noark

Has completed the requisite training for asbestos accreditation
under TSCA TITLE II
Date of Examination 11/10/10

Date of Course: 11/10/10 Expiration Date 11/10/11 Certificate \# 1110103
course \#FL49-0006321 Provider \#FL49-0003810


## APPENDIX B- <br> LABORATORY ACCREDITATIONS

## SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

## EMSL Analytical, Inc.

5125 Adanson Street, Suite 900
Orlando, FL 32804
Dr. Blanca Cortes
Phone: 407-599-5887 Fax: 407-599-9063
E-Mail: bcortes@emsl.com
URL: http://www.emsl.com

2010-07-01 through 2011-06-30


## APPENDIX CPHOTOGRAPHS



1. Photograph of the grey window caulking on the front exterior of the WO building.

2. Photograph of unknown color vinyl floor tile (bottom Layer) at the front doorway area of the FS building.

ASBESTOS SAMPLING AREAS
GRU PARCEL 1 AND PARCEL 2
528 \& 555 SOUTHEAST 5TH AVENUE GAINESVILLE, FLORIDA
Source: ECT, 2011.

## $\square \square$

Environmental Consulting \& Technology, Inc.

3. Photograph of the black condensation barrier under sink in the rear bathroom area of the FS building.

4. Photograph of white pipe insulation with white wrap in the main mechanical room of the OCW building.

ASBESTOS SAMPLING AREAS
GRU PARCEL 1 AND PARCEL 2
528 \& 555 SOUTHEAST 5TH AVENUE GAINESVILLE, FLORIDA
Source: ECT, 2011.

## ECT

Environmental Consulting \& Technology, Inc.

5. Photograph of the black condensation barrier under sink in the west kitchenette area of the OCW building.

## APPENDIX D-

## ASBESTOS LABORATORY REPORT AND CHAIN OF CUSTODY

Project: GRU operations bldg

| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Prof: |  |
| Analysis Date: | $6 / 6 / 2011$ |

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using
Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07



Jonathan Teda, Asbestos Lab Manager or other approved signatory

[^3]Samples analyzed by EMSL Analytical. Inc. Orlando. FL NVLAP Lab Code 101151-0


James Spinnenweber Environmental Consulting \& Tech., Inc. 3701 N.W. 98th St. Gainesville, FL 32606
Fax: (352) 332-6733 Phone: (352) 332-0444

Project: GRU operations bldg

| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | 1100590100 |
| Received: | $05 / 27 / 1110.51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy



Initial report from 06/06/2011 14:32:07

Analyst(s)


[^4]EHSL Anamten mo


Attn: James Spinnenweber

| Environ | \& Tech Inc. | Customer ID: | EC\&T50 |
| :---: | :---: | :---: | :---: |
| 3701 NW 98th | inc. | Customer PO: | 110059-0100 |
| 3701 N.W. 98th St |  | Received: | 05/27/11 10:51 AM |
| Gainesville, FL 32 |  | EMSL Order: | 341104141 |
| (352) 332-6733 | Phone: (352) 332-0444 |  |  |
| GRU operations bldg |  | EMSL Prof: |  |
|  |  | Analysis Date: | 6/6/2011 |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Descriptlon | Appearance | Non-Asbestos |  |  |  | $\begin{aligned} & \text { Asbestos } \\ & \% \text { Type } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% | Non-Fibrous |  |
| 8-W allboard <br> 341104141-0008 | FSTF-mens bathroom wallboard/joint compound | Brown <br> Fibrous <br> Heterogeneous | 5\% | Cellulose |  | \% Non-fibrous (other) <br> \% Gypsum | None Detected |
| 8-Joint Compound <br> 341104141-0008A | FSTF-mens bathroom wallboard/joint compound | White <br> Non-Fibrous Heterogeneous |  |  |  | $\%$ Non-fibrous (other) <br> \% Ca Carbonate | None Detected |
| 9 -Ceramic Tile <br> 341104141-0009 | FSTF-mens bathroom ceramic tile w/white grout | White <br> Non-Fibrous Homogeneous |  |  |  | \% Non-fibrous (other) | None Detected |
| 9-Grout <br> 341104141-00094 | FSTF-mens bathroom ceramic tile w/white grout | White <br> Non-Fibrous <br> Homogeneous |  |  |  | Non-fibrous (other) | None Detected |
| 10-Ceramic Tile 341104141-0010 | FSTF-mens bathroom ceramic tile w/white grout | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | Non-fibrous (other) | None Detected |
| 10-Grout <br> 341104141-0010A | FSTF-mens bathroom ceramic tile w/white grout | Yellow <br> Non-Fibrous <br> Homogeneous |  |  |  | Non-fibrous (other) | None Detected |

Initial report from 06/06/2011 14 32:07
Analyst(s)
Adelmarie Bones (47) Jonathan Teda (40)
Jerry Cherian (102)

[^5]EvGL Annyluat ine

| Attn: | James Spinnenweber |
| :--- | :--- |
|  | Environmental Consulting \& Tech., Inc. |
|  | 3701 N.W. 98 th St. |
|  | Gainesville, FL 32606 |
| Fax: | (352) $332-6733$ |
| Project: | GRU operations bldg |


| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy



Initial report from 06/06/2011 14:32:07
Analyst(s)

| Adeimanie Bones (47) Jonathan Teda (40) |
| :--- |
| Jerry Chenian (102) |



[^6] used by the client to clam product certfication. approval, or endorsement by NVLAP. NIST or any agency of the federal government. Non-fnable organically bound matenals present a problem matnx and therefore EMSL recommends gravmetnc rediuction phor to analysis. Samples recelved in good condtion unless otherwise noted.
Samples analyzed by EMSL Analyticat, inc. Orlando. FL NVLAP Lab Code 101151-0
6) BL Anatyman bat
James Spinnenweber
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Gainesville, FL. 32606

| (352) $332-6733$ |
| :--- |
| GRU operatlons bldg | Phone: (352) 332-0444


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| Customer PO: | $110059-0100$ |
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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% Non-Fibrous | \% Type |
| $\begin{aligned} & 15 \\ & 341104141-0015 \end{aligned}$ | FSTF-warehouse pink joint compound | Pink <br> Non-Fibrous Heterogeneous |  |  | $75 \%$ Non-fibrous (other) <br> 25\% Ca Carbonate | None Detected |
| $\begin{aligned} & 16 \\ & 341104141-0016 \end{aligned}$ | FSTF-warehouse pink joint compound | Pink <br> Non-Fibrous Heterogeneous |  |  | $75 \%$ Non-fibrous (other) <br> 25\% Ca Carbonate | None Detected |
| $\begin{aligned} & 17 \\ & 341104141-0017 \end{aligned}$ | FSTF- <br> water/wastewater tech breakroom grey/white window caulk | Gray/White <br> Non-Fibrous Heterogeneous | 5\% | Cellulose | 95\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 18 \\ & 341104141-0018 \end{aligned}$ | FSTF- <br> water/wastewater tech breakroom grey/white window caulk | Gray/White <br> Non-Fibrous <br> Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 19 \\ & 341104141-0019 \end{aligned}$ | WWO-southwest hallway - carpet glue | Yellow <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 20 \\ & 341104141.0020 \end{aligned}$ | WWO-southwest hallway - carpet glue | Yellow <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |

Initial report from 06/06/2011 14:32:07

Analyst(s)
Adelmarie Bones (47) Jonathan Teda (40)


[^7] problem matnx and therefore EMSL recommends gravmetnc reduction phor to analysis. Samples recerved in good condtion unfess otherwise noted
Samples analyzed by EMSL Analyical. fnc. Oriando. FL NVLAP Lab Code $101151-0$


| Customer ID: | EC\&T50 |
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| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07
Analyst(s)

| Adelmarie Bones (47) |  |
| :--- | :--- |
| Jerry Cherian (102) | Jonathan Teda (40) |


| Jonathan Teda, Asbestos Lab Manager |
| :---: |
| or other approved signatory |

[^8] problem matnx and therefore EMSL recommends gravmetnc reduction phor to analysis. Samples received in good condition unless otherwise noted
Samples analyzed by EMSL Analylical. Inc. Orlando FL. NVLAP Lab Code $101151-0$

EMSL anatyen Mo



| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Flbrous | \% Non-Fibrous | \% Type |
| 24-Wallboard <br> 344104141-0024 | WWO-southwest hallway wallboard/joint compound | Brown/Gray <br> Fibrous <br> Heterogeneous | 40\% | Cellulose | 20\% Non-fibrous (other) 40\% Gypsum | None Detected |
| 24-Joint Compound <br> 341104141-0024A | WWO-southwest hallway wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  | 85\% Non-fibrous (other) <br> 15\% Ca Carbonate | None Detected |
| 25-Insulation <br> 341104141-0025 | WWO-southwest hallway - yellow insulation w/black batt | Yellow <br> Fibrous <br> Homogeneous | 100\% | Min. Wool | 0\% Non-fibrous (other) | None Detected |
| 25-Black Batt <br> 341104141-0025A | WWO-southwest hallway - yellow insulation w/black batt | Brown/Black <br> Fibrous <br> Heterogeneous | 85\% | Cellulose | 15\% Non-fibrous (other) | None Detected |
| 26-Insulation <br> 341104141-0026 | WWO-southwest hallway - yellow insulation w/black batt | Yellow <br> Fibrous <br> Homogeneous | 90\% | Min. Woot | 10\% Non-fibrous (other) | None Detected |
| 26-Black Batt <br> 341104141 -00264 | WWO-southwest hallway - yellow insulation w/black batt | Brown/Black <br> Fibrous <br> Heterogeneous | 80\% | Cellulose | 20\% Non-fibrous (other) | None Detected |

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Analyst(s)
Adelmarie Bones (47) Jonathan Teda (40)

> Jonathan Teda, Asbestos Lab Manager or other approved signatory

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| Customer ID: | EC\&T50 |
| :--- | :--- |
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| Received: | $05 / 27 / 1110: 51$ AM |
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| EMSL Pro: |  |
| Analysis Date: | $6 / 6 / 2011$ |

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07
Analyst(s)

| Adelmarie Bones (47) |
| :--- |
| Jerry Cherian $(102)$ |$\quad$ Jonathan Teda (40)



Jonathan Teda, Asbestos Lab Manager or other approved signatory

[^10]| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  |  | Non-Asbestos |  |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Flbrous | \% | Non-Fibrous |  |
| $34$ <br> 341104141-0034 | WWO-kichenette area - off white condensation barrier | White <br> Fibrous <br> Heterogeneous | 20\% | Cellulose |  | 80\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 35 \\ & 341104141-0035 \end{aligned}$ | WWO-kichenette area - off white condensation barrier | White <br> Fibrous <br> Homogeneous | 30\% | Cellulose |  | 70\% Non-fibrous (other) | None Detected |
| $36$ $341104141-0036$ | WWO-northeast storage room grey/white/green terrazzo floor | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 70\% Non-fibrous (other) $30 \%$ Quartz | None Detected |
| $\begin{aligned} & 37 \\ & 341104141-0037 \end{aligned}$ | WWO-northeast storage room grey/white/green terrazzo floor | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | $50 \%$ Non-fibrous (other) 50\% Quartz | None Detected |
| $\begin{aligned} & 38 \\ & 341104141-0038 \end{aligned}$ | WWO-northeast storage room brown expansion joint | Brown/Black <br> Fibrous <br> Heterogeneous | 75\% | Célulose |  | 5\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 39 \\ & 341104141-0039 \end{aligned}$ | WWO-northeast storage room brown expansion joint | Brown/Black <br> Fibrous <br> Heterogeneous | 75\% | Cellulose |  | 5\% Non-fibrous (other) | None Detected |

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[^11]EMSL Anditud.
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| Received: | $05 / 27 / 1110.51$ AM |
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| EMSL Proj: |  |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  |  | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Fibrous | \% Non-Fibrous | \% Type |
| $40$ <br> 341104141-0040 | WWO-northeast storage room - 4,2 dot fissure ceiling tile | White/Beige <br> Fibrous <br> Heterogeneous | $\begin{aligned} & 40 \% \\ & 20 \% \end{aligned}$ | Cellulose <br> Glass | 20\% Non-fibrous (other) <br> 20\% Perlite | None Detected |
| $\begin{aligned} & 41 \\ & 341104141-0041 \end{aligned}$ | WWO-northeast storage room - $4 \times 2$ dot fissure ceiling tile | Gray/White <br> Fibrous Homogeneous | $\begin{aligned} & 30 \% \\ & 30 \% \end{aligned}$ | Cellulose Glass | 20\% Non-fibrous (other) 20\% Perlite | None Detected |
| $\begin{aligned} & 42 \\ & 341104141-0042 \end{aligned}$ | WWO-mens bathroom wallboard | Gray <br> Non-Fibrous <br> Heterogeneous | 10\% | Cellulose | $30 \%$ Non-fibrous (other) 60\% Gypsum | None Detected |
| $\begin{aligned} & 43 \\ & 341104141-0043 \end{aligned}$ | WWO-mens balhroom wallboard | Brown/Gray <br> Fibrous Heterogeneous | 10\% | Cellulose | 20\% Non-fibrous (other) 70\% Gypsum | None Detected |
| 44-Ceramic Tile 341104141-0044 | WWO-womens bathroom - grey tile \& grout | White <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 44-Grout <br> 341104141-0044A | WWO-womens bathroom - grey tile \& grout | Gray <br> Non-Fibrous <br> Heterogeneous |  |  | $70 \%$ Non-fibrous (other) 30\% Quartz | None Detected |

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Analyst(s) \begin{tabular}{l}
Adelmarie Bones (47) <br>
Jerry Cherian (102)

$\quad$ Jonathan Teda (40) $\quad$

Jonathan Teda. Asbestos Lab Manager <br>
or other approved signatory
\end{tabular}

[^12]Samples analyzed by EMSL Anaiytical. Inc. Ortando. FL NVLAP Lab Code 101151.0

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07

| Analyst(s) |
| :--- |
| Adelmarie Bones (47) <br> Jerry Chenan (102) |



Jonathan Teda, Asbestos Lab Manager or other approved signatory

[^13] problem matrix and therefore EMS L recommends grawmetnc reduction poor to analysis. Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical. Inc. Orlando. FL NVLAP Lab Code 101151 -0

James Spinnenweber Environmental Consulting \& Tech., Inc. 3701 N.W. 98th St.

## Gainesville, FL 32606

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| EMSL Order: | 341104141 |
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| EMSL Proj: |  |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos | Fibrous |
| :--- | :--- | :--- | :--- | :--- |

Initial report from 06/06/2011 14:32:07

| Initial report from 06/06/2011 14:32:07 |  |
| :--- | :--- |
| Analyst(s) |  |
| Jerry Cherian (102) | Jonathan Teda (40) |
| Orie Bones (47) | Jonather approved signatory Teda, Asbestos Lab Manager |

[^14] Samples analyzed by EMSL Anation formend grawmetnc reduction phor to analysis. Samples recerved in good condition unless othenwise noted.

James Spinnenweber

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| Customer ID: | EC\&T50 |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07

| Analyst(s) |
| :--- |
| Adelmarie Bones (47) <br> Jerry Cherian (102) |



[^15]| Customer ID: | EC\&T50 |
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| Customer PO: | $110059-0100$ |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% | Non-Fibrous |  |
| 60 | FSO-mens bathroom - white wall surfacing |  |  |  | $70 \%$ Non-fibrous (other) <br> $30 \% \mathrm{Ca}$ Carbonate |  | None Detected |
| 341104147-0060 |  | Non-Fibrous <br> Heterogeneous |  |  |  |  |  |
| 61 | FSO-HVAC <br> mechanical room white wall surfacing | White <br> Non-Fibrous Heterogeneous |  |  | 85\% Non-fibrous (other) <br> 15\% Ca Carbonate |  | None Detected |
| $341104141-0061$ |  |  |  |  |  |  |  |
| 62-Tape | FSO-kichenette area - metal tape w/black mastic under sink | Silver <br> Non-Fibrous Homogeneous |  |  | 100\% Non-fibrous (other) |  | None Detected |
| 3411041410062 |  |  |  |  |  |  |  |
| 62-Mastic | FSO-kichenette area - metal tape w/black mastic under sink | Black <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) |  | None Detected |
| 341104141.00624 |  |  |  |  |  |  |  |
| 63-Tape | FSO-kichenette area - metal tape w/black mastic under sink | Silver <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) |  | None Detected |
| 341104141 -0063 |  |  |  |  |  |  |  |
| 63-Mastic | FSO-kichenette area - metal tape w/black mastic under sink | Black <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) |  | None Detected |
| 341104141-0063A |  |  |  |  |  |  |  |

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Analyst(s)

| Adelmarie Bones (47) Jonathan Teda (40) |
| :--- |
| Jerry Cherian (102) |



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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% Non-Fibrous |  |
| 64 $341104141-0064$ | FSO-hallway white dot fissure ceiling tile | White/Beige <br> Fibrous <br> Heterogeneous | $\begin{aligned} & 40 \% \\ & 20 \% \end{aligned}$ | Cellulose <br> Glass | 20\% Non-fibrous (other) 20\% Perlite | None Detected |
| $\begin{aligned} & 65 \\ & 341104141-0065 \end{aligned}$ | FSO-halway white dot fissure ceiling tile | Gray ${ }^{W}$ hite <br> Fibrous <br> Homogeneous | $\begin{aligned} & 40 \% \\ & 20 \% \end{aligned}$ | Cellulose <br> Glass | 20\% Non-fibrous (other) <br> 20\% Perlite | None Detected |
| 66-Insulation $341104141-0066$ | FSO-hallway yellow insulation w/black batt | Yellow <br> Fibrous Homogeneous | 100\% | Min. Wool | 0\% Non-fibrous (other) | None Detected |
| 66-Black Batt $341104141-0066 \mathrm{~A}$ | FSO-hallway yellow insulation w/black batt | Brown/Black <br> Fibrous <br> Heterogeneous | 85\% | Cellulose | 15\% Non-fibrous (other) | None Detected |
| 67-Insulation 341104141-0067 | FSO-hallway yellow insulation w/black batt | Yellow <br> Non-Fibrous Heterogeneous | 70\% | Glass | 30\% Non-fibrous (other) | None Detected |
| 67-Black Batt $341104141-0067 \mathrm{~A}$ | FSO-hallway yellow insulation w/black batt | Black <br> Non-Fibrous Heterogeneous | 40\% | Cellulose | 60\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 68 \\ & 341104141-0068 \end{aligned}$ | FSO-hallway green/yellow carpet w/glue | Various <br> Non-Fibrous <br> Heterogeneous | 5\% | Synthetic | 95\% Non-fibrous (other) | None Detected |

[^16]Initial report from 06/06/2011 14:32:07 Unable to seperate sample Composite analysis.
$\frac{\text { Analyst(s) }}{\text { Adelmarie Bones (47) Jonathan Teda (40) }}$


Jonathan Teda, Asbestos Lab Manager or other approved signatory

[^17]



Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07

| Analyst(s) |  |
| :---: | :---: |
| Adelmarie Bones (47) | Jonathan Teda (40) |
| Jerry Cherian (102) |  |


Jonathan Teda, Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMS Analyicai. Inc. Onando, FL NVLAP Lab Code 101151-0



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| EMSL Proi: |  |
| Analysis Date: | $6 / 6 / 2011$ |

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using
Polarized Light Microscopy

| Sample | Description | Non-Asbestos |  |  |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Appearance | \% | Fibrous |  | Non-Fibrous | \% Type |
| $\begin{aligned} & 74 \\ & 341104141-0074 \end{aligned}$ | FSO-rear bathroom - black condensation barrier | Black <br> Non-Fibrous <br> Heterogeneous |  |  |  | 97\% Non-fibrous (other) | 3\% Chrysotile |
| $\begin{aligned} & 75 \\ & 341104141-0075 \end{aligned}$ | FSO-rear bathroom - black condensation barrier |  |  |  |  |  | Stop Positive (Not Analyzed) |
| $\begin{aligned} & 76 \\ & 341104141-0076 \end{aligned}$ | FSO-front exterior - tan extenor surfacing | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 60\% Non-fibrous (other) 0\% Quartz | None Detected |
| $\begin{aligned} & 77 \\ & 341104141-0077 \end{aligned}$ | FSO-front exterior - tan exterior surfacing | Gray <br> Non-Fibrous Heterogeneous |  |  |  | 6\% Non-fibrous (other) $0 \%$ Quartz | None Detected |
| $\begin{aligned} & 78 \\ & 341104141-0078 \end{aligned}$ | FSO-front exterior - tan exterior surfacing | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) $0 \%$ Quartz | None Detected |
| $\begin{aligned} & 138 \\ & 341104141-0079 \end{aligned}$ | OCW--mechanical room - pink tan gray terrazzo floor | Various <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) $0 \%$ Quartz | None Detected |

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| Analyst(s) |  |
| :--- | :--- |
| Ade/marie Bones (47) <br> Jerry Cherian (102) | Jonathan Teda $(40)$ |

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample |  | Non-Asbestos |  |  |  |  | Asbesstos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Description | Appearance | $\%$ | Fibrous | \% | Non-Fibrous | \% Type |
| 79 | OCW-mechanical room - pink tan gray terrazzo floor | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 6\% Non-fibrous (other) | None Detected |
| 341104141-0080 |  |  |  |  |  | 20\% Ca Carbonate <br> 20\% Quartz |  |
| 80-Skim Coat <br> 341104141-0081 | OCW--mechanical room - sheetrock | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
|  |  |  |  |  |  | $0 \%$ Quartz |  |
| Sample appeared to de a plaster sample. |  |  |  |  |  |  |  |
| 80-Base Coat <br> $341104141-0081 \mathrm{~A}$ | OCW--mechanical room - sheetrock | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
|  |  |  |  |  |  | \%\% Quartz |  |
|  | Sample appeared to be a plaster sample. |  |  |  |  |  |  |
| 81-Skim Coat <br> 341104141-0082 | OCW--mechanical room - sheetrock |  | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
|  |  |  |  |  |  | 0\% Ca Carbonate |  |
|  |  |  |  |  |  | 0\% Quartz |  |
| Sample appeared to be a plaster sample. |  |  |  |  |  |  |  |
| 81-Base Coat <br> 341104141-00824 | OCW --mechanical room - sheetrock | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | \% Non-fibrous (other) | None Detected |
|  |  |  |  |  |  | 0\% Ca Carbonate |  |
|  |  |  |  |  |  | 0\% Quartz |  |
|  |  |  | Sample appeared to be a plaster sample. |  |  |  |  |

Initial report from 06/06/2011 14:32:07

| Analyst(s) |  |
| :--- | :--- |
| Adelmarie Bones (47)  <br> Jerry Cherian (102) Jonathan Teda (40) | Jonathan Teda, Asbestos Lab Manager |
| or other approved signatory |  |

[^19]EMSL Annytical :ro

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| Customer ID: | EC\&T50 |
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| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07

Analyst(s) \begin{tabular}{l}
Adelmarie Bones (47) <br>
Jerry Cherian (102)

$\quad$ Jonathan Teda (40) $\quad$

Jonathan Teda, Asbestos Lab Manager <br>
or other approved signatory
\end{tabular}

[^20] used by the chent to claim produci centication. approval, or endorsement by NVLAP. NIST or any agency of the federai government. Non-fnable organically bound matenais present a problem matinx and therefore EMSL tecommends graumetnc reduction prior to analysis. Samples received in good condifion untess otherwise noted
Samples analyzed by EMSL Analytical. inc. Orlando. FL NVLAP Lab Code 101151.0

| Attn: | James Spinnenweber |
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| Customer ID: | EC\&T50 |
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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy


Initial report from 06/06/2011 14:32:07

| Analyst(s) |  |
| :--- | :--- |
| Adelmarie Bones (47) <br> Jerry Cherian (102) | Jonathan Teda (40) |

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| Anaiysis Date: | $6 / 6 / 2011$ |

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% Non-Fibrous | \% Type |
| $\begin{aligned} & 93 \\ & 341104141-0095 \end{aligned}$ | OCW-main hallway west side $2 \times 2$ random dot | Tan <br> Fibrous <br> Heterogeneous | $\begin{aligned} & 60 \% \\ & 10 \% \end{aligned}$ | Cellulose <br> Glass | 15\% Non-fibrous (other) <br> 15\% Perlite | None Detected |
| 94-Insulation <br> 341104141-0096 | OCW-west kichenette area yellow insulation whlack batt | Yellow <br> Fibrous <br> Homogeneous | 100\% | Min. Wool | 0\% Non-fibrous (other) | None Detected |
| 94-Black Batt <br> 341104141-0096A | OCW-west kichenette area yellow insulation w/black batt | Brown/Black <br> Fibrous <br> Heterogeneous | 85\% | Ceilulose | 15\% Non-fibrous (other) | None Detected |
| 95-Insulation <br> 341104141-0097 | OCW-west kichenette area yellow insulation w/black batt | Yellow <br> Fibrous <br> Heterogeneous | 100\% | Glass | 0\% Non-fibrous (other) | None Detected |
| 95-Black Batt <br> 341104141-0097A | OCW-west kichenette area yellow insulation w/black batt | Black <br> Non-Fibrous <br> Heterogeneous | 40\% | Cellulose | 60\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 96 \\ & 341104141-0098 \end{aligned}$ | OCW-west kichenette area black condensation barrier | Black <br> Non-Fibrous Heterogeneous |  |  | 90\% Non-fibrous (other) | 10\% Chrysotile |

Initial report from 06/06/2011 14:32:07
Analyst(s)

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| :--- | :--- |
| Jerry Cherian (102) | Jonathan Teda (40) |


| Jonathan Teda, Asbestos Lab Manager |
| :---: |
| or other approved signatory |

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Samples analyzed by EMSL Analytical. inc. Oriando. FL NVLAP Lab Code 101151.0
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| EMSL Proj: |  |
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using
Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos | Fibrous |
| :--- | :--- | :--- | :--- | :--- |



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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% Non-Fibrous | $\%$ Type |
| 100-Floor Tile <br> $341104141-0102$ | OCW-gas meter room - light gray stripet FT w/yellow glue | Gray <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 100-Glue <br> $341104141-0102 \mathrm{~A}$ | OCW -gas meter room - light gray stripet FT w/yellow glue | Yellow <br> Non-Fibrous Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 101-Floor Tile $341104141-0103$ | OCW-gas meter room - light gray stripet FT w/yellow glue | White <br> Non-Fibrous <br> Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 101-Glue <br> $341104141-0103 A$ | OCW -gas meter room - light gray stripet FT w/yellow glue | Yellow <br> Non-Fibrous <br> Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 102-W allboard $341104141-0104$ | OCW-electric meter side room wallboard/jaint compound | Brown/White <br> Fibrous <br> Heterogeneous | 30\% | Cellulose | 20\% Non-fibrous (other) 50\% Gypsum | None Detected |
| 102-Joint Compound <br> $341104141-0104 \mathrm{~A}$ | OCW-electric meter side room. wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  | 70\% Non-fibrous (other) <br> 30\% Ca Carbonate | None Detected |


| Initial report from 06/06/2011 14:32:07 |  |
| :---: | :---: |
| Analyst(s) | R |
| Adelmane Bones (47) <br> Jonathan Teda (40) Jerry Cherian (102) | Jonathan Teda, Asbestos Lab Manager or other approved signatory |

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous |  | Non-Fibrous |  |
| 103-W allboard <br> 341104141 -0105 | OCW-electric meter side room wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous | 20\% | Cellulose |  | 40\% Non-fibrous (other) 40\% Gypsum | None Detected |
| 103-Joint Compound $341104141-0105 \mathrm{~A}$ | OCW-electric meter side room . wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $80 \%$ Non-fibrous (other) 20\% Ca Carbonate | None Detected |
| 104-Ceramic Tile <br> 341104141.0106 | OCW-electric meter sideroom. red ceramic FT w/gray grout | Peach <br> Non-Fibrous <br> Heterogeneous |  |  |  | 00\% Non-fibrous (other) | None Detected |
| 104-Grout $341104141-0106 \mathrm{~A}$ | OCW-electric meter side room red ceramic FT w/gray grout | Gray <br> Non-Fibrous Heterogeneous |  |  |  | 00\% Non-fibrous (other) | None Detected |
| 105-Ceramic Tile <br> $341104141-0107$ | OCW-electric meter side room red ceramic FT w/gray grout | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $90 \%$ Non-fibrous (other) <br> $0 \%$ Quartz | None Detected |
| 105-Grout <br> 341704141.0107 A | OCW-electric meter side room red ceramic FT w/gray grout | Gray <br> Non-Fibrous Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) <br> 0\% Ca Carbonate <br> 0\% Quartz | None Detected |

Initial report from 06/06/2011 $14: 32: 07$

| Analyst(s) |  |
| :--- | :--- |
| Adelmarie Bones (47) |  |
| Jerry Cherian (102) | Jonathan Teda (40) |

[^24] probiem matnx and therefore EMSL recommends gravmetne reduction pnor to analysis. Samples recerved in good condtion untess otherwise noted.
Samples analyzed by EMSL Analytical inc. Ortando, FL NVLAP Lab Code $101151-0$

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy



Initial report from 06/06/2011 $\quad 14: 32: 07$
Analysts)

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| :--- |
| Jerry Cherian (102) |



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| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy



Initial report from 06/06/2011 14:32:07
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| Adelmarie Bones (47) |
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| Jerry Cherian (102) |$\quad$ Jonathan Teda (40)



Jonathan Teda. Asbestos Lab Manager or other approved signatory

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Samples analyzed by EMSL Analytical Inc. Orlando. FL NVLAP Lav Code 101151-0


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| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% | Non-Fibrous |  |
| $\begin{aligned} & 116 \\ & 341104141-0118 \end{aligned}$ | OCW-west wing breakroom - grey condensate barrier | Gray <br> Fibrous <br> Heterogeneous | 25\% | Cellulose |  | 5\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 117 \\ & 341104141-0119 \end{aligned}$ | OCW-west wing breakroom - grey condensate barrier | Gray <br> Non-Fibrous <br> Heterogeneous | 25\% | Cellulose |  | 5\% Non-fibrous (other) | None Detected |
| 118-Floor Tile $341104141-0120$ | OCW-west wing breakroom- $12 \times 12$ tan/white FT w/yellow glue | TanN Wite Non-Fibrous Heterogeneous |  |  |  | 8\% Non-fibrous (other) | 2\% Chrysotile |
| 118-Glue <br> 341104141-0120A | OCW-west wing breakroom-12×12 tan/white FT w/yellow glue | Yellow <br> Non-Fibrous <br> Homogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
| 119-Floor Tile 341104141-0121 | OCW-west wing breakroom-12×12 tan/white FT w/yellow glue |  |  |  |  |  | Stop Positive (Not Analyzed) |
| 119-Glue <br> 341104141-0121A | OCW-west wing breakroom-12×12 $\tan /$ white FT w/yellow glue | Yellow <br> Non-Fibrous <br> Heterogeneous |  |  |  | \% Non-fibrous (other) | None Detected |

Initial report from 06/06/2011 14:32:07

| Analyst(s) |  |
| :---: | :---: |
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| Jerry Chenan (102) |  |



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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Non-Asbestos |  |  |  | $\begin{aligned} & \text { Asbestos } \\ & \% \text { Type } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Appearance | \% | Flbrous | \% Non-Fibrous |  |
| 120-Floor Tile <br> 341104141 -0122 | OCW-warehouse office - $12 \times 12$ gray flaked FT w/white glue | Gray <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| SUGGEST TEM |  |  |  |  |  |  |
| 120-Glue <br> 341104141-0122A | OCW-warehouse office - $12 \times 12$ gray flaked FT w/white glue | Yellow <br> Non-Fibrous <br> Homogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 121-Floor Tile 341104141-0123 | OCW-warehouse office $-12 \times 12$ gray flaked FT w/white glue | Gray <br> Non-Fibrous Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| SUGGEST TEM |  |  |  |  |  |  |
| 121-Glue <br> 341104141-0123A | OCW-warehouse office - $12 \times 12$ gray flaked FT w/white glue | Yellow <br> Non-Fibrous Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 122-W allboard <br> $341104141-0124$ | OCW-east wing womens bathroom wallboard/jcint compound | Brown/White <br> Fibrous <br> Heterogeneous | 20\% | Cellulose | 20\% Non-fibrous (other) 60\% Gypsum | None Detected |

Initial report from 06/06/2011 14:32:07

Analyst(s)
Adelmarie Bones (47) Jonathan Teda (40)


[^27]| Attn: | James Spinnenweber |
| :--- | :--- |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  | Non-Asbestos |  |  |  |  | Asbestos \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Fibrous | \% | Non-Fibrous |  |
| 122-Joint Compound <br> $341104141-0124 A$ | OCW-east wing womens bathroom wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | 70\% Non-fibrous (other) <br> 30\% Ca Carbonate | None Detected |
| 123-Wallboard <br> $341104141-0125$ | OCW-east wing womens bathroom wallboard/joint compound | White <br> Fibrous <br> Heterogeneous | 20\% | Cellulose |  | $0 \%$ Non-fibrous (other) 0\% Gypsum | None Detected |
| 123-Joint Compound $341104141.0125 A$ | OCW-east wing womens bathroom wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) 0\% Ca Carbonate | None Detected |
| 124-Plaster <br> 341104141-0126 | OCW-east wing womens bathroom - gray plaster w/white skim coat | Gray <br> Non-Fibrous Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) $0 \%$ Quartz | None Detected |
| 124-Skim Coat 341104141-0126A | OCW -east wing womens bathroom - gray plaster w/white skim coat | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) <br> 0\% Ca Carbonate | None Detected |

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Analyst(s)

| Adelmane Bones (47) |
| :--- |
| Jerry Cherian (102) |

Jonathan Teda (40)

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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  | Non-Asbestos |  |  |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Fibrous | \% | Non-Fibrous |  |
| 125-Plaster <br> $341104141-0127$ | OCW-east wing womens bathroom - gray plaster w/white skim coat | Gray <br> Non-Fibrous Heterogeneous |  |  |  | $\%$ Non-fibrous (other) <br> \% Quartz | None Detected |
| 125-Skim Coat $341104141-0127 A$ | OCW -east wing womens bathroom - gray plaster w/white skim coat | White <br> Non-Fibrous Heterogeneous |  |  |  | $\%$ Non-fibrous (other) <br> \% Ca Carbonate | None Detected |
| 126-Plaster <br> 341104141-0128 | OCW-east wing womens bathroom - gray plaster w/white skim coat | Gray <br> Non-Fibrous Heterogeneous |  |  |  | $\%$ Non-fibrous (other) <br> \% Ca Carbonate <br> \% Quartz | None Detected |
| 126-Skim Coat 341104141-0128.4 | OCW-east wing womens balhroom - gray plaster w/white skim coat | White <br> Non-Fibrous Heterogeneous |  |  |  | $\%$ Non-fibrous (other) <br> \% Ca Carbonate <br> \% Quartz | None Detected |
| 127-Ceramic Tile <br> $341104141-0129$ | OCW -east wing mens bathroom $2 \times 2$ white ceramic FT w/grout | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | Non-fibrous (other) | None Detected |

Initial report from 06/06/2011 14:32:07

| Anatyst(s) |  |
| :--- | :--- |
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[^29]| Customer ID: | EC\&T50 |
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## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  | Non-Asbestos |  |  |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Fibrous | \% | Non-Fibrous | \% Type |
| 127-Grout <br> $341104141-01294$ | OCW-east wing mens bathroom $2 \times 2$ white ceramic FT w/grout | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
| 128-Ceramic Tile $341104141-0130$ | OCW-east wing mens bathroom $2 \times 2$ white ceramic FT w/grout | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) 0\% Quartz | None Detected |
| 128-Grout <br> 341104141-0730A | OCW-east wing mens bathroom $2 \times 2$ white ceramic FT w/grout | Gray <br> Non-Fibrous Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) 0\% Quartz | None Detected |
| 129-Floor Tile 341104141-0131 | OCW -east wing kitchen area $12 \times 12$ gray tan FT w/yellow glue | Gray/Tan <br> Non-Fibrous <br> Homogeneous |  |  |  | \% Non-fibrous (other) | None Detected |
| 129-Glue <br> 341104141-0131A | OCW-east wing kitchen area $12 \times 12$ gray tan FT w/yellow glue | Yellow <br> Non-Fibrous <br> Homogeneous |  |  |  | \% Non-fibrous (other) | None Detected |
| 130-Floor Tile <br> $341104141-0132$ | OCW-east wing kitchen area $12 \times 12$ gray tan FT w/yellow glue | Tan <br> Non-Fibrous <br> Heterogeneous |  |  |  | \% Non-fibrous (other) | None Detected |


| Initial report from 06/06/2011 $14: 32: 07$ |
| :--- | :--- |
| Analyst(s) |
| Adelmarie Bones (47)  <br> Jerry Cherian (102) Jonathan Teda (40) |
| or other approved signatory |

[^30]| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
| EMSL Pro: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% Non-Fibrous | \% Type |
| 130-Glue <br> 341104141-0132A | OCW-east wing kitchen area $12 \times 12$ gray $\tan$ FT w/yellow glue | Yelow <br> Non-Fibrous <br> Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 131 \\ & 341104141-0133 \end{aligned}$ | OCW-east wing kitchen area white condensation barrier | White <br> Fibrous <br> Heterogeneous | 25\% | Cellulose | 75\% Non-fibrous (other) | None Detected |
| $\begin{aligned} & 132 \\ & 341104141-0134 \end{aligned}$ | OCW-east wing kitchen area white condensation barrier | White <br> Non-Fibrous Heterogeneous |  |  | 100\% Non-fibrous (other) | None Detected |
| 133-W allboard <br> $341104141-0135$ | OCW-east wing kitchen area wallboard/joint compound | Brown/White <br> Fibrous <br> Heterogeneous | 40\% | Cellulose | 20\% Non-fibrous (other) 40\% Gypsum | None Detected |
| 133-Joint Compound $341104141-0135 A$ | OCW-east wing kitchen area wallboard/joint compound | White <br> Non-Fibrous <br> Heterogeneous |  |  | 70\% Non-fibrous (other) <br> $30 \% \mathrm{Ca}$ Carbonate | None Detected |

Initial report from 06/06/2011 14:32:07

| Analyst(s) |  |
| :--- | :--- |
| Adelmarie Bones (47) <br> Jerry Cherian (102) | Jonathan Teda (40) |

[^31]| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Proi: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

|  |  | Non-Asbestos |  |  |  |  | Asbestos |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | Description | Appearance | \% | Fibrous | \% | Non-Fibrous | \% Type |
| 134-W allboard <br> $341104141-0136$ | OCW-east wing kitchen area wallboard/joint compound | White <br> Fibrous <br> Heterogeneous | 20\% | Ceflulose |  | 40\% Non-fibrous (other) 40\% Gypsum | None Detected |
| 134-Joint Compound <br> 341104141-01364 | OCW-east wing kitchen area wallboard/joint compound | White <br> Non-Fibrous Heterogeneous |  |  |  | $80 \%$ Non-fibrous (other) <br> 20\% Ca Carbonate | None Detected |
| 135-Plaster <br> $341104141-0137$ | OCW-east wing kitchen area - gray plaster w/white skim coat | Gray <br> Non-Fibrous Heterogeneous |  |  |  | 0\% Non-fibrous (other) <br> 0\% Quartz | None Detected |
| 135-Skim Coat 341104141-0137A | OCW east wing kitchen area - gray plaster w/white skim coat | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) <br> $30 \%$ Ca Carbonate | None Detected |
| 136-Plaster $341104141-0138$ | OCW-east wing kitchen area - gray plaster w/white skim coat | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) 0\% Quartz | None Detected |
| 136-Skim Coat <br> $341104141-0138 \mathrm{~A}$ | OCW-east wing kitchen area - gray plaster w/white skim coat | White <br> Non-Fibrous <br> Heterogeneous |  |  |  | $0 \%$ Non-fibrous (other) <br> $0 \%$ Ca Carbonate | None Detected |

Initial report from 06/06/2011 14:32:07

Analyst(s) \begin{tabular}{l}
Adelmarie Bones (47) <br>
Jerry Cherian (102)

$\quad$ Jonathan Teda (40) $\quad$

Jonathan Teda, Asbestos Lab Manager <br>
or other approved signatory
\end{tabular}

[^32]GMSL anatytan ©


James Spinnenweber
Environmental Consulting \& Tech., Inc. 3701 N.W. 98th St.
Gainesville, FL 32606
Fax:
(352) 332-6733

Phone: (352) 332-0444
Project:
GRU operations bldg

| Customer ID: | EC\&T50 |
| :--- | :--- |
| Customer PO: | $110059-0100$ |
| Received: | $05 / 27 / 1110: 51$ AM |
| EMSL Order: | 341104141 |
|  |  |
| EMSL Proj: |  |
| Analysis Date: | $6 / 6 / 2011$ |

## Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Description | Appearance | Non-Asbestos |  |  |  | Asbestos <br> \% Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | \% | Fibrous | \% | Non-Fibrous |  |
| 137-Plaster | OCW-east wing kitchen area - gray plaster w/white skim coat | Gray <br> Non-Fibrous <br> Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
| $341104141-0139$ |  |  |  |  |  | 20\% Ca Carbonate |  |
|  |  |  |  |  |  | 0\% Quartz |  |
| 137-Skim Coat | OCW-east wing kitchen area - gray plaster w/white skim coat | White <br> Non-Fibrous Heterogeneous |  |  |  | 0\% Non-fibrous (other) | None Detected |
| 341104141-0139A |  |  |  |  |  | 20\% Ca Carbonate |  |
|  |  |  |  |  |  | 0\% Quartz |  |

Initial report from 06/06/2011 14:32:07
Analyst(s)

| Adelmarie Bones (47) Jonathan Teda (40) | Jonathan Teda, Asbestos Lab Manager |
| :--- | :--- |
| Jerry Cherian (102) | or other approved signatory |

EMSL mantans liablify timited to cost of analysis. This repont relates only to the samples reported and may not be reproduced, except in full, without wniten approval by EMSL. EMSL bears no fesponsibfity for sample colfection actuvies or analytical method limitations. Interpretation and use of test fesults are the responsibity of the chent this report must not be used by the client to ciam product centication, aporovai, or endorsement by NVLAP. NIST or any agency of the federat govermment. Non-frable organically bound matenais present a problem matixand therefore EMSL recommends gravimetnc reduction pnor to analysts. Samples received in good comdtion uniess otherwise noted
Samples analyzed by EMSL Analyticai, inc. Oriando. FL NVLAP Lab Code 101151-0

| EMSL ANALYTICAL CH |  |
| :---: | :---: |
| Representative: | James Spinnenweber |
| Your Company |  |
| Name: | ECT |
| Street: | 3701 NW 98th Street |
| Box \#: 3701NW 98th Street |  |
| City/State: | Gainesville, FL Zip: 32606 |
| E-Mail Results to: |  |
| Name: | James Spinnenweber |
| E-Mail: | jpinnenweber@ectinc.com |
| Project |  |
| Name/Number: | GRU Operations Buildings |

## CHAIN OF CUSTODY

EMSL-Bill to:

|  | ECT |
| :--- | :--- |
|  | Attn: James Spinnenweber |
| Street: | 3701 NW 98th Street |
| Box\#: |  |
| City/State: |  |
|  | Gainesville, FL $\quad$ Zip: $\quad 32606$ |

Phone Results to:
Name: James Spinnenweber
Phone \#: (352) 322-0444
Purchase
Order \#: 110059-0100



EMSL ANALYTICAL

| HOMOG. AREA | SAMPLE \# |
| :---: | :---: |
| ! |  |


| HOMOG. AREA | SAMP |
| :---: | ---: |
| 1 | 1 |
| 1 | 2 |
| 2 | 3 |
| 2 | 4 |
| 3 | 5 |
| 3 | 6 |


| HOMOG. AREA | SAMPLE \# | LOCATION | SAMPLE MATERIAL |
| :---: | :---: | :---: | :---: |
| 26 | 53 | FSO-Mens Bathroom | 12 X 12 Tan Flakes FT with Yellow Glue |
| 26 | 54 | FSO-Mens Bahroom | 12X12 Tan Flakes FT with Yellow Glue |
| 27 | 55 | FSO - Mens Bathroom | Green VFT Botom Layer |
| 27 | 56 | FSO-Mens Bathroom |  |
| 28 | 57 | FSO-Mens Bathroom |  |
| 28 | 58 | FSO-Mens Bathroom |  |
| 29 | 59 | FSO-Mens Bathroom | White Wall Surfacing |
| 29 | 60 | FSO-Mens Bathroom | White Wall Surfacing |
| 29 | 61 | FSO - HVAC Mechanical Room | White Wall Surfacing |
| 30 | 62 | FSO - Kichencle Area | Metal Tape with Black Mastik under Sink |
| 31 | 63 | FSO - Kichenelte Area | Metal Tape with Black Mastik under Sink |
| 31 | 64 | FSO - Hallway | White Dot Fissure Ceiling Tile |
| 32 | 66 | FSO-Hallway | White Dot Fissure Ceiling Tile |
| 32 | 67 | FSO-Hallway | Yellow Insulation with Black Batr |
| 33 | 68 | FSO-Hallway | Yellow Insulation with Black Batl |
| 33 | 69 | So-Hallway | Green/Yellow Carpet with Glue |
| 34 | 70 | $\frac{\text { FSO - Front Doorway Area }}{\text { - Hallway }}$ | Green/Yellow Carpet with Glue |
| 34 | 71 | FSO - Front Doortay Area | White/Green Terrazzo Floor |
| 35 | 72 | FSO-Front Doorwa | White/Green Terrazzo Floor |
| 35 | 73 | FSO - Front Doorw | Unknown Color VFT with Glue |
| 36 | 74 | FSO-Rear B | Unknown Color VFT with Glue |
| 36 | 75 | FSO-Rear Bath | Black condensation barrier |
| 37 | 76 | FSO-Front Ext | Black condensation barrier |
| 37 | 77 | FSO - Front E | Tan Exterior Surfacing |
| 37 | 78 | FSO-Front Exteri | Tan Exterior Surfacing |
| 38 | 138 | OCW - Mechanical Room | Tan Exterior Surfacing |
| 38 | 79 | OCW - Mechanical Room | Pink Tan Gray Terrazzo Floor |
| 39 | 80 | OCW - Mechanical Room | Pink Tan Gray Terrazzo Floor |
| 39 | 81 | OCW - Mechanical Room | Sheetrack |
| 40 | 82 | OCW - Mechanical Room | Sheetrock |
| 40 | 83 | OCW - Mechanical Room | Wallboard |
| 41 | 84 | OCW - Mechanical Room | Wallboard |
| 41 | 85 | OCW - Mechanical Room | White Pipe Insulation with White Wrap |
| 41 | 86 | OCW - Mechanicil Room | White Pipe Insulation with White Wrap |
| 42 | 87 | OCW - Office (Mr. David Sparks) | White Pipe Insulation with White Wrap |
| 42 | 88 | OCW - Office (Mr David Sparks) | $2 \times 2$ White Ceiling Tile |
| 43 | 89 | OCW - Main Hallway Entrance | $2 \times 2$ White Ceiling Tile |
| 43 | 90 | OCW - Main Hallway Entrance | Yellow Carpet Glue |
| 4 | 139 | OCW - Main Hallway West Side | Yellow Carpet Glue |
| 44 | 91 | OCW - Main Hallway West Side | 2X2 Dot Fissure Celling Tile |
| 45 | 92 | OCW - Main Hallway West Side | $2 \times 2$ Dot Fissure Ceiling Tile |
| 45 | 43 | OCW - Main Hallway West Side | 2X2 Random Dot |
| 46 | 94 | OCW - West Kichenetest Area | 2X2 Random Dot |
| 46 | 45 | OCW - West Kichenent | Yellow Insulation with Black Batt |
| 47 | 96 | OCW - West Kichenette Area | Yellow Insulation with Black Batt |
| 47 | 97 | OCW - West Kichenctte Area | Black condensation barrier |
| 48 | 98 | OCW - Electric Meter Room | Black condensation barrier |
| 48 | 99 | OCW - Electric Meter Roon | Gray Striped FT with Yellow Glue |
| 49 | 101) | OCW - Gas Meter Room | Gray Striped FT with Yellow Glue |
| 49 | 101 | OCW - Gas Meter Room | Light Gray Striped FT with Yellow Glue |
|  |  |  | Light Gray Striped FT with Yellow Glue |



FSTF - Field Services Technicians Facility
WWO-Water-Wastewater Office
FSO - Field Services Office
OCW- Operations Center \& Warehouse

## APPENDIX D - <br> FIELD NOTES AND BORING LOGS

Environmental Consuting \& Technology, ho

Project Name: GRU Phase II ESA
Project Number_110059-0100

Project Location: 555 SE $5^{\text {th }}$ Ave, Gainesville, Alachua, County, Florida

Project Manager: Perry Hubbard for Stephanie Emerson
Team Leader: Perry Hubbard
ECT Employees on-site: David Flake
Description of Job to be performed: Install 31 direct push and hand auger borings. Sample for parameters according to the attached proposal. Lead based paint and asbestos surveys will be conducted during the event. Screen soils and visually inspect them for sample selection.

Additional Forms Attached:

Site Maps
$\square$ Other $\qquad$
Calibration Logs
GW Sampling Logs
Boring Logs
Well Construction Logs

List Any Special Equipment Needed: OVA, Survey equipment, water level indicator 10 cases mason jars.


Date 4-15-11
GRU PHase II
(0)0-650011 $13: 25$
13:30 Sampled so-8 os 8 ore for luch
14:30 Bad fom Iunch Grimdinte potection inter potechion


Began 58. 8 $13: 25$
13:30 Sampled so-8 os 8 ore for luch
14:30 Bual fom Iunch Grumdiate potection gativing Supplies Began $13: 25$
13:30 Sampled so-8 os 8 ore for luch
14:30 Bual fom Iunch Grumdiate potection

## 4-13-11

110059-0100


$$
\begin{aligned}
& \frac{3}{2}
\end{aligned}
$$

$$
\begin{aligned}
& \text { ร } \\
& \text { ㄴํำ }
\end{aligned}
$$

# BORING LOG 



Borehole Completion (check one):
[ Well
[. Grout
[. Bentonite
Backfill
[. Other (describe)


## BORING LOG


Borehole Completion (check one): $\quad \mathrm{C}$ Well $\quad \Gamma$ Grout $\Gamma$ Bentonite $\Gamma$ Backfill $\Gamma$ Other (describe)


BORING LOG


Borehole Completion (check one): $\quad \mathrm{L}$ Well $\Gamma$ Grour $\quad \Gamma$ Bentonite $\quad \Gamma$ Backfill $\Gamma$ Other (describe)


BORING LOG


Borehole Completion (check one):
L Well
[. Grout
C. Bentonite

Backfill
ᄃ. Other (describe)


## BORING LOG



BORING LOG


Borehole Completion (check one): $\quad \square$ Well $\quad \Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \square$ Backfill $\Gamma$ Other (describe)


# BORING LOG 


Borehole Completion (check one): $\quad \square$ Well $\Gamma$ Grout $\quad \square$ Bentonite $\quad \Gamma$ Backfill $\quad[$ Other (describe)


## BORING LOG



Borehole Completion (check one): $\quad \Gamma$ Well $\Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \Gamma$ Other (describe)


Mosture Content Codes: $\mathbf{0}=$ Dry; $\mathbf{M}$ - Most: $w$ Wet: S = saturated

BORING LOG


## BORING LOG



# BORING LOG 



BORING LOG


BORING LOG


## BORING LOG



## BORING LOG



Borehole Completion (check one):
L Well
I. Grout
[. Bentonite
E Backfill
[. Other (describe)


## BORING LOG



Borehole Completion (check one): $\quad \Gamma$ Well $\Gamma$ Grout $\Gamma$ Bentonite $\quad \Gamma$ Other (describe)


BORING LOG


## BORING LOG

|  |  |  | Page 1 of 1 |
| :---: | :---: | :---: | :---: |
| SB - i | Permit Number: |  | FDEP Fxeclity Identification Number: |
| Site Same: GRy Prase En ESA | Borehole Start Date: $4 / 13 / 11$ Borehole S <br> End Date: $4 / 13 / 11$ $E$ |  | End Time: $15: 45$ Г AM |
| Environmental Contractor: $E \subset T$ | Geologist's Name: <br> PERRY Hubbard |  | Environmental Technician's Name: David Flake |
| Drilling Company:Preffered Drill, we ${ }^{\text {Pavement Thickness (inches): }} /$Dilling Methods) |  | $\|$Borthole Diameter (inches): Borehole Deph (feet) <br> $21 / 4$  |  |
|  |  |  |  |
| Disposition of Drill Curtings [heck method(s)]: (describe if other or multiple items are checked): |  |  | $\Sigma$ Stockpile $\Gamma$ Other |



## BORING LOG



## BORING LOG



## BORING LOG



## BORING LOG



## BORING LOG



BORING LOG


## BORING LOG


Borehole Completion (check one): $\quad \square$ Well $\Gamma$ Grour $\quad[$ Bentonite $\quad \Gamma$ Other (describe)


## BORING LOG



BORING LOG


BORING LOG



BORING LOG


## BORING LOG



Borehole Completion (check one): $\quad \Gamma$ Well $\Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \square$ Other (describe)


BORING LOG

|  | Permit Number: |  |  |
| :---: | :---: | :---: | :---: |
| SB-26 |  |  | FDEP Facility Identification Number: |
| Site Name: <br> Gry Phase II EsA | Borehole Start Date: $4 / 14 / 11$End Date: $4 / 14 / 11$ |  | Time: 11.17 AM Г PM <br> Time: 1:35 Г. 1 АМ Г PM |
| Environmental Contractor: $E \subset T$ | Geologist's Name: <br> PERRY Hubbard |  | Environmental Technician's Name: David Flake |
|  |  |  | ${ }^{\text {Borehole Depth (feet): }}$ |
| Drilling Method(s) Apparati Bo <br> D trom soil mon |  |  | OVA (list model and check type): <br> microfid $\nabla_{\text {FID } \Gamma_{\text {pID }}}$ |
| Disposition of Drill Cuttings (check method(s)]: <br> (describe if other or multiple items are checked): C Drum $\Gamma$ Spread |  |  | $\Sigma$ Stockpile $\Gamma$ Other |



[^33]
## BORING LOG



Borehole Completion (check one): $\quad \square$ Well $\Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \square$ Backfill $\quad$ Other (describe)


## BORING LOG


Borehole Completion (check one): $\quad \mathrm{L}$ Well $\Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \Gamma$ Backfill $\Gamma$ Other (describe)


## BORING LOG



Borehole Completion (check one): $\quad \Gamma$ Well $\quad \Gamma$ Grout $\quad \Gamma$ Bentonite $\quad \Gamma$ Backfill $\quad \Gamma$ Other (describe)


> DEP-SOP-001/01

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS INSTRUMENT (MAKEMODEL\#) Micrdid INSTRUMENT\# CZR~ノ/ 14 PARAMETER: [check only one]
$\square$
temperatureCONDUCTIVITYSALINITY
$\square \mathrm{pH}$ARP $\square$ TURBIDITY $\square$ residual CIDO
-
OTHER
$\qquad$

STANDARDS: [Specify the types) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A _100 ppm
Standard B $\qquad$
Standard C








9645 E. Colonial Dr. Suite 114
Oriando, Florida 32817
CHAIN-OF-CUSTODY RECORD $\qquad$ of $\qquad$ (407) 382-5742 • Fax (407) 382-7195

$\qquad$
$\qquad$
(407) 382-5742 • Fax (407) 382-7195


Orlando, Florida 32817 $\qquad$ of
(407) 382-5742 • Fax (407) 382-7195

$\qquad$ of $\qquad$
(407) 382-5742 • Fax (407) 382-7195


## APPENDIX E -

ANALTYICAL LABORATORY REPORTS

Emvirommental Consulting \& Technology, inc.


# Alpha Analytics, Inc. 

An Environmental Laboratory
9645 E. Colonial Dr. , Suite 114
Orlando, Florida 32817

## ALPHA ANALYTICS, INC. REPORT OF ANALYTICAL RESULTS

## TO: Perry Hubbard

ECT, Inc.
3701 NW 98th St.
Gainesville, FL 32606
RE: GRU Phase II ESA (110059-0100)
This report contains results of analyses of the samples received under your work I.D. referenced above. The results relate only to these samples and the report may not be reproduced except in full without the written permission of the laboratory. Initial QA/QC information is listed below. More extensive information may be found in the Case Narrative.

NUMBER OF SAMPLES: (15) Soils (3) Groundwaters
DATE OF SAMPLING: 4/13/11
DATE OF RECEIPT IN LAB: 4/14/11
Our laboratory is NELAC certified by the Florida Department of Health, and the results meet all requirements of the NELAC Standards unless clearly noted in the report. Please contact me if you have any questions. We very much appreciate your business. NELAC Certification \#E83806.


John Bowers
Laboratory Director
407-382-5742
(jbowers@alphaanalyticsorlando.com)

# ALPHA ANALYTICS REPORT OF QUALITY ASSURANCE/QUALITY CONTROL 

CASE NARRATIVE

Client: ECT, Inc.
Project Name, \#: GRU Phase II ESA, 110059-0100
Alpha Analytics ID \#: 11-04-022

1. Samples were received into the laboratory at a temperature of 2 degrees $C$.
2. Soil sample results are reported on a dry weight basis, unless noted here.
3. A statement of the uncertainty of the results is available on request.
4. All samples were received with sufficient sample volume, within method specific holding times, and in proper method specific containers unless noted here:
5. Metals analysis was performed by Accutest Laboratories Southeast, NELAC \#E83510, and the results are under separate cover.


Randy J. Wesson
Quality Assurance Officer

Client 1.D.
Date Sampled
Date Analyzed
Ditution Factor
Matrix
Units (pob)
\% Moisture

Benzene
Tobene
Ethybenzene
Total xylenes
MTBE
(Sur)Toluene-d8 (\%)
(Surr)4-BFB (\%)

| S8-1 08 |  |  |
| :---: | :---: | :---: |
| 1104022-1 |  |  |
| $4 / 13 / 11$ |  |  |
| 4/14/11 |  |  |
| 1 |  |  |
| Solid |  |  |
| Ucheg |  |  |
| 11.6 |  |  |
|  | MD | $P Q L$ |
| 0.60 | 0.6 | 5.7 |
| 0.70 | 0.7 | 5.7 |
| 0.74 | 0.7 | 5.7 |
| 0.54 | 0.5 | 5.7 |
| 0.64 | 0.6 | 5.7 |

$58-2 @ 8$
11040222
$4 / 13 / 11$
$4 / 14 / 11$
1
5016
$19 / \mathrm{Kg}$
14.7

$0.6 U$
$0.7 U$
$0.7 U$
$0.5 U$
$0.6 U$

|  |  |
| :--- | :--- |
|  |  |
|  |  |
| MOL | $D Q L$ |
| 0.6 | 5.9 |
| 0.7 | 5.9 |
| 0.7 | 5.9 |
| 0.5 | 59 |
| 0.6 | 5.9 |


| $\begin{aligned} & 58-3 @ 8 \\ & 1104022-3 \end{aligned}$ |  |  | $\begin{aligned} & \text { SB-4@ } \\ & 1104022-4 \end{aligned}$ |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| 4/13/11 |  |  | $4 / 13 / 11$ |
| $4 / 14 / 11$ |  |  | 4/14/11 |
| 1 |  |  | 1 |
| Solid |  |  | Solld |
| velkg |  |  | ug/kg |
| 8.09 |  |  | 20.6 |
|  | MDL | POL |  |
| $0.5 U$ | 0.5 | 5.4 | 0.64 |
| 0.70 | 0.7 | 5.4 | 0.8 U |
| 0.70 | 0.7 | 5.4 | 0.8 U |
| 0.4 U | 0.4 | 5.4 | 0.5 U |
| 0.5 U | 0.5 | 5.4 | 0.6 U |


| $M O$ | $D Q L$ | $C A S \%$ |
| :---: | :---: | :---: |
| 0.6 | 6.3 | $71-43.2$ |
| 0.8 | 6.3 | $108.88-3$ |
| 0.8 | 6.3 | $100-414$ |
| 0.5 | 6.3 | $1330-20-7$ |
| 0.6 | 6.3 | $1634-04-4$ |

104
97.9
$\frac{\text { Accentable limits }}{70-130 \%}$

| SB-8@8 |  |  |  |
| :---: | :---: | :---: | :---: |
| 1104022-10 |  |  |  |
| 4/13/11 |  |  |  |
| 4/14/11 |  |  |  |
| 1 |  |  |  |
| Solid |  |  |  |
| $4 \mathrm{~g} / \mathrm{Kg}$ |  |  |  |
| 18.3 |  |  |  |
|  | $M D L$ | POL | CASH |
| 0.6 U | 0.6 | 6.1 | 71-43-2 |
| 0.7 U | 0.7 | 6.1 | 108-88-3 |
| 0.7 U | 0.7 | 6.1 | 100-41-4 |
| 0.5 U | 0.5 | 6.1 | 1330-20-7 |
| 0.6 U | 0.5 | 6.1 | 1634-04-4 |
|  |  |  | ceptable Limits |
| 104 |  |  | 70-130\% |
| 97.8 |  |  | 70-130\% |


| Client I.D. | SB-14 @ 3' |
| :--- | :---: |
| Alpha I.D. | $1104022-11$ |
| Date Sampled | $4 / 13 / 11$ |
| Date Analyzed | $4 / 14 / 11$ |
| Dilution Factor | 1 |
| Matrix | Solid |
| Units (ppo) | $49 / \mathrm{Kg}$ |
| \%o Mosture | 4.84 |
|  |  |
| Benzene | 0.5 U |
| Toluene | 0.6 U |
| Ethybenzene | 0.6 U |
| Total xyenes | 0.4 U |
| MTBE | 0.5 U |
|  |  |
| Sur)Toluene-d8 (\%) | 106 |
| (Surr)4-BFB (\%) | 110 |


|  |  |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
| $M D L$ | $P Q L$ |
| 0.5 | 5.3 |
| 0.6 | 5.3 |
| 0.6 | 5.3 |
| 0.4 | 5.3 |
| 0.5 | 5.3 |
|  |  |
|  |  |

SB-13 @ 9
$1104022-12$
$4 / 13 / 11$
$4 / 14 / 11$
1
Solid
ug/Kg
15.2

$0.6 U$
$0.7 U$
$0.7 U$
$0.5 U$
$0.6 U$

106
109

|  |  | SB |
| :---: | :---: | :---: |
|  |  | 1104022-13 |
|  |  | 4/13/11 |
|  |  | $4 / 14 / 11$ |
|  |  | 1 |
|  |  | Solid |
|  |  | $4 \mathrm{~m} / \mathrm{Kg}$ |
|  |  | 15.6 |
| MDL | PQL |  |
| 0.6 | 5.9 | 0.6 U |
| 0.7 | 5.9 | 0.7 U |
| 0.7 | 5.9 | 0.7 U |
| 0.5 | 5.9 | 0.5 U |
| 0.6 | 5.9 | 0.6 U |
|  |  | 106 |
|  |  | 108 |



The qualifer "L" denotes the value reported is above the calbration range. The actual value may be higher than the value giver.
he qualfer "I" denotes that the reported value is between the MOL (Method Detection Limit) and the PQL (Practical Quantitaton Limit). the qualifier "U" denotes that the analyte was not present, and the value preceding the "U" is the MDL
Per FDEP recommendation, DI water is used instead of sodium bisulate in low-fevel soil vials

| Client 1.D. | S8-17 © 4 |  |  | Method Blank |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alphat ID. | 1104022-17 |  |  | 1104022-20 |  |  |  |
| Date Sampled | 4/13/11 |  |  | NA |  |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  |  |
| Matrix | Sold |  |  | Solid |  |  |  |
| Units (ppo) | ug/Kg |  |  | $u g / \mathrm{Kg}$ |  |  |  |
| \% Mosture | 7.95 |  |  | NA |  |  |  |
|  |  | MOL | POL |  | MD | POL | CAS |
| Benzene | 0.50 | 0.5 | 5.4 | 0.50 | 0.5 | 5.0 | 71-43-2 |
| Toluene | 0.70 | 0.7 | 5.4 | 0.60 | 0.6 | 5.0 | 108-88-3 |
| Ethybenzene | 0.70 | 0.7 | 5.4 | 0.50 | 0.6 | 5.0 | 100-41-4 |
| Total xylenes | 0.40 | 0.4 | 5.4 | 0.40 | 0.4 | 5.0 | $1330 \cdot 20.7$ |
| MTBE | 0.6 U | 0.5 | 5.4 | 0.54 | 0.5 | 5.0 | 1634-04-4 |
| (Surr)Tokene-d8 (\%) | 105 |  |  |  |  |  | Acceptable limits |
| (Sur)4-BFB (\%) | 107 |  |  | 102 |  |  | 70-130\% |



The qualifer " $L$ " denotes that the reported value is above the calibration range. The actual value may be higher than the value given.
The qualtier " denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit)
The qualfier "U" denotes that the analvte was not present, and the value preceding the "U" is the MDL.
Per FDEP recommendation, DI water is used instead of sodium bisulfate in low-level soll vials

| - Ilent I.D. | SB-5 @ 8' |  |  | SB-6 |  |  | SB-7@8 |  |  | SB-8 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - Mipha I.D. | $1104022 \cdot 6$ |  |  | 1104022 |  |  | 1104022-8 |  |  | 1104022 |  |  |  |
| Date Sampled | 4/13/11 |  |  | 4/13/11 |  |  | 4/13/11 |  |  | $4 / 13$ |  |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  | 4/13/1/11 |  |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 1 |  |  |  |  |  |  |
| Matrix | Solid |  |  | Sold |  |  | solid |  |  | Solld |  |  |  |
| Units (ppb) | $4 \mathrm{~g} / \mathrm{Kg}$ |  |  | wg/ Kg |  |  | $u g / \mathrm{Kg}$ |  |  | ug/k |  |  |  |
| \% Moisture | 17.4 |  |  | 37.6 |  |  | 15.5 |  |  | 18.3 |  |  |  |
|  |  | MDL | POL |  | MDL | pol |  | MD | POL |  | MDI | POL | C45 \% |
| 1,1- Dichloroethane | 0.50 | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U |  |  |  |
| 1,1- Dichloroethene | 0.60 | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.64 | 0.6 | 5.9 | 0.50 | 0.5 | 6.1 | 75-34-3 |
| 1,1,1-Trichoroethane | 0.8 U | 0.8 | 6.1 | 1.14 | 1.1 | 8.0 | 0.80 | 0.8 | 5.9 | 0.9 U | 0.6 | 6.1 | 75-35-4 |
| 1,1,1,2-Tetrachloroethane | 0.64 | 0.6 | 6.1 | $0.8 \cup$ | 0.8 | 8.0 | 0.64 | 0.6 | 5.9 | 0.9 U | 0.9 0.6 | 6.1 6.1 | 71-55-6 |
| 1,1,2,2-Tetrachloroethane | 0.60 | 0.6 | 6.1 | 0.80 | 0.8 | 8.0 | 0.5 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.6 | 630-20-6 |
| 1,1,2-Trichloroethane | 0.70 | 0.7 | 6.1 | 1.00 | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.70 | 0.6 | 6.1 | 79.34-5 |
| 1,1-Dichloropropene | 0.70 | 0.7 | 6.1 | 1.04 | 1.0 | 8.0 | 0.70 | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 563-58-6 |
| 1,2-Dichloroethane | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.50 | 0.5 | 6.1 | 563-58-6 $10706-2$ |
| 1,2-Dichioropropane | 0.60 | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.60 | 0.6 | 5.9 | 0.60 | 0.5 | 6.1 | $107-06-2$ $78-87-5$ |
| 1,2,3-Ttichlorobenzene | 0.70 | 0.7 | 6.1 | 1.04 | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.70 | 0.7 | 6.1 | 87-61-6 |
| 1,2,4-Trimethybenzene | 0.70 | 0.7 | 6.1 | 1.00 | 1.0 | 8.0 | 0.74 | 0.7 | 5.9 | 0.70 | 0.7 | 6.1 | $95-63-6$ |
| 1,2-Dichlorobenzene | 0.8 U | 0.8 | 6.1 | 1.1 U | 1.1 | 8.0 | 0.8 U | 0.8 | 5.9 | 0.9 U | 0.9 | 6.1 | 95-50-1 |
| 1,3,5-Trimethylbenzene | 0.80 | 0.8 | 6.1 | 1.10 | 1.1 | 8.0 | 0.8 U | 0.8 | 5.9 | 0.9 U | 0.9 | 6.1 | 108-67-8 |
| 1,3-Dichlorobenzene | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | 108-67-8 |
| 1,3-Dichloropropane | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | $540-73-1$ $142-28-9$ |
| 1,4-Dichlorobenzene | 1.0 U | 1.0 | 6.1 | 1.3 U | 1.3 | 8.0 | 0.9 U | 0.9 | 5.9 | 1.0 U | 1.0 | 6.1 | $142-28-9$ $106-46-7$ |
| 2-Chiorotoluene | 0.8 U | 0.8 | 6.1 | 1.10 | 1.1 | 8.0 | 0.8 U | 0.8 | 5.9 | 0.9 U | 0.9 |  | $106-46-7$ $95-49-8$ |
| 2,2-Dichloropropane | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.9 | 6.1 | $95-49-8$ $594-20-7$ |
| Benzene | $0.6 \cup$ | 0.6 | 6.1 | $0.8 \cup$ | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | $594-20-7$ $71-43-2$ |
| Bromobenzene | 0.5 U | 0.5 | 6.1 | 0.60 | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | 108-43-2 |
| Bromochloromethane | 0.7 U | 0.7 | 6.1 | 1.0 U | 1.0 | 8.0 | 0.70 | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 108-86-1 |
| Bromodichloromethane | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | 74-97-5 $75-27-4$ |
| Bromoform | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.60 | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | 75-25-2 |
| Bromomethane | 1.20 | 1.2 | 6.1 | 1.6 U | 1.6 | 8.0 | 1.2 U | 1.2 | 5.9 | 1.2 U | 1.2 |  | 75-25-2 |
| c-1,2-Dichloroethene | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 1.2 | 6.1 | 14-83-9 |
| Carbon tetrachloride | 0.50 | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | $156-59-2$ $56-23-5$ |
| 205: Chlorobenzene | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | $56-23-5$ $108-90-7$ |
| רoroethane | 1.50 | 1.5 | 6.1 | 1.9 U | 1.9 | 8.0 | 1.4 U | 1.4 | 5.9 | 1.5 U | 1.5 | 6.1 | $175-00-3$ |
| S hloroform | 0.7 U | 0.7 | 6.1 | 1.0 U | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 67-66-3 |
| Chloromethane | 1.1 U | 1.1 | 6.1 | 1.4 U | 1.4 | 8.0 | 1.1 U | 1.1 | 5.9 | 1.1 U | 1.1 | 6.1 | 74-87-3 |
| cis-1,3-Dichloropropene | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | 10061-01-5 |
| Dibromochloromethane | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | 124-48-1 |
| Dichlorodifluoromethane Ethybenzene | 1.3 U 0.7 U | 1.3 0.7 | 6.1 | 1.8 U 1.0 U | 1.8 1.0 | 8.0 | 1.3 U | 1.3 | 5.9 | 1.3 U | 1.3 | 6.1 | 75-71-8 |
| Isopropylbenzene | 0.6 U | 0.6 | 6.1 | 1.0 U | 1.0 | 8.0 8.0 | 0.7 U 0.6 U | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 100-41-4 |
| Methylene chloride | 0.8 U | 0.8 | 6.1 | 1.10 | 1.1 | 8.0 | 0.6 U | 0.6 0.8 | 5.9 5.9 | 0.6 U 0.9 U | 0.6 | 6.1 | 98-82-8 |
| MTBE | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.9 | 6.1 | 75-09-2 $1634-04-4$ |
| Naphthalene | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.60 | 0.6 | 5.9 | 0.6 U | 0.0 | 6.1 | $1634-044$ |
| $n$-Butylbenzene. | 1.0 U | 1.0 | 6.1 | 1.3 U | 1.3 | 8.0 | 0.9 U | 0.6 | 5.9 5.9 | 1.0 U | 0.6 1.0 | 6.1 | 91-20-3 |
| n-Propylbenzene | 0.70 | 0.7 | 6.1 | 1.00 | 1.0 | 8.0 | 0.70 | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 104-51-8 |
| p-Isopropyltoluene | 0.7 U | 0.7 | 6.1 | 1.0 U | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.70 | 0.7 | 6.1 | $\begin{gathered} 103-65-1 \\ 99-87-6 \end{gathered}$ |
| sec -Butybenzene | 0.74 | 0.7 | 6.1 | 1.00 | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 99-87-6 $135-98-8$ |
| Styrene | 0.5 U | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.5 U | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | 100-42-5 |
| tert-Butylbenzene | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | -98-06-6 |
| Tetrachioroethene | 0.7 U | 0.7 | 6.1 | 1.0 U | 1.0 | 8.0 | 0.7 U | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 128-18-4 |
| Toluene | 0.7 U | 0.7 | 6.1 | 1.04 | 1.0 | 8.0 | 0.70 | 0.7 | 5.9 | 0.7 U | 0.7 | 6.1 | 108-88-3 |
| tr-1,2-Dichloroethene | 1.04 | 1.0 | 6.1 | 1.30 | 1.3 | 8.0 | 0.9 U | 0.9 | 5.9 | 1.0 U | 1.0 | 6.1 | 156-60-5 |
| tr-1,3-Dichloropropene | 0.6 U | 0.6 | 6.1 | 0.8 U | 0.8 | 8.0 | 0.6 U | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | 10061-02-6 |
| Trichlorofuoromethane | 0.60 | 0.5 | 6.1 | 0.60 | 0.6 | 8.0 | 0.54 | 0.5 | 5.9 | 0.5 U | 0.5 | 6.1 | 79-01-6 |
| Vinyl choride | 0.70 | 0.7 | 6.1 | 1.04 | 1.0 | 8.0 | 0.50 0.74 | 0.6 | 5.9 | 0.6 U | 0.6 | 6.1 | 75-69-4 |
| Total xylenes | $0.5 U$ | 0.5 | 6.1 | 0.6 U | 0.6 | 8.0 | 0.50 | 0.5 | 5.9 5.9 | 0.5 U 0.5 U | 0.5 | 6.1 | $\begin{gathered} 75-01-4 \\ 1330-20-7 \end{gathered}$ |
| (Surr)Toluened8 (\%) | 104 |  |  | 104 |  |  |  |  |  |  |  |  | eptable limit |
| (Surr)4-BFB (\%) | 102 |  |  | 93.5 |  |  | 95.1 |  |  | $\begin{array}{r} 104 \\ 97.8 \end{array}$ |  |  | $\begin{aligned} & 70-130 \% \\ & 70-130 \% \end{aligned}$ |

The qualifier "L" denotes that the reported value is above the calibration range. The actual value may be higher than the value given,
The qualfier "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit),
The qualifier " $U$ " denotes that the analyte was not present, and the value preceding the " $U$ " is the MDL
Per FDEP recommendation, D: water is used instead of sodum blsulfate in low-level soil vials


[^34]| Mient I.D. | SB-17 @ $4^{\prime}$ | Method Blank |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - Mpha L.D. | 1104022-17 | 1104022-20 |  |  |  |  |  |
| Date Sampled | 4/13/11 | NA |  |  |  |  |  |
| Date Analyzed | 4/14/11 | 4/14/1苂 |  |  |  |  |  |
| Dilution Factor | 1 | 1 |  |  |  |  |  |
| Matrix | sold | Solid |  |  |  |  |  |
| Units (ppb) | $u \mathrm{~g} / \mathrm{Kg}$ | ug/kg |  |  |  |  |  |
| \% Moisture | 7.95 | MOS | NA |  |  | POL |  |
|  |  |  | PQL |  | MOL |  | CAS H |
| 1,1- Dichboroethane | 0.40 | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 75-34-3 |
| 1,1- Dichloroethene | 0.5 U | 0.5 | 5.4 | 0.50 | 0.5 | 5.0 | 75-35-4 |
| 1,1,1-Trichloroethane | $0.8 \cup$ | 0.8 | 5.4 | 0.70 | 0.7 | 5.0 | 71.55-6 |
| 1,1,1,2-Tetrachioroethane | 0.50 | 0.5 | 5.4 | 0.54 | 0.5 | 5.0 | 630-20-6 |
| 1,1,2,2-Tetrachoroethane | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 79.345 |
| 1,1,2-Trichoroethane | 0.70 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 79-00-5 |
| 1,1-Dichloropropene | 0.70 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 563-58-6 |
| 1,2-Dichloroethane | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 107-06-2 |
| 1,2-Dichioropropane | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 78-87-5 |
| 1,2,3-Trichiorobenzene | 0.70 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 87-61-6 |
| 1,2,4-Trimethybenzene | 0.70 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 95-63-6 |
| 1,2-Dichlorobenzene | 0.8 U | 0.8 | 5.4 | 0.7 U | 0.7 | 5.0 | 95-50-1 |
| 1,3,5-Trimethybenzene | 0.8 U | 0.8 | 5.4 | 0.7 U | 0.7 | 5.0 | 108-67-8 |
| 1,3-Dichlorobenzene | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 540-73-1 |
| 1,3-Dichloropropane | 0.50 | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 142-28-9 |
| 1,4-Dichlorobenzene | 0.9 U | 0.9 | 5.4 | 0.8 U | 0.8 | 5.0 | 106-46-7 |
| 2-Chlorotoluene | 0.8 U | 0.8 | 5.4 | 0.7 U | 0.7 | 5.0 | 95-49-8 |
| 2,2-Dichloropropane | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 594-20-7 |
| Benzene | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 71-43-2 |
| Bromobenzene | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 108-86-1 |
| Bromochloromethane | 0.70 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 74-97-5 |
| Bromodichloromethane | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 75-27-4 |
| Bromoform | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 75-25-2 |
| Bromomethane | 1.14 | 1.1 | 5.4 | 1.0 U | 1.0 | 5.0 | 74-83-9 |
| $\mathrm{c}-1,2$-Dichloroethene | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 156-59-2 |
| Carbon tetrachloride | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 56-23-5 |
| 4x. Chiorobenzene | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 108-90-7 |
| - Whoroethane | 1.3 U | 1.3 | 5.4 | 1.2 U | 1.2 | 5.0 | 75-00-3 |
| - Whloroform | 0.7 U | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 67-66-3 |
| Chioromethane | 1.0 U | 1.0 | 5.4 | 0.9 U | 0.9 | 5.0 | 74-87-3 |
| cis-1,3-Dichloropropene | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 10061-01-5 |
| Dibromochloromethane | 0.50 | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 124-48-1 |
| Dichlorodifluoromethane | 1.2 U | 1.2 | 5.4 | 1.10 | 1.1 | 5.0 | 75-71-8 |
| Ethylbenzene | $0.7 U$ | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 100-41-4 |
| Isopropylbenzene | 0.50 | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 98-82-8 |
| Methylene chloride | 0.8 U | 0.8 | 5.4 | 0.7 U | 0.7 | 5.0 | 75-09-2 |
| MTBE | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 1634-04-4 |
| Naphthalene | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | 91-20-3 |
| n-Butybenzene | 0.9 U | 0.9 | 5.4 | 0.8 U | 0.8 | 5.0 | 104-51-8 |
| n-Propylbenzene | 0.7 U | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 103-65-1 |
| p-isopropyltoluene | 0.7 U | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 99-87-6 |
| sec-Butybenzene | 0.74 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | 135-98-8 |
| Styrene | 0.40 | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | $100-42-5$ |
| tert-Butybenzene | 0.5 U | 0.5 | 5.4 | 0.5 U | 0.5 | 5.0 | $98-06-6$ |
| Tetrachloroethene | $0.7 U$ | 0.7 | 5.4 | 0.64 | 0.6 | 5.0 | 127-18-4 |
| Toluene | 0.74 | 0.7 | 5.4 | 0.6 U | 0.6 | 5.0 | $108-88-3$ |
| tr-1,2-Dichloroethene | 0.9 U | 0.9 | 5.4 | 0.8 U | 0.8 | 5.0 | 156-60-5 |
| tr-1,3-Dichloropropene | 0.5 U | 0.5 | 5.4 | 0.50 | 0.5 | 5.0 | 10061-02-6 |
| Trichloroethene | 0.4 U | 0.4 | 5.4 | 0.4 U | 0.4 | 5.0 | 79-01-6 |
| Trichlorofuoromethane | 0.50 | 0.5 | 5.4 | 0.50 | 0.5 | 5.0 | 75-69-4 |
| Vinyl chloride | 0.70 | 0.7 | 5.4 | 0.60 | 0.6 | 5.0 | 75-01-4 |
| Total xylenes | 0.40 | 0.4 | 5.4 | 0.40 | 0.4 | 5.0 | 1330-20-7 |
| (Surr)Toluened8 (\%) | 102 |  |  | 103 |  |  | $\frac{\text { ceptable lim }}{70-130 \%}$ |
| (Surr)4-BFB (\%) | 105 |  |  | 105 |  |  | 70-130\% |

[^35]Alpha Analytics, Inc. (407) 382-5742 NELAP \#E83806

EPA 3510/8310

| Client I. ${ }^{\text {d. }}$ | SB-1@ ${ }^{\text {8 }}$ |  |  | SB-2 @ $8^{\prime}$ |  |  | SB-3 @ 8' |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha 1.D. | 1104022-1 |  |  | 1104022-2 |  |  | 1104022-3 |  |  |
| Date Sampled | 4/13/11 |  |  | 4/13/11 |  |  | 4/13/11 |  |  |
| Date Extracted | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solld |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 11.6 | MOL | POL | 14.7 | $M D L$ | $P Q L$ | 8.09 | MDL | POL |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| 1-Methylnaphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.003 U | 0.003 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Pyrene | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(a)anthracene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.01 | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.01 | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo(a,h)anthracene | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.009 | 0.003 | 0.003 |
| Benzo( $g, h, i$ )perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno( $1,2,3-c_{r}$ d)pyrene | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| urrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 77.6 |  |  | 75.5 |  |  | 83.7 |  |  |

NR denotes that the surrogate recovery is not repontable due to matrix interference.
The qualffer "L" denotes that the value reported is above the calbration curve.
he qualtier " i " denotes that the reported value is between the MOL (Method Detection Limit) and the PQL (Practical Quantitation Limit). The qualifer " $U$ " denotes that the analyte was not detected, and the value preceding the " $U$ " is the MDL.
Surrogate \% Recovery limits are: p-Terphenyl 66.1-120.

| Client I.D. | SB-4@ ${ }^{\prime}$ |  |  | SB-5 @ 8' |  |  | SB-6 @ 8' |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-4 |  |  | 1104022-6 |  |  | 1104022-7 |  |  |
| Date Sampled | 4/13/11 |  |  | 4/13/11 |  |  | 4/13/11 |  |  |
| Date Extracted | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 20.6 | MOL | POL | 17.4 | MDL | PQ | 37.6 | MOL | PQL |
| Naphthaiene | 0.008 U | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.01 U | 0.010 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.006 U | 0.006 | 0.03 |
| 1-Methylnaphthalene | 0.008 U | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.46 | 0.010 | 0.03 |
| 2-Methyinaphthalene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.006 U | 0.006 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | $0.01 \cup$ | 0.01 | 0.03 |
| Fluorene | 0.003 U | 0.003 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.14 | 0.003 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.005 U | 0.005 | 0.03 |
| Anthracene | 0.003 U | 0.003 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Fluoranthene | 0.004 U | 0.004 | 0.003 | 0.05 | 0.004 | 0.003 | 0.05 | 0.005 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.02 | 0.004 | 0.003 | 0.005 U | 0.005 | 0.003 |
| Benzo(a)anthracene | 0.003 U | 0.003 | 0.003 | 0.01 | 0.002 | 0.003 | 0.11 | 0.003 | 0.003 |
| Chrysene | 0.003 U | 0.003 | 0.003 | 0.11 | 0.002 | 0.003 | 0.02 | 0.003 | 0.003 |
| Benzo(b)fluoranthene | 0.003 U | 0.003 | 0.003 | 0.01 | 0.002 | 0.003 | 0.03 | 0.003 | 0.003 |
| Benzo(k)fluoranthene | 0.003 U | 0.003 | 0.002 | 0.08 | 0.002 | 0.002 | 0.003 U | 0.003 | 0.002 |
| Benzo(a)pyrene | 0.003 U | 0.003 | 0.003 | 0.02 | 0.002 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Dibenzo( a, h)anthracene | 0.004 U | 0.004 | 0.003 | 0.02 | 0.004 | 0.003 | 0.005 U | 0.005 | 0.003 |
| Benzo(g, h,i)perylene | 0.003 U | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Indeno( $1,2,3-c, d)$ pyrene | 0.004 U | 0.004 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.005 U | 0.005 | 0.003 |
| urrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 83.1 |  |  | 76.6 |  |  | 64.7 |  |  |

EPA $3510 / 8310$

| Client I.D. | SB-7 @ 8* |  |  | SB-8 @ 8' |  |  | SB-14@ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-8 |  |  | 1104022-10 |  |  | 1104022-1 |  |  |
| Date Sampled | 4/13/11 |  |  | 4/13/11 |  |  | 4/13/11 |  |  |
| Date Extracted | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{kg}$ |  |  | $\mathrm{mg} / \mathrm{kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 15.5 | MDL | PQL | 18.3 | MOL | POL | 4.84 | MDL | PQL |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| 1-Methylnaphthalene | 0.18 | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.004 U | 0.004 | 0.003 | 0.05 | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(a)anthracene | 0.002 U | 0.002 | 0.003 | 0.40 L | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.06 | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo(a,h)anthracene | 0.004 U | 0.004 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo( g , $\mathrm{h}, \mathrm{i}$ ) perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno( $1,2,3-\mathrm{c}$ d) p prene | 0.004 U | 0.004 | 0.003 | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 |
| urrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p -Terphenyl-d14 | 103 |  |  | 82.7 |  |  | 83.4 |  |  |

[^36]The qualfier " " denotes that the value reported is above the calbration curve
Whe qualfier " denotes that the reported value is between the MOL (Method Detection Limit) and the PQL (Practical Quantation Limit) Whe qualfier "U" denotes that the anatyte was not detected, and the vaue preceding the "y" is the MOL
Surogate \% Recovery limits are: p-Terphenyl 60.1-120

## Client I.D.

Alpha I.D.
Date Sampled
Date Analyzed
Dilution Factor
Matrix
Units
Percent Moisture
Naphthalene
Acenaphthylene
1-MethyInaphthalene
2-MethyInaphthalene
Acenaphthene
Fluorene
Phenanthrene
Anthracene
Fluoranthene
Pyrene
Benzo(a)anthracene
Chrysene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Dibenzo(a,h)anthracene
Benzo( $g, h, i$ ) perylene
Indeno(1,2,3-c,d)pyrene
urrogate \% Recovery
p-Terphenyl-d14

| s8-13 @ 5 |  |  |
| :---: | :---: | :---: |
| $1104022 \cdot 12$ |  |  |
| $4 / 13 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| 1 |  |  |
| Sold |  |  |
| mg/kg |  |  |
| 15.2 | $M 01$ |  |
|  |  |  |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.01 U | 0.01 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.004 U | 0.004 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.004 U | 0.004 | 0.003 |
| 0.004 U | 0.004 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.002 |
| 0.002 U | 0.002 | 0.003 |
| 0.004 U | 0.004 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.004 U | 0.004 | 0.003 |


| SB-15 @ 6' |  |  |
| :---: | :---: | :---: |
| $1104022-13$ |  |  |
| $4 / 13 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| 1 |  |  |
| Solid |  |  |
| mg/Kg |  |  |
| 15.6 | $M 0 L$ | $P 02$ |
|  |  |  |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.01 U | 0.01 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.004 U | 0.004 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.004 U | 0.004 | 0.003 |
| 0.004 U | 0.004 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.002 |
| 0.002 U | 0.002 | 0.003 |
| 0.004 U | 0.004 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.004 U | 0.004 | 0.003 |

66.1

| SB-16 @ 6" |  |  |
| :---: | :---: | :---: |
| $1104022-14$ |  |  |
| $4 / 13 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| $4 / 14 / 11$ |  |  |
| 1 |  |  |
| Solld |  |  |
| $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| 13.2 | $M 01$ | 0.2 |
|  |  |  |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.007 U | 0.007 | 0.03 |
| 0.005 U | 0.005 | 0.03 |
| 0.01 U | 0.01 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.003 U | 0.003 | 0.03 |
| 0.002 U | 0.002 | 0.03 |
| 0.003 U | 0.003 | 0.003 |
| 0.003 U | 0.003 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.002 U | 0.002 | 0.002 |
| 0.002 U | 0.002 | 0.003 |
| 0.003 U | 0.003 | 0.003 |
| 0.002 U | 0.002 | 0.003 |
| 0.003 U | 0.003 | 0.003 |
|  |  |  |
| 81.3 |  |  |
|  |  |  |
|  |  |  |

NR denotes that the surrogate recovery is not reportable due to matrix interference.
The qualifier "L" denotes that the value repoted is above the calibration curve.
The qualfier "?" denotes that he reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit)
The qualifier "U" denotes that the analyte was not detected, and the value preceding the " 4 " is the MDL
arrogate \% Recovery limits are: p-Terpheny" 66.1-120.

| Client I.D. | SB-16 © $6^{\prime}$ |  |  | SB-17@ $6^{\prime \prime}$ |  |  | SB-17@ $4^{\text {a }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha 1.D. | 1104022-15 |  |  | 1104022-16 |  |  | 1104022-17 |  |  |
| Date Sampled | 4/13/11 |  |  | 4/13/11 |  |  | 4/13/11 |  |  |
| Date Extracted | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Analyzed | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solld |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{kg}$ |  |  |
| Percent Moisture | 15.7 | $M D L$ | PQL | 8.09 | MDL | EQL | 7.95 | MDL | PQL |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.004 U | 0.004 | 0.03 |
| 1-Methyinaphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | $0,004 \mathrm{U}$ | 0.004 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.09 | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.004 U | 0.004 | 0.003 | 0.07 | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.05 | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(a)anthracene | 0.06 | 0.002 | 0.003 | 0.02 | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.16 | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.03 | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.10 | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo( $a, h$ anthracene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo( $(\mathrm{g}, \mathrm{h}, \mathrm{i})$ perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno(1,2,3-c,d)pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| urrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 90.5 |  |  | 83.7 |  |  | 92.7 |  |  |

[^37]

[^38]| Client I.D. | SB-1 @ 8' |  | SB-2 @ 8 |  | SB-3 @ 8' |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-1 |  | 1104022-2 |  | 1104022-3 |  |
| Date Sampled | 4/13/11 |  | 4/13/11 |  | 4/13/11 |  |
| Date Extracted | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Analyzed | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Dilution Factor | 1 |  | 1 |  | 1 |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 11.6 |  | 14.7 |  | 8.09 |  |
| MDL. | 3.4 |  | 3.5 |  | 3.3 |  |
|  | POL |  | PQL |  | POL |  |
| Total Petroleum Hydrocarbons | 7.41 | 9.0 | 3.5 U | 9.0 | 3.3 U | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 91.1 |  | 97.0 |  | 89.9 |  |
| C39/ Nonatriacontane | 98.1 |  | 94.6 |  | 85.6 |  |


| Client I.D. | SB-4 @ 6' |  | SB-5 @ 8' |  | SB-6 @ 8' |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-4 |  | 1104022-6 |  | 1104022-7 |  |
| Date Sampled | 4/13/11 |  | 4/13/11 |  | 4/13/11 |  |
| Date Extracted | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Analyzed | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Dilution Factor | 1 |  | 1 |  | 1 |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 20.6 |  | 17.4 |  | 37.6 |  |
| MDL | 3.8 |  | 3.6 |  | 4.8 |  |
|  |  | PQL |  | $\underline{P Q L}$ |  | PQL |
| Total Petroleum Hydrocarbons | 3.8 U | 9.0 | 11 | 9.0 | 28 | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 98.1 |  | 96.9 |  | 94.2 |  |
| C39/ Nonatriacontane | 88.6 |  | 97.5 |  | 87.5 |  |
| Client I.D. | SB-7 @ 8' |  | SB-8 @ 8' |  | SB-14 @ 3' |  |
| Alpha I.D. | 1104022-8 |  | 1104022-10 |  | 1104022-11 |  |
| Date Sampled | 4/13/11 |  | 4/13/11 |  | 4/13/11 |  |
| Date Extracted | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Analyzed | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Dilution Factor | 1 |  | 1 |  | 1 |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 15.5 |  | 18.3 |  | 4.84 |  |
| MOL | 3.6 |  | 3.7 |  | 3.2 |  |
|  |  | PQL |  | POL |  | PQL |
| Total Petroleum Hydrocarbons | 3.6 U | 9.0 | 11 | 9.0 | 3.2 U | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 90.4 |  | 99.2 |  | 94.6 |  |
| C39/Nonatriacontene | 95.5 |  | 90.5 |  | 98.5 |  |

NR denotes that the surrogate recovery is not reportabie due to matrix interference.
The qualfier "L" denotes that the value reported is above the calbration curve.
The qualifer "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
The qualfier " $U$ " denotes that the analyte was not detected, and the value preceding the " $U$ " is the MOL
Surrogate \% Recovery limits are: OTP 62-109 and C-39 60-118.

| Client I.D. | SB-13 @ 5' |  | SB-15 @ $6^{\text {' }}$ |  | SB-16 @ 6' |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-12 |  | 1104022-13 |  | 1104022-15 |  |
| Date Sampled | 4/13/11 |  | 4/13/11 |  | 4/13/11 |  |
| Date Extracted | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Analyzed | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Dilution Factor | 1 |  | 1 |  | 1 |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 15.2 |  | 15.6 |  | 15.7 |  |
| MDL | 3.5 |  | 3.6 |  | 3.6 |  |
|  |  | $P Q L$ |  | $P O L$ |  | PQL |
| Total Petroleum Hydrocarbons | 3.5 U | 9.0 | 3.6 U | 9.0 | 8.8 I | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 83.5 |  | 84.6 |  | 92.1 |  |
| C39/ Nonatriacontane | 89.5 |  | 79.7 |  | 98.4 |  |


| Client I.D. | SB-17 @ $\mathbf{4}^{\text {P }}$ |  | Blank |  |
| :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-17 |  | 1104022 |  |
| Date Sampled | 4/13/11 |  | NA |  |
| Date Extracted | 4/14/11 |  | 4/14/1 |  |
| Date Analyzed | 4/14/11 |  | 4/14/1 |  |
| Dilution Factor | 1 |  | 1 |  |
| Matrix | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 7.95 |  | NA |  |
| MDL | 3.3 |  | 3.0 |  |
|  | PQL |  | PQL |  |
| Total Petroleum Hydrocarbons | 3.3 U | 9.0 | 3.0 U | 9.0 |
| Surrogate \% Recovery |  |  |  |  |
| OTP | 82.6 |  | 64.6 |  |
| C39/ Nonatriacontane | 94.3 |  | 79.4 |  |

[^39]Client I.D.
Alpha LD.
Date Sampled
Date Analyzed
Dilion Factor
Matrix
Units (ppo)

Benzene
Toluene
Ethybenene
Total xylenes
MTBE
Total BTEX
(Surr)Toluene-d8 (\%) (Surr) 4-BFB (\%)
SB-4
1104022.5
$4 / 13 / 11$
$4 / 14 / 11$
2
Liquid
$u g / L$

$0.2 U$
$0.2 U$
$0.3 U$
$0.3 U$
$0.2 U$
$0.2 U$

107
113

|  |  |
| :--- | :--- |
|  |  |
| $M 01$ | 102 |
| 0.2 | 1.0 |
| 0.2 | 1.0 |
| 0.3 | 1.0 |
| 0.3 | 1.0 |
| 0.2 | 1.0 |
| 0.2 | 1.0 |

$58-7$
$1104022-9$
$4 / 13 / 11$
$4 / 14 / 11$
1
Lquid
ug/


| Client I. ${ }^{\text {D }}$ | Method Blank |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-19 |  |  |  |
| Date Sampled | NA |  |  |  |
| Date Analyzed | 4/14/11 |  |  |  |
| Dilution Factor | 1 |  |  |  |
| Matrix | Lquid |  |  |  |
| Units (ppo) | ug/L |  |  |  |
|  |  | MDL | $P O L$ | CASH |
| Benzene | 0.20 | 0.2 | 1.0 | 71-43-2 |
| Toluene | 0.2 U | 0.2 | 1.0 | $108-88-3$ |
| Ethybenzene | 0.3 U | 0.3 | 1.0 | 100-41-4 |
| Total xylenes | 0.3 U | 0.3 | 1.0 | $1330-20-7$ |
| MTBE | 0.2 U | 0.2 | 1.0 | 1634-04-4 |
| Total BTEX | 0.2 U | 0.2 | 1.0 | -63404 |
| urr)Toluene-d8 (\%) | 110 |  |  | $\frac{\text { Acceptable Limits }}{70-130 \%}$ |
| (Surr)4-BFB (\%) | 124 |  |  | 70-130\% |



The qualfer "L" cenotes the value report is above the cabration range. The actual value may be higher than the value given
The qualfer "I" denotes that the reported value s between the MDL (Method Detection Limit) and the PQL (Practical Quartitation Limit) The qualfer "E" denotes that the analyte was not present, and the value preceding the "U" is the MOL

| Client L.D. | SB-4 |  |  | SB-7 |  |  | SB-17 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha 1.D. | 1104022 |  |  | 110402 |  |  | 1104022 |  |  |
| Date Sampled | 4/13/1 |  |  | 4/13/1 |  |  | 4/13/ |  |  |
| Date Extracted | 4/15/1 |  |  | 4/15/1 |  |  | $4 / 15$ |  |  |
| Date Analyzed | 4/15/1 |  |  | 4/15/1 |  |  | 4/15/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | $\begin{gathered} 4 / 151 \\ 1 \end{gathered}$ |  |  |
| Matrix | Liquid |  |  | Liquid |  |  | Liquid |  |  |
| Units | ug/L |  |  | ug/L |  |  | ug/L |  |  |
|  |  | MDL | $P Q L$ |  | MOL | $P O L$ |  | MDL | $P Q L$ |
| Naphthalene | 0.15 U | 0.15 | 2.0 | 0.15 U | 0.15 | 2.0 |  |  |  |
| Acenaphthylene | 0.58 U | 0.58 | 2.0 | 0.58 U | 0.58 | 2.0 | 0.15 U | 0.15 | 2.0 |
| 1-Methylnaphthalene | 0.71 U | 0.71 | 2.0 | 0.71 U | 0.71 | 2.0 | 0.58 U | 0.58 | 2.0 |
| 2-MethyInaphthalene | 0.63 U | 0.63 | 2.0 | 0.63 U | 0.63 | 2.0 | 0.71 U | 0.71 | 2.0 |
| Acenaphthene | 0.68 U | 0.68 | 2.0 | 0.68 U | 0.63 | 2. | 0.63 U | 0.63 | 2.0 |
| Fluorene | 0.17 U | 0.17 | 2.0 | 0.68 | 0.68 | 2.0 | 0.68 U | 0.68 | 2.0 |
| Phenanthrene | 0.09 U | 0.09 | 20 | 0.17 | 0.17 | 2.0 | 0.17 U | 0.17 | 2.0 |
| Anthracene | 0.06 U | 0.06 | 2.0 | 0.09 | 0.09 | 2.0 | 0.09 U | 0.09 | 2.0 |
| Fluoranthene | 0.22 U | 0.22 | 0.2 | , 22 | 0.06 | 2.0 | 0.06 U | 0.06 | 2.0 |
| Pyrene | 0.20 U | 0.20 | 0.2 | 0.22 | 0.22 | 0.2 | 0.22 U | 0.22 | 0.2 |
| Benzo(a)anthracene | 0.64 | 0.12 | 0.2 | 0.12 U | 0.20 | 0.2 | 0.20 U | 0.20 | 0.2 |
| Chrysene | 0.16 U | 0.16 | 0.2 | 0.164 | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 |
| Benzo(b)fluoranthene | 0.10 U | 0.10 | 0.2 | 0.16 U | 0.16 | 0.2 | 0.16 U | 0.16 | 0.2 |
| Benzo(k)fluoranthene | 0.08 U | 0.08 | 0.1 | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 |
| Benzo(a)pyrene | 0.12 U | 0.12 | 0.2 | . 0.12 U | 0.08 | 0.1 | 0.08 U | 0.08 | 0.1 |
| Dibenzo( $\mathrm{a}, \mathrm{h}$ )anthracene | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 |
| Benzo(g, h,i)perylene | 0.18 U | 0.18 | 0.2 | 0.18 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 |
| hdeno(1,2,3-c,d)pyrene | 0.15 U | 0.15 | 0.2 | 0.15 U | 0.15 | . 2 | 0.18 U | 0.18 | 0.2 |
|  |  |  |  |  | 0.15 | 0.2 | 0.15 U | 0.15 | 0.2 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 69.7 |  |  | 79.1 |  |  | 82.7 |  |  |

The qualiter "L" denotes that the value reported is above the calibration curve
The qualtier "! denotes that the reported value is beween the MOL (Method Detection Limit) and the PQ (Practical Quantitation Limit)
The qualfer "U" denotes that the analyte was not detected, and the value preceding the " $U$ " is the MDL
Surtoaate \% Recovery limits are: p-Terohenvi 72.4-130
$\left.\begin{array}{lcllll}\text { Client I.D. } & \text { Blank } \\ \text { Alpha I.D. } \\ \text { Date Sampled } & \text { 1104022-19 }\end{array}\right)$

[^40]| Client I.D. | SB-4 |  | SB-7 |  | SB-17 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104022-5 |  | 1104022-9 |  | 1104022-18 |  |
| Date Sampled | 4/13/11 |  | 4/13/11 |  | 4/13/11 |  |
| Date Extracted | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Analyzed | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Dilution Factor | 1 |  | , |  | 4/11 |  |
| Matrix | Liquid |  | Liquid |  | Liquid |  |
| Units | $\mathrm{mg} / \mathrm{L}$ |  | $\mathrm{mg} / \mathrm{L}$ |  | $\mathrm{mg} / \mathrm{L}$ |  |
| MDL | 0.20 |  | 0.20 |  | 0.20 |  |
|  |  | PQL |  | POL |  | PQt |
| Total Petroleum Hydrocarbons | 0.20 U | 0.60 | 0.20 U | 0.60 | 0.20 U | 0.60 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 56.7 |  | 71.2 |  | 71.9 |  |
| C39/Nonatriacontane | 75.1 |  | 95.1 |  | 84.7 |  |


| Client I.D. | Blank |  |
| :--- | :---: | :--- |
| Alpha I.D. | $1104022-19$ |  |
| Date Sampled | NA |  |
| Date Extracted | $4 / 14 / 11$ |  |
| Date Analyzed | $4 / 14 / 11$ |  |
| Dilution Factor | 1 |  |
| Matrix | Liquid |  |
| Units | $\mathrm{mg} / \mathrm{L}$ |  |
| MDL | 0.20 |  |
|  |  | $\underline{P Q L}$ |
| Total Petroleum Hydrocarbons | 0.20 U | 0.60 |
| Surrogate \% Recovery |  |  |
| OTP | $\mathbf{7 9 . 6}$ |  |
| C39/ Nonatriacontane | 63.5 |  |
|  |  |  |

ANALYSIS DATE : $4 / 14 / 11$

SAMPLE ID \#: $1002006-1$ MATRIX: | QOIL |
| :--- |
| QATCH ID: |
| 041411A |

| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \end{gathered}$ | $\begin{gathered} \text { MSD \% } \\ \text { RECOVERY } \end{gathered}$ | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{aligned} & \text { MAXIMUM } \\ & \text { RPD } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vinyl chloride | 0.0 | 20 | 25 | 23 | 125.5\% | 117.4\% | $6.6 \%$ | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 23 | 22 | 112.5\% | 110.7\% | 1.7\% | 70.0\% | 130.0\% | 20.0\% |
| MTBE | 0.0 | 20 | 21 | 21 | 106.5\% | 106.5\% | 0.0\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 22 | 21 | 108.0\% | 103.6\% | 4.2\% | 70.0\% | 130.0\% | 20.0\% |
| Chioroform | 0.0 | 20 | 24 | 23 | 117.6\% | 113.4\% | 3.6\% | 70.0\% | 130.0\% | 20.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 22 | 19 | 109.1\% | 96.2\% | 12.5\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 24 | 23 | 121.5\% | 116.9\% | 3.9\% | 70.0\% | 130.0\% | 20.0\% |
| Benzene | 0.0 | 20 | 22 | 22 | 111.0\% | 107.8\% | 2.9\% | 70.0\% | 130.0\% | 20.0\% |
| Trichloroethene | 0.0 | 20 | 23 | 23 | 116.9\% | 114.8\% | 1.8\% | 70.0\% | 130.0\% | 20.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 21 | 21 | 106.9\% | 106.1\% | 0.7\% | 70.0\% | 130.0\% | 20.0\% |
| Toluene | 0.0 | 20 | 24 | 23 | 118.4\% | 114.0\% | 3.8\% | 70.0\% | 130.0\% | 20.0\% |
| Tetrachloroethene | 0.0 | 20 | 28 | 26 | 137.7\% | 132.3\% | 4.0\% | 70.0\% | 130.0\% | 20.0\% |
| Chiorobenzene | 0.0 | 20 | 24 | 23 | 118.2\% | 114.8\% | 2.9\% | 70.0\% | 130.0\% | 20.0\% |
| Ethylbenzene | 0.0 | 20 | 23 | 22 | 115.6\% | 111.6\% | 3.5\% | 70.0\% | 130.0\% | 20.0\% |
| m,p-Xylenes | 0.0 | 40 | 49 | 47 | 122.6\% | 118.0\% | 3.8\% | 70.0\% | 130.0\% | 20.0\% |
| o-Xylene | 0.0 | 20 | 23 | 22 | 116.8\% | 112.1\% | 4.2\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,2,2-Tetrachoroethane | 0.0 | 20 | 20 | 20 | 101.6\% | 98.3\% | $3.3 \%$ | 70.0\% | 130.0\% | 20.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 22 | 23 | 108.4\% | 117.5\% | 8.0\% | 70.0\% | 130.0\% | 20.0\% |


| ANALYSIS DATE: 4 SAMPLE ID \#: |  |  |  |  | MATRIX : QC BATCH ID: | $\begin{gathered} \text { SOLL } \\ 041411 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | LCS \% <br> RECOVERY | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| Vinyl chloride | 0.0 | 20 | 24 | 122.5\% | 70.0\% | 130.0\% |
| 1,1-Dichlorocthene | 0.0 | 20 | 23 | 113.1\% | 70.0\% | 130.0\% |
| MTBE | 0.0 | 20 | 21 | 107.2\% | 70.0\% | 130.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 21 | 106.8\% | 70.0\% | 130.0\% |
| Chloroform | 0.0 | 20 | 23 | 114.8\% | 70.0\% | 130.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 20 | 100.4\% | 70.0\% | 130.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 24 | 119.3\% | 70.0\% | 130.0\% |
| Benzene | 0.0 | 20 | 22 | 108.9\% | 70.0\% | 130.0\% |
| Trichloroethene | 0.0 | 20 | 23 | 116.7\% | $70.0 \%$ | 130.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 21 | 106.5\% | 70.0\% | 130.0\% |
| Toluene | 0.0 | 20 | 23 | 114.8\% | 70.0\% | 130.0\% |
| Tetrachloroethene | 0.0 | 20 | 27 | 132.7\% | 70.0\% | 130.0\% |
| Chlorobenzene | 0.0 | 20 | 23 | 117.3\% | 70.0\% | 130.0\% |
| Ethybenzene | 0.0 | 20 | 23 | 114.2\% | 70.0\% | 130.0\% |
| m,p-xylenes | 0.0 | 40 | 48 | 119.9\% | 70.0\% | 130.0\% |
| --Xylene | 0.0 | 20 | 22 | 112.4\% | 70.0\% | 130.0\% |
| 1,1,2,2-Tetrachoroethane | 0.0 | 20 | 20 | 99.4\% | 70.0\% | 130.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 21 | 105.4\% | 70.0\% | 130.0\% |


| ANALYSIS DATE: SAMPLE ID \#: | 4/14/11 <br> SAND |  |  |  |  |  |  |  | MATRIX: QC BATCH ID: | $\begin{aligned} & \text { SOLL } \\ & 041411 \mathrm{~A} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT <br> SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | MS \% <br> RECOVERY | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{gathered} \text { MAXIMUM } \\ \text { RPD } \\ \hline \end{gathered}$ |
| Naphthalene | 0.0 | 25.0 | 19.4 | 19.1 | 77.6\% | 76.4\% | 1.6\% | 70.0\% | 130.0\% | 25.0\% |
| Fluorene | 0.0 | 25.0 | 20.2 | 20.1 | 80.8\% | 80.4\% | 0.5\% | 70.0\% | 130.0\% | 25.0\% |
| Phenanthrene | 0.0 | 25.0 | 20.4 | 20.6 | 81.6\% | 82.4\% | 1.0\% | 70.0\% | 130.0\% | 25.0\% |
| Anthracene | 0.0 | 25.0 | 20.2 | 20.0 | 80.8\% | 80.0\% | 1.0\% | 70.0\% | 130.0\% | 25.0\% |
| Fluoranthene | 0.0 | 25.0 | 22.2 | 22.4 | 88.8\% | 89.6\% | 0.9\% | 70.0\% | 130.0\% | 25.0\% |
| Pyrene | 0.0 | 25.0 | 23.3 | 23.1 | 93.2\% | 92.4\% | 0.9\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)anthracene | 0.0 | 25.0 | 25.9 | 25.7 | 103.6\% | 102.8\% | 0.8\% | 70.0\% | 130.0\% | 25.0\% |
| FWane | 0.0 | 25.0 | 27.3 | 27.1 | 109.2\% | 108.4\% | 0.7\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(b)fluoranthene | 0.0 | 25.0 | 27.0 | 25.7 | 108.0\% | 102.8\% | 4.9\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(k)fluoranthene | 0.0 | 25.0 | 26.6 | 26.5 | 106.4\% | 106.0\% | 0.4\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)pyrene | 0.0 | 25.0 | 27.8 | 27.6 | 111.2\% | 110.4\% | 0.7\% | 70.0\% | 130.0\% | 25.0\% |
| Dibenzo( $a, h$ anthracene | 0.0 | 25.0 | 25.5 | 26.2 | 102.0\% | 104.8\% | 2.7\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(g,h,I)perylene | 0.0 | 25.0 | 25.8 | 26.5 | 103.2\% | 106.0\% | 2.7\% | 70.0\% | 130.0\% | 25.0\% |
| Indeno(1,2,3-c,d)pyrene | 0.0 | 25.0 | 27.5 | 27.7 | 110.0\% | 110.8\% | 0.7\% | 70.0\% | 130.0\% | 25.0\% |



| NALYSIS DATE: SAMPLE ID \#: | 4/14/11 SAND |  |  |  |  |  |  |  | MATRIX : QC BATCH ID: | $\begin{gathered} \text { SOIL } \\ 041411 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT <br> SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | MS \% <br> RECOVERY | MSD \% <br> RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | MAXIMUM RPD |
| Total Petroleum tydrocarbons | 0.0 | 3400 | 2928 | 2802 | 86.1\% | 82.4\% | 4.4\% | 62\% | 204\% | 25.0\% |


| ANALYSIS DATE: $4 / 14 / 11$ SAMPLE ID \#: <br> LCS |  |  |  |  | MATRIX: QC BATCH ID: | $\begin{gathered} \text { SOIL } \\ 041411 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | LCS \% RECOVERY | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| Total Petroleum Hydrocattons | 0.0 | 1700 | 1071 | 63.0\% | 63.0\% | 153.0\% |

MATRIX : LIQUID

SAMPLE ID \#: MW
QC BATCH ID: 041411B

| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \end{gathered}$ | $\begin{gathered} \text { MSD \% } \\ \text { RECOVERY } \\ \hline \end{gathered}$ | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{gathered} \text { MAXIMUM } \\ \text { RPD } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vinyl chioride | 0.0 | 20 | 26 | 25 | 131.6\% | 127.2\% | 3.4\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 23 | 22 | 114.5\% | 109.8\% | 4.1\% | 70.0\% | 130.0\% | 20.0\% |
| MTBE | 0.0 | 20 | 17 | 18 | 87.2\% | 91.6\% | 5.0\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 22 | 22 | 110.7\% | 111.2\% | 0.5\% | 70.0\% | 130.0\% | 20.0\% |
| Chloroform | 0.0 | 20 | 25 | 23 | 123.2\% | 114.6\% | 7.3\% | 70.0\% | 130.0\% | 20.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 21 | 20 | 106.6\% | 100.3\% | 6.1\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 22 | 21 | 109.9\% | 106.8\% | 2.9\% | 70.0\% | 130.0\% | 20.0\% |
|  | 0.0 | 20 | 25 | 24 | 122.6\% | 119.3\% | 2.7\% | 70.0\% | 130.0\% | 20.0\% |
| Trichloroethene | 0.0 | 20 | 22 | 21 | 107.7\% | 102.9\% | 4.5\% | 70.0\% | 130.0\% | 20.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 24 | 22 | 120.3\% | 111.7\% | 7.4\% | 70.0\% | 130.0\% | 20.0\% |
| Toluene | 0.0 | 20 | 25 | 24 | 124.5\% | 119.8\% | 3.8\% | 70.0\% | 130.0\% | 20.0\% |
| Tetrachloroethene | 0.0 | 20 | 24 | 22 | 119.2\% | 112.3\% | 6.0\% | 70.0\% | 130.0\% | 20.0\% |
| Chlorobenzene | 0.0 | 20 | 28 | 27 | 140.0\% | 134.0\% | 4.4\% | 70.0\% | 130.0\% | 20.0\% |
| Ethybenzene | 0.0 | 20 | 25 | 24 | 126.4\% | 119.4\% | 5.7\% | 70.0\% | 130.0\% | 20.0\% |
| m,p-xylenes | 0.0 | 40 | 55 | 50 | 138.3\% | 125.7\% | 9.5\% | 70.0\% | 130.0\% | 20.0\% |
| 0-Xviene | 0.0 | 20 | 24 | 24 | 117.6\% | 118.6\% | 0.8\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 32 | 31 | 158.4\% | 153.3\% | 3.3\% | 70.0\% | 130.0\% | 20.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 26 | 16 | 129.3\% | 80.9\% | 46.0\% | 70.0\% | 130.0\% | 20.0\% |


| ANALYSIS DATE: 4/ SAMPLE ID \#: |  |  |  |  | MATRIX: QC BATCH ID: | $\begin{aligned} & \text { LIQUID } \\ & 041411 B \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | LCS \% RECOVERY | LOWER LIMIT U RECOVERY | JPPER LIMIT RECOVERY |
| Vinyl chloride | 0.0 | 20 | 26 | 131.3\% | 70.0\% | 130.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 22 | 108.9\% | 70.0\% | 130.0\% |
| MTBE | 0.0 | 20 | 18 | 87.7\% | 70.0\% | 130.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 21 | 106.2\% | 70.0\% | 130.0\% |
| Chloroform | 0.0 | 20 | 22 | 109.3\% | 70.0\% | 130.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 21 | 102.7\% | 70.0\% | 130.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 22 | 107.8\% | 70.0\% | 130.0\% |
| Benzene | 0.0 | 20 | 21 | 106.9\% | 70.0\% | 130.0\% |
| Trichloroethene | 0.0 | 20 | 19 | 97.3\% | 70.0\% | 130.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 22 | 109.0\% | 70.0\% | 130.0\% |
| Toluene | 0.0 | 20 | 24 | 122.2\% | 70.0\% | 130.0\% |
| Tetrachloroethene | 0.0 | 20 | 23 | 117.3\% | 70.0\% | 130.0\% |
| Chlorobenzene | 0.0 | 20 | 25 | 127.1\% | 70.0\% | 130.0\% |
| Ethylbenzene | 0.0 | 20 | 22 | 111.2\% | 70.0\% | 130.0\% |
| m,p-Xylenes | 0.0 | 40 | 48 | 121.0\% | 70.0\% | 130.0\% |
| o-xylene | 0.0 | 20 | 23 | 114.9\% | 70.0\% | 130.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 31 | 157.1\% | 70.0\% | 130.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 17 | 86.8\% | 70.0\% | 130.0\% |


| ANALYSIS DATE: SAMPLE ID \# : | $\begin{gathered} 4 / 15 / 11 \\ 1104027-3 \end{gathered}$ |  |  |  |  |  |  |  | MATRIX: QC BATCH ID: | $\begin{aligned} & \text { LQQUD } \\ & 041511 A \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | MS \% <br> RECOVERY | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | MAXIMUM RPD |
| Naphthalene | 0.0 | 25.0 | 24.3 | 23.7 | 97.2\% | 94.8\% | 2.5\% | 70.0\% | 130.0\% | 25.0\% |
| Fluorene | 0.0 | 25.0 | 21.7 | 19.4 | 86.8\% | 77.6\% | 11.2\% | 70.0\% | 130.0\% | 25.0\% |
| Phenanthrene | 0.0 | 25.0 | 19.0 | 19.2 | 76.0\% | 76.8\% | 1.0\% | 70.0\% | 130.0\% | 25.0\% |
| Anthracene | 0.0 | 25.0 | 18.8 | 18.7 | 75.2\% | 74.8\% | 0.5\% | 70.0\% | 130.0\% | 25.0\% |
| Fluoranthene | 0.0 | 25.0 | 21.7 | 21.1 | 86.8\% | 84.4\% | 2.8\% | 70.0\% | 130.0\% | 25.0\% |
| Pyrene | 0.0 | 25.0 | 21.1 | 21.6 | 84.4\% | 86.4\% | 2.3\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)anthracene | 0.0 | 25.0 | 22.2 | 24.4 | 88.8\% | 97.6\% | 9.4\% | 70.0\% | 130.0\% | 25.0\% |
| Chrusene | 0.0 | 25.0 | 23.1 | 25.8 | 92.4\% | 103.2\% | 11.0\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(b)fluoranthene | 0.0 | 25.0 | 22.9 | 25.0 | 91.6\% | 100.0\% | 8.8\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(k)fluoranthene | 0.0 | 25.0 | 24.0 | 25.2 | 96.0\% | 100.8\% | 4.9\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)pyrene | 0.0 | 25.0 | 24.1 | 26.2 | 96.4\% | 104.8\% | 8.3\% | 70.0\% | 130.0\% | 25.0\% |
| Dibenzo(a, h)anthracen | 0.0 | 25.0 | 22.4 | 23.9 | 89.6\% | 95.6\% | 6.5\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo $(\mathrm{g}, \mathrm{h}, \mathrm{l})$ perylene | 0.0 | 25.0 | 21.4 | 23.0 | 85.6\% | 92.0\% | 7.2\% | 70.0\% | 130.0\% | 25.0\% |
| Indeno( $1,2,3-6, \mathrm{~d}$ )pyren | 0.0 | 25.0 | 22.7 | 25.8 | 90.8\% | 103.2\% | 12.8\% | 70.0\% | 130.0\% | 25.0\% |



FL-PRO
SPIKE RECOVERY REPORT

| TNALYSIS DATE: 4/14/11 SAMPLE ID \#: MW-3-20118 |  |  |  |  |  |  |  |  | MATRIX : QC BATCH ID: UPPER LIMIT RECOVERY | $\begin{aligned} & \text { Liquid } \\ & 041411 \mathrm{~A} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | MS \% <br> RECOVERY | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY |  | MAXIMUM RPD |
| Total Petroum Hydrocarons | 0.0 | 3400 | 3166 | 2779 | 93.1\% | 81.7\% | 13.0\% | 41\% | 101\% | 20.0\% |

## ANALYSIS DATE: $4 / 14 / 11$

 SAMPLE ID \#: LCS| MATRIX: | Liquid |
| :---: | :---: |
| QC BATCH ID: | 041411 A |

LCS COMPOUND

Total Petroleum Hydrocarbons

| LCS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SAMPLE AMOUNT | AMOUNT <br> SPIKED | AMOUNT RECOVERED | LCS \% RECOVERY | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| 0.0 | 1700 | 1464 | 86.1\% | 55.0\% | 118.0\% |

CHAIN-OF-CUSTODY RECORD
Page $\qquad$ of $\alpha$


9645 E. Colonial Dr. Suite 114
Orlando, Florida 32817
CHAIN-OF-CUSTODY RECORD $\qquad$
(407) 382-5742 • Fax (407) 382-7195


## Technical Report for

## Alpha Analytics

GRU Phase 2 ESA
110059-0100
Accutest Job Number: F81550

Sampling Date: 04/13/11

Report to:
Alpha Analytics
jbowers@alphaanalyticsorlando.com
ATTN: John Bowers

Total number of pages in report: 51


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.


Client Service contact: Jean Dent-Smith 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366). LA (03051), KS (E-10327). SC, AK This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.
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## Sample Summary

Alpha Analytics
GRU Phase 2 ESA
Job No: F81550
Project No: 110059-0100

| Sample <br> Number | Collected <br> Date | Time By |  | Matrix <br> Received <br> Code Type | Sample ID |
| :--- | :--- | :--- | :--- | :--- | :--- |

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

## Sample Summary

(continued)

| Alpha Analytics |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| GRU Phase 2 ESA <br> Project No: 110059-0100 |  |  |  |  |  |  |  |
| Sample Number | Collected Date | Time By | Received | Mat | ix Type | Client <br> Sample ID |  |
| F81550-14 | 04/13/11 | $15: 55 \mathrm{RJ}$ | 04/15/11 | SO | Soil | SB-16@6" |  |
| F81550-15 | 04/13/11 | 16:10 RJ | 04/15/11 | SO | Soil | SB-16@6 |  |
| F81550-16 | 04/13/11 | $16: 25 \mathrm{RJ}$ | 04/15/11 | SO | Soil | SB-17@ $6^{\prime}$ |  |
| F81550-17 | 04/13/11 | 16:50 RJ | 04/15/11 | SO | Soil | SB-17@4' |  |
| F81550-18 | 04/13/11 | 17:00 RJ | 04/15/11 | AQ | Ground Water | SB-17 |  |

[^41]Sample Results

Report of Analysis

| Client Sample ID: | SB-1 @ 8 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-1 | Date Sampled: $04 / 13 / 11$ <br> Matrix: |
| SO - Soil | Date Received: 04/15/11 <br> Percent Solids: 87.4 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.271 | 0.41 | 0.082 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Barium | 5.0 I | 8.2 | 0.41 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.041 U | 0.16 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW8463050B ${ }^{3}$ |
| Chromium | 5.3 | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 9.1 | 0.82 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.021 I | 0.084 | 0.0084 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW84674718 ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.16 U | 0.82 | 0.16 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.041 U | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{MDL}=$ Method Detection Limit

[^42]| Client Sample ID: | SB-2@ $8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-2 | Date Sampled: 04/13/11 <br> Matrix: |
| SO-Soil | Date Received: 04/15/11 <br> Percent Solids: 85.1 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.69 | 0.51 | 0.10 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 30500 ${ }^{3}$ |
| Barium | 39.0 | 10 | 0.51 | mg/kg | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.051 U | 0.20 | 0.051 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 4.2 | 0.51 | 0.051 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Lead | 7.3 | 1.0 | 0.051 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.068 I | 0.092 | 0.0092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.38 I | 1.0 | 0.20 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.051 U | 0.51 | 0.051 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 ${ }^{\text {l }}$ | SW84630508 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410

| Client Sample ID: | SB-3 $@ 8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-3 | Date Sampled: $04 / 13 / 11$ |
| Matrix: | SO-Soil | Date Received: $04 / 15 / 11$ <br>  <br> Project: |
|  | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.67 | 0.41 | 0.083 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Barium | 32.4 | 8.3 | 0.41 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.041 U | 0.17 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {d }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 5.5 | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 C ${ }^{\text {a }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 9.3 | 0.83 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0090 U | 0.090 | 0.0090 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.17 U | 0.83 | 0.17 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 C | SW846 3050B ${ }^{3}$ |
| Silver | 0.041 U | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 C ${ }^{\text {a }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$U=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-4 $a, 6$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-4 |  |
| Matrix: | SO-Soil | Date Sampled: $04 / 13 / 11$ <br> Date Received: $04 / 15 / 11$ <br> Percent Solids: 84.7 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.080 U | 0.40 | 0.080 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C | SW84630508 ${ }^{3}$ |
| Barium | 4.21 | 8.0 | 0.40 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010 C ${ }^{\text {L }}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.040 U | 0.16 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 0.81 | 0.40 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010 ${ }^{\text {- }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 1.5 | 0.80 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0095 U | 0.095 | 0.0095 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.16 U | 0.80 | 0.16 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.040 U | 0.40 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

9041
$\triangle C O U T E=T$ Fersta inabutremisa

Client Sample ID: SB-4
Lab Sample ID: F81550-5

| Matrix: | AQ - Ground Water |
| :--- | :--- |
| Project: | GRU Phase 2 ESA |

Date Sampled: 04/13/11
Date Received: 04/15/11
Percent Solids: n/a

## Total Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.0 U | 10 | 2.0 | ug 1 | 1 | 04/18/11 | $04 / 1911 \mathrm{RS}$ | SW8466010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Barium | 62.81 | 200 | 5.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3010A ${ }^{4}$ |
| Cadmium | 1.0 U | 5.0 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C | SW846 3010A ${ }^{4}$ |
| Chromium | 11.3 | 10 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{\text {1 }}$ | SW846 3010A ${ }^{4}$ |
| Lead | 12.8 | 5.0 | 1.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Mercury | 0.085 I | 1.0 | 0.050 | ug/1 | 1 | 04/19/11 | 04/19/11 LM | SW846 7470A ${ }^{2}$ | SW846 7470A ${ }^{5}$ |
| Selenium | 2.0 U | 10 | 2.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Silver | 1.0 U | 10 | 1.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3010A ${ }^{4}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8878
(3) Instrument QC Batch: MA8880
(4) Prep QC Batch: MP20395
(5) Prep QC Batch: MP20398

| Client Sample ID: | SB-5@8 |
| :---: | :---: |
| Lab Sample ID: | F81550-6 |
| Matrix: | SO-Soll |
| Project: | GRU Phase 2 ESA |

Date Sampled: 04/13/11
Date Received: 04/15/11
Percent Solids: 77.0

Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.49 | 0.46 | 0.093 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Barium | 22.3 | 9.3 | 0.46 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.14 I | 0.19 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 4.1 | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 26.4 | 0.93 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0771 | 0.095 | 0.0095 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.19 U | 0.93 | 0.19 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 3050b ${ }^{3}$ |
| Silver | 0.046 U | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-6@8 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-7 | Date Sampled: 04/13/11 |
| Matrix: | SO-Soil | Date Received: $04 / 15 / 11$ <br> Percent Solids: 71.4 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.95 | 0.56 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Barium | 31.1 | 11 | 0.56 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {I }}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.056 U | 0.22 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {a }}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 3.8 | 0.56 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {I }}$ | SW846 30508 ${ }^{3}$ |
| Lead | 12.0 | 1.1 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {- }}$ | SW846 30508 ${ }^{3}$ |
| Mercury | 0.13 | 0.11 | 0.011 | mg/kg | 1 | 04/20/11 | 04/20/11 | LM | SW84674718 ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.99 I | 1.1 | 0.22 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.056 U | 0.56 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {a }}$ | SW846 30508 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$


## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.55 | 0.53 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 30508 ${ }^{3}$ |
| Barium | 27.8 | 11 | 0.53 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.070 I | 0.21 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 4.4 | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 C ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Lead | 28.4 | 1.1 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.21 | 0.11 | 0.011 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.311 | 1.1 | 0.21 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 30503 ${ }^{3}$ |
| Silver | 0.053 U | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466610C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410

| Client Sample ID: | SB-7 |
| :--- | :--- |
| Lab Sample ID: | F81550-9 |
| Matrix: | AQ-Ground Water |
| Project: | GRU Phase 2 ESA |

Date Sampled: 04/13/11
Date Received: 04/15/11
Percent Solids: n/a

Total Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.0 U | 10 | 2.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Barium | 17.4 I | 200 | 5.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 3010A ${ }^{4}$ |
| Cadmium | 1.0 U | 5.0 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3010A ${ }^{4}$ |
| Chromium | 4.3 I | 10 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{4}$ |
| Lead | 1.0 I | 5.0 | 1.0 | ug/ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Mercury | 0.050 U | 1.0 | 0.050 | ug/ | 1 | 04/19/11 | 04/19/11 LM | SW846 7470A ${ }^{2}$ | SW846 7470A ${ }^{5}$ |
| Selenium | 3.41 | 10 | 2.0 | ug/l | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW846 3010. ${ }^{4}$ |
| Silver | 1.0 U | 10 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {d }}$ | SW846 3010A ${ }^{4}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8878
(3) Instrument QC Batch: MA8880
(4) Prep QC Batch: MP20395
(5) Prep QC Batch: MP20398
$P Q L=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

Client Sample ID: SB-8@ $8^{\circ}$

| Lab Sample ID: | F81550-10 | Date Sampled: 04/13/11 |
| :--- | :--- | :--- |
| Matrix: | SO - Soil | Date Received: $04 / 15 / 11$ <br>  |

Project: GRU Phase 2 ESA

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |
| Arsenic | 0.11 U | 0.54 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | $04 / 18 / 11$ | $04 / 19 / 11$ | RS | SW 8466010 C |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-14 @ 3: |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-11 | Date Sampled: $04 / 13 / 11$ <br> Matrix: |
| SO - Soil | Date Received: $04 / 15 / 11$ <br> Percent Solids: 91.0 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.092 U | 0.46 | 0.092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C 1 | SW846 3050B ${ }^{3}$ |
| Barium | 1.4 I | 9.2 | 0.46 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 30500 ${ }^{3}$ |
| Cadmium | 0.046 U | 0.18 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 0.49 | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {a }}$ | SW846 30508 ${ }^{3}$ |
| Lead | 0.49 I | 0.92 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0090 U | 0.090 | 0.0090 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.18 U | 0.92 | 0.18 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.046 U | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-13 @ $5^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-12 | Date Sampled: $04 / 13 / 11$ <br> Matrix: |
|  | SO-Soil | Date Received: $04 / 15 / 11$ <br> Project: |
|  | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.9 | 0.42 | 0.084 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Barium | 6.91 | 8.4 | 0.42 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050日 ${ }^{3}$ |
| Cadmium | 0.042 U | 0.17 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010 ${ }^{1}$ | SW846 30500 ${ }^{3}$ |
| Chromium | 8.9 | 0.42 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Lead | 7.0 | 0.84 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0093 U | 0.093 | 0.0093 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW846 74718 ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.53 I | 0.84 | 0.17 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C | SW846 3050B ${ }^{3}$ |
| Silver | 0.042 U | 0.42 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {I }}$ | SW846 30508 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410

| Client Sample ID: | SB-15 06 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-13 | Date Sampled: 04/13/11 |
| Matrix: | SO-Soil | Date Received: $04 / 15 / 11$ <br> Percent Solids: 80.9 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.161 | 0.46 | 0.092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 $3050 \mathrm{~B}^{3}$ |
| Barium | 4.4 I | 9.2 | 0.46 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.046 U | 0.18 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C | SW846 3050B ${ }^{3}$ |
| Chromium | 2.3 | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C 1 | SW846 30500 ${ }^{3}$ |
| Lead | 3.0 | 0.92 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.024 I | 0.10 | 0.010 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW84674718 ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.18 U | 0.92 | 0.18 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.046 U | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 30500 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-16@6" |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-14 | Date Sampled: 04/13/11 <br> Matrix: |
| SO-Soil | Date Received: 04/15/11 <br> Percent Solids: 84.7 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.61 | 0.48 | 0.096 | mg/kg | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 $3050 \mathrm{~B}^{3}$ |
| Barium | 10.5 | 9.6 | 0.48 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.048 U | 0.19 | 0.048 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 3.0 | 0.48 | 0.048 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 4.9 | 0.96 | 0.048 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.031 I | 0.092 | 0.0092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW8467471B ${ }^{2}$ | SW846 7471B ${ }^{4}$ |
| Selenium | 0.19 U | 0.96 | 0.19 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.048 U | 0.48 | 0.048 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 305003 ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410

| Date Sampled: | $04 / 13 / 11$ |
| :--- | :--- |
| Date Received: | $04 / 15 / 11$ |
| Percent Solids: | 73.8 |

Client Sample ID: SB-16@6
Lab Sample ID: F81550-15
Date Received: 04/15/11
Matrix: $\quad \mathrm{SO}$ - Soil
Date Received: 04/15/11
Project: GRU Phase 2 ESA

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.58 | 0.53 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Barium | 25.4 | 11 | 0.53 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.053 U | 0.21 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 3.9 | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Lead | 15.7 | 1.1 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.12 | 0.11 | 0.011 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW84674718 ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.21 U | 1.1 | 0.21 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {- }}$ | SW846 30508 ${ }^{3}$ |
| Silver | 0.053 U | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {I }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-17 @ $6^{\prime \prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-16 | Date Sampled: 04/13/11 |
| Matrix: | SO-Soil | Date Received: $04 / 15 / 11$ <br> Percent Solids: 94.0 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.79 | 0.40 | 0.079 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{4}$ |
| Barium | 23.6 | 7.9 | 0.40 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {I }}$ | SW846 3050B ${ }^{4}$ |
| Cadmium | 0.131 | 0.16 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 30508 ${ }^{4}$ |
| Chromium ${ }^{\text {a }}$ | 5.9 | 1.6 | 0.16 | mg/kg | 4 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Lead ${ }^{\text {a }}$ | 29.1 | 3.2 | 0.16 | $\mathrm{mg} / \mathrm{kg}$ | 4 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Mercury | 0.11 | 0.084 | 0.0084 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{3}$ | SW8467471B ${ }^{5}$ |
| Selenium ${ }^{\text {a }}$ | 0.64 U | 3.2 | 0.64 | $\mathrm{mg} / \mathrm{kg}$ | 4 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Silver | 0.040 U | 0.40 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{4}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8880
(3) Instrument QC Batch: MA8883
(4) Prep QC Batch: MP20392
(5) Prep QC Batch: MP20410
(a) Elevated reporting limit(s) due to matrix interference.

| Client Sample ID: | SB-17 @ 4 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-17 | Date Sampled: $04 / 13 / 11$ <br> Matrix: |
| SO-Soil | Date Received: $04 / 15 / 11$ <br> Percent Solids: 93.1 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.73 | 0.50 | 0.099 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {d }}$ | SW846 30500 ${ }^{3}$ |
| Barium | 11.4 | 9.9 | 0.50 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 C | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.050 U | 0.20 | 0.050 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 5.7 | 0.50 | 0.050 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 3.5 | 0.99 | 0.050 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 60100 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.0090 U | 0.090 | 0.0090 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.20 U | 0.99 | 0.20 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {a }}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.050 U | 0.50 | 0.050 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/18/11 | 04/19/11 | RS | SW846 6010 ${ }^{\text {a }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20392
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-17 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81550-18 | Date Sampled: 04/13/11 <br> Matrix: |
| AQ-Ground Water | Date Received: 04/15/11 <br> Percent Solids: n/a |  |
| Project: | GRU Phase 2 ESA |  |

Total Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.0 U | 10 | 2.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Barium | 19.41 | 200 | 5.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{4}$ |
| Cadmium | 1.0 U | 5.0 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3010A ${ }^{4}$ |
| Chromium | 43.2 | 10 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{\text {d }}$ | SW846 3010A ${ }^{4}$ |
| Lead | 5.2 | 5.0 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW8466010C ${ }^{3}$ | SW8 $463010 A^{4}$ |
| Mercury | 0.33 I | 1.0 | 0.050 | ug/1 | 1 | 04/19/11 | 04/19/11 LM | SW846 7470A ${ }^{2}$ | SW8467470A ${ }^{5}$ |
| Selenium | 2.0 U | 10 | 2.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW846 6010 ${ }^{3}$ | SW846 3010A ${ }^{4}$ |
| Silver | 1.0 U | 10 | 1.0 | ug/1 | 1 | 04/18/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3010A ${ }^{4}$ |

(1) Instrument QC Batch: MA8877
(2) Instrument QC Batch: MA8878
(3) Instrument QC Batch: MA8880
(4) Prep QC Batch: MP20395
(5) Prep QC Batch: MP20398

PQL = Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

## Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody


F81550: Chain of Custody
Page 1 of 4

```
Nob Namber: F91550 C1imat projuct: 110059-0100
Accomet mlpma Alphe dielytios
```



```
Raport to: HC Date: 22-ApR-11 Delfv: conce Seatecodet is
5umgla mancer climat =0
##5350-1 se-1**
FA1550-2 SB-2.*
F41550-3 5%-3 * %
FB15504 8#-4 6.
7415so.5 EB-4
781550-6 8b-5 - 8.
p01550-7 SB-6 * 0.
P81550-% SE.7. #
F01550-9 SB-7
##1530-10 EE-E|E*
Fen550.11 SE-14e 3'
T81550-17 SE-13 - 5.
MA1550-13 sB-15 6.
F01550-14 58-16* 6.
*1550-15 SB-16* 6'
**1550-16 5*-17 * 6.
F81550-17 S8-17 * *
F41550-10 Ss-17
```

Packege AC hre
package so mix



F81550: Chain of Custody
Page 3 of 4

## ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION



COOLER INFORMATION
CUSTODY SEAL NOT PRESENT OR NOT INTACT
CHAIN OF CUSTODY NOT RECEIVED (OC)
ANAL XIS REQUESTED IS UNCLEAR OR MISSING
SAMPLE DATES OR TIMES UNCLEAR OR MISSING
TEMPERATURE CRITERIA NOT MET
WET ICE PRESENT
TRIP BLANK INFORMATION
TRIP BLANK PROVIDED
8 Trip blank not provided
Trip blank not on Cod
TRIP BLANK INTACT
TRIP BLANK NOT INTACT
RECEIVED WATER TRIP BLANK
RECEIVED SOIL TRIP BLANK
MISC. INFORMATION
NUMBER OF ENCORES? 25-GRAM $X$ NUMBER OF 5035 FIELD KITS?
NUMBER OF LAB FILTERED METALS ?


## TEMPERATURE INFORMATION



SUMMARY OF COMMENTS $\qquad$

- $\qquad$
$\qquad$

TECHNICIAN SIGNATURE/DATE NF 12/10

receipt confirmation 122910.xds

## Southeast

## Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

 $10, ~ 581550-11,591550-12,781550-13,881550-14,581550-15$, E81550-16, $581550-17$

Resubre Mru are showm as zero for calculatuon purposes
(*) Outcide of QC limhte
(anr) Analyte not requested

## MATRIX SPIKE AND DUPLHCARE RESULTS SURMRY


(a) Elevated reporting limit(o) due to matrix interference.
(b) Spike recovery indicates possible matrix interference andor sample nonhomogeneity.

## MATRIX SPTRE AND DURTCATE RESULS SUMMARY



10, 581550-11, F81550-12, F81550-33, F81550-14, 581550-15, F81550-15, F81550-17
Resuhts TD, are shomn as zero for calculation purposes
(*) Outside of Qe limits
(N) Matrix Splke Rec. Outside of Co limits
(Anc) Analyte not requested
(a) Sptie recovery inchcates posshbie matnix interference andion Bampie nonhomogenelty.
(b) blevated reportirg Limit (s) due wo matrix interference.
(c) High RPD due to possible sample nonhomogenetty.


SERTEL DHUMTON RESUUTS SUMMRE

 10, E81550-11, Z81550-12, P81550-13, E31550-14, F81550-15, F81550-16, 501550-17

Results < Mob are shomn as zero for calculation purposes
(*) Ontside of QC Mmits
(anr) Analyte not requested
(a) Serial dinution incioates possible matrix meterference.
(b) peroent diference acceptabje due to low intual sample concentration (a 50 (imes mol).

> post orcestate, serke sumary

```
                                    Login Number: Fel550
Account: ArPMA - Alpha Amalytios
Project: gru ghase z EsA
```





Alumirum
Antimony

| Axseric | 9.8 | 10 | 137.5 | 134.848 | 204.3 | 0.2 | 5 | 100 | 69.5* (a) | $80-120$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barium | 9.8 | 10 | 1824 | 1787.52 | 2998 | 0.2 | 12.5 | 250 | 84.2 | 80-120 |
| Berymitum |  |  |  |  |  |  |  |  |  |  |
| Cacmium | 9.8 | 10 | 10.2 | 3.996 | 59.7 | 0.2 | 2.5 | 50 | 99.4 | 80-120 |
| Cancium |  |  |  |  |  |  |  |  |  |  |
| Chrombum | 9.8 | 10 | 279.3 | 273.518 | 313.8 | 0.2 | 2.5 | 50 | 80.6 | 90-120 |
| Cobalt |  |  |  |  |  |  |  |  |  |  |

Inon

| Leed | 9.8 | 10 | 350.9 | 343.882 | 392.5 | 0.2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| , | 9.8 | 10 | -50.9 | 34.8882 | 392.5 | 0.2 | 2.3 | 50 | 97.2 | 82-120 |

Magnesium
Manganese

Molybdenum
Nickel

Potassium

| Sevenium | 3.8 | 10 | 0 | 0 | 121.6 | 0.2 | 5 | 100 | 121.6* ${ }^{\text {a }}$ | 80-120 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sulver | 9.8 | 10 | 0 | 0 | 35.2 | 0.2 | 2.5 | 50 | 70.4* (a) | $80-12$ |

Sodium
Strontium

Thelisum
$\operatorname{Tin}$

Theandut
Vanadiun
zinc
 $10, F 81550-11$, E81550-12, $581550-13, \operatorname{F81550-14,~581550-15,~} 881550-16, ~ 681550-17$

Results < ToL awe shom as zero for calculation purposes
(*) Outside of oc Ilmits
(**) Cons sample result $=$ Raw * \{ample volume / final volumet
(anr) Analyte mot requested
(a) Sphke recovery indicates matrix interference andow outside controh dimits aue to high level in sample relative to spike amount.


Assoclated samples Me20395: $81550-5$, F81550-9, F81550-18
Resuyts < Hom are shown as zero for calounathon purposes
(*) OUtsicie of QC immes
(ant) Aralyte not requested

## MATRIX SPTRE RNO DURIMCAME RESULTS SUMMRY

> Login Wumber: E81550
> Accomr: ALequ- Alpha Amalytics
> Qroject: GRU Phase 2 ESA


Aluminum
Antimony

| Arsenye | 0.0 | 0.0 | NC | 0-20 | 0.0 | 1900 | 2000 | 35.0 | 80-120 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bartum | 62.8 | 65.5 | 4.2 | $0-20$ | 62.8 | 2090 | 2000 | 101. 4 | 80-120 |
| Beryturum |  |  |  |  |  |  |  |  |  |
| Cacmium | 0.0 | 0.0 | NC | $0-20$ | 0.0 | 48.7 | 50 | 97.4 | $80-120$ |
| Calcium |  |  |  |  |  |  |  |  |  |
| Chromium | 13.3 | 11.8 | 4.3 | 0-20 | 1.13 | 209 | 200 | 98.9 | 80-120 |

Copper

| Lron | ant |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| mead | 12.8 | 12.7 | 0.8 | $0-20$ | 12.8 | 475 | 500 | 92.4 |

Magnesinm
Manganese anc

Molyoderum

Nicken
Potasskum

| Selenium | 0.0 | 0.0 | NC | $0-20$ | 0.0 | 1930 | 2000 | 96.5 | $00-120$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Siner | 0.0 | 0.0 | nC | $0-20$ | 0.0 | 46.8 | 50 | 93.6 | $80-120$ |

Sodinm
strontium

Thativem

In

Titanium

Vanadium
Zinc

Aspochated semples ma20395: ES1550-5, $281550-9,781550-18$

Results < DD are showr as zeco for caloulation purposes
(*) Outside of QC Mimits
(v) Matrix Spike pec. outside of oc limits
(anr) Andiyte mot requested

## WATEIX SPTEE AND DUPLTCATE RESULTS SUMMBR

|  |  |  |  |  | mber <br> - B <br> RU | $\begin{aligned} & 550 \\ & \text { Eyed } \\ & 2 B 6 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { QC Batch MD: MpqQ39s } \\ & \text { Marrim Type: Aqueous } \end{aligned}$ |  |  |  |  |  |  |
| Prep Dete: |  |  |  |  | 04/18/12 |  |
| Metal | $\begin{aligned} & \text { T } 85 \\ & \text { orig } \end{aligned}$ | MSD | $\begin{aligned} & \text { spik } \\ & \text { Marew } \end{aligned}$ | $\% \mathrm{Rec}$ | $\begin{aligned} & \mathrm{MSD} \\ & \text { RPD } \end{aligned}$ | $\begin{aligned} & Q \infty \\ & \text { Lim } \end{aligned}$ |
| Abumimem |  |  |  |  |  |  |
| Antimony |  |  |  |  |  |  |
| Arseric | 0.0 | 1860 | 2000 | 93.0 | 2.1 | 20 |
| gartum | 62.8 | 2020 | 2000 | 97.9 | 3.4 | 20 |
| Beryllinm |  |  |  |  |  |  |
| Cabmium | 0.0 | 47.3 | 50 | 94.6 | 2.9 | 20 |
| Caicium |  |  |  |  |  |  |
| Chromium | 11.3 | 202 | 200 | 35.4 | 3.4 | 20 |
| Cobalt |  |  |  |  |  |  |
| copper |  |  |  |  |  |  |
| rron | ant |  |  |  |  |  |
| Lexa | 12.8 | 466 | 500 | 90.6 | 1.9 | 20 |
| Magnesium |  |  |  |  |  |  |
| Manganese | antr |  |  |  |  |  |
| Molybdenum |  |  |  |  |  |  |
| Nickel |  |  |  |  |  |  |
| Porassium |  |  |  |  |  |  |
| Selenimm | 0.0 | 1880 | 2000 | 94.0 | 2.6 | 20 |
| Stiver | 0.0 | 45.4 | 50 | 90.8 | 3.9 | 20 |
| sodium |  |  |  |  |  |  |
| Strontiam |  |  |  |  |  |  |
| Thallium |  |  |  |  |  |  |
| Tin |  |  |  |  |  |  |
| Titanium |  |  |  |  |  |  |
| Vanachum |  |  |  |  |  |  |
| 2 noc |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| pesults < WI ate shown as zero for caloulation purposes (*) Owtside of gC inmite <br> (M) Matrix Spike kec. Outside of oc limits <br> (anc) Analyte not requested |  |  |  |  |  |  |

Herhous: Swate botom
Unas: na/
Unats: igh/
-

## ${ }_{\text {impt }}^{c}$

$t$


Au*

Antimony

| Brsente | 2050 | 2000 | 102.5 | $80-120$ |
| :--- | :--- | :--- | :--- | :--- |
| Barlum | 2070 | 2000 | 103.5 | $80-120$ |
| Beryllum |  |  |  |  |
| Cadmium | 50.4 | 50 | 100.8 | $80-120$ |
| Calcium |  |  |  |  |
| Chromium | 204 | 200 | 102.0 | $80-120$ |

Cobzlt
Copper

| Iron | $\operatorname{anx}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Lead | 483 | 500 | 96.6 | $80-120$ |

Magnesium
*anganase
$\operatorname{an} 2$
Molybdenum
Nuckel

Potass.um
Selenium $2050 \quad 2000 \quad 102.5 \quad 80-120$

| Siver | 48.8 | 50 | 97.6 | $80-120$ |
| :--- | :--- | :--- | :--- | :--- |

Sodium
strontium

Thad 11 um
7 in

Thtanimm
Vamadium
zinc

Associzted samyabs Ma20395: E91550-5, E81550-9, E85550-18

Resulte < Dhe are shomn as zero fox caloulation purooees
(*) Outsiobe of QC akmeb
(anc) Analyte not requested

# SEREAL DHUTHM RESUKTS SUMMARY 

Foon Number: EP1550
acounc: Amprs - Mpha Anevytics profect: GRU ehase 2 esk


Alumantam
Antimony

| Arsenic | 0.00 | 0.00 | Ne | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |
| Barbum | 62.8 | 69.4 | 10.5 | (a) $0-10$ |

Beryllinm
Cadmbum
0.00
0.00 NC
$0-10$
calctum
Chromium 11.3 11.4 0.9 0-10

Cobale

Copere
Tron anr

| Lead | 12.3 | 22.1 | 5.5 | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |

Magnesfum

Manganese ans
Molybdenum

Mcice.
porasstum

| Selenium | 0.00 | 0.00 | NC | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |
| Silver | 0.00 | 0.00 | NC | $0-10$ |

Sodium
strontium

Thalinum

In

Tiranium

Vanactum
$\operatorname{lin} \alpha$

A3sociates 3amples My20395: ma1550-5. F81550-9, 581550-18

Results < DDw are shom as zero for caloulation purposes
*) Outside of QC Umits
(ant) Analyte not reguested
(a) percent difference acceptable due to low intuby sample concentration (a so times Tht

POST DIGESTATE SPTKE SUMMRY
ocin Nmber: P81550
Account: Ampha - Alpha malytics Project: GRy Phase 2 Gsk


> BMAK RESUKTS SUMREX
> Part 2 - Method Blanke
> begin Mumber: Fe1550
> Accoun: EEEHA - Apha Anclytics
> Project: QRU Phase 2 ESA


## 

togin wamber: r81550
Awcount: Alphat - Apha Mnalytics project: GTU bhase 2 ESG


Associated Famples MP20348: E81550-5, F81550-9, P81550-18
Results < Tole are shown as zero fow calcubation putposes
(*) Outside of QC Limite
(v) Matrix gpike Rec. outstie of QC Limites
(any) Analyte mot requested

## MARPX SPTKE ANO DUPLACATE RESULTS SUMMARE

> Gogin Wumber: 88550
> Account: Apha - Abra Analymics
> Project: GpU phaas 2 ESA


Assochated semples mp20398: w81550-5, w81550-9, p81550-18

Results < mb are shomn as wero for calubation purposes
(*) Ou-side or QC Limits
(N) Ma-rix Splke Rec. outside of QC Iumts
(anc) Analyte not requested

> Login Number: E81550
> Accourc: AtyhA - Alpha Analywice
> Project: GRU Phase 2 ESA


## sERTAD DTUTTON RESULTE SUMMRE

Login Number: 81550
Account: Arpha - Alpha Abelytios Project: GRU Phase 2 gSA


> BHANE RESULTS SUMWARY Part 2 - Method Blanks
> Login Mmber: 881550
> Account: Arefa - Apha Analytics Project: GRU Phase 2 EsA


MARMX SPRKE AMD DUPLECAEE RESURTS SUMMRY

> Togin Number: FB1550
> Accound : ALPrA - Apha Analytios project: GRy Phase 2 esh


 10, $281550-11, \operatorname{F1550-12,~E81550-13,~581550-14,~281550-15,~581550-15,~581550-17~}$

Results < TDt are shown as wero for caloudation purposes
(*) Outsice of ge himites
(w) Matrix Spike Rec. Outside of pe In its
(any) Analyte not requested

## SQTKE Bugnk AND LAB CORTROL SAMELE SUMMRRY

> woin Number: 781550
> Accent: KMEH - Apha mbaytics project: GRU Phase 2 rss


## SERMA DLUUTION EESULTS SUMMARY

## fogin Number: Eg1550

Account: ALPha - Nipha Analytics project: Grt phase 2 psa

| Qc gatch ID: Mezotho | Methods: SM846 747Es |
| :---: | :---: |
| Matrix rype: sompe | Mnits: 1 g/i |

Prep Date: 04/20/11

|  | Eeas50-1 |  | Q |
| :---: | :---: | :---: | :---: |
| Metar | Otiginar Sot 1:5 | 80\%mer | yumits |

Assochated samples Me20410: P81550-1, F81550-2, E81550-3, E81550-4, 1881550-6, F81550-7, 581550-8, 58155010, E81550-31, $581550-12, ~ E 81550-13, ~ E 81550-14, ~ ש 81550-15, ~ 281550-16, ~ 581550-17$

Results $\quad$ IDL are shom as zero for calculation purposes
(*) Outside of oc limits
(anr) analyte not requested
(a) Percent difference acceptable due to low inithal sample concentration (< so cimes Int).


## Alpha Analytics, Inc.

An Environmental Laboratory
9645 E. Colonial Dr., Suite 114
Orlando, Florida 32817

## ALPHA ANALYTICS, INC. <br> REPORT OF ANALYTICAL RESULTS

TO: Perry Hubbard
ECT, Inc.
3701 NW 98th St.
Gainesville, FL 32606
RE: GRU Phase II ESA (110059-0100)
This report contains results of analyses of the samples received under your work I.D. referenced above. The results relate only to these samples and the report may not be reproduced except in full without the written permission of the laboratory. Initial QA/QC information is listed below. More extensive information may be found in the Case Narrative.

NUMBER OF SAMPLES: (16) Soils (2) Groundwaters
DATE OF SAMPLING: 4/14/11
DATE OF RECEIPT IN LAB: 4/15/11

Our laboratory is NELAC certified by the Florida Department of Health, and the results meet all requirements of the NELAC Standards unless clearly noted in the report. Please contact me if you have any questions. We very much appreciate your business. NELAC Certification \#E83806.


John Bowers
Laboratory Director
407-382-5742
(jbowers@alphaanalyticsorlando.com)

# ALPHA ANALYTICS REPORT OF QUALITY ASSURANCE/QUALITY CONTROL 

CASE NARRATIVE

Client: ECT, Inc.
Project Name, \#: GRU Phase II ESA, 110059-0100
Alpha Analytics ID \#: 11-04-031

1. Samples were received into the laboratory at a temperature of 2 degrees $C$.
2. Soil sample results are reported on a dry weight basis, unless noted here.
3. A statement of the uncertainty of the results is available on request.
4. All samples were received with sufficient sample volume, within method specific holding times, and in proper method specific containers unless noted here:
5. Metals analysis and analysis for PCBs were performed by Accutest Laboratories Southeast, NELAC \#E83510, and the results are under separate cover.


Randy J. Wesson<br>Quality Assurance Officer



The qualfier "L" denotes the value reported is above the calibration range. The actual value may be higher than the value given
The qualfier "Y" denotes that the reported value is between the MOL (Method Detection Limit) and the PQL (Practical Quantitation Limit)
The qualifer "U" denotes that the analyte was not present, and the value preceding the "U" is the MDL
Per FDEP recommendation, DI water is used instead of sodium bisulfate in low-level soil vials
$\left.\begin{array}{lcll}\text { Clent 1.D. } & \text { Method Blank } \\ \text { Apha I.D. } & & \\ \text { Date Sampled } & \text { 104031-19 }\end{array}\right)$

The qualfier "L" denotes the value repoted is above the calloration range. The atual value may be higher than the value given
The qualfer "p" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit)
The qualfier "U" denotes that the analyte was not present, and the value preceding the "U" is the MDL
Per FDEP recommendation, DI water is used instead of sodum bisulfate in low-level soil vial:
Went I.D.
Wate Sampled
Date Analyzed
Dilution Factor
Matrix
Units (ppb)
\% Moisture

| SB-22 @ 10' | SB-23 @ 8: |
| :---: | :---: |
| $1104031-5$ | 1104031.6 |
| $4 / 14 / 11$ | $4 / 14 / 11$ |
| $4 / 15 / 11$ | $4 / 15 / 11$ |
| 1 | 1 |
| Sold | $50 / \mathrm{ld}$ |
| $u g / \mathrm{kg}$ | 4 Kg |
| 13.7 | 17.1 |


|  |  | MOL | POL |  | MOL | BOL |  | MDL | PQL |  | MOL | PQL | CAS H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,1-Dichioroethane | 0.50 | 0.5 | 5.8 | 0.50 | 0.5 | 6.0 | 0.54 | 0.5 | 6.1 | 0.5 U |  |  |  |
| 1.1-Dichloroethene | 0.60 | 0.6 | 5.8 | 0.60 | 0.6 | 6.0 | 0.60 | 0.6 | 6.1 | 0.5 U | 0.5 | 5.8 5.8 | $\begin{aligned} & 75-34-3 \\ & 75.35-4 \end{aligned}$ |
| 1,1,1- Trichloroethane | 0.80 | 0.8 | 5.8 | 0.30 | 0.8 | 5.0 | 0.90 | 0.0 | 6.1 | 0.8 U | 0.6 | 5.8 5.8 | $\begin{aligned} & 75-35-4 \\ & 71-55-6 \end{aligned}$ |
| 1,1,1,2-Tetrachloroethane | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.60 | 0.6 | 6.1 | 0.6 U | 0.8 | 5.8 | 71-55-6 $630-20-6$ |
| 1,1,2,2-Tetrachloroethane | 0.60 | 0.6 | 5.8 | 0.60 | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 0.6 | 5.8 5.8 | $630-20-6$ $79-34-5$ |
| 1,1,2-Trichloroethane | 0.70 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.70 | 0.6 0.7 | 5.8 5.8 | $79-34-5$ $79-00-5$ |
| 1,1-Dichloropropene | 0.74 | 0.7 | 5.8 | 0.8 U | 0.8 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.7 U | 0.7 | 5.8 | 563-58-6 |
| 1,2-Dichloroethane | $0.5 U$ | 0.5 | 5.8 | 0.50 | 0.5 | 6.0 | 0.50 | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 107-06-2 |
| 1,2-Dichloropropane | 0.60 | 0.6 | 5.8 | 0.64 | 0.6 | 6.0 | 0.64 | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 78-87-5 |
| 1,2,3-Trichlorobenzene | 0.70 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.74 | 0.7 | 5.8 | 87-61-6 |
| 1,2,4-Trimethybenzene | 0.70 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.70 | 0.7 | 6.2 | 0.7 U | 0.7 | 5.8 | $95-63 \cdot 6$ |
| 1,2-Dichiorobenzene | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 6.0 | 0.90 | 0.9 | 6.1 | 0.8 U | 0.8 | 5.8 5.8 | $95-63-6$ $95-50-1$ |
| 1,3,5-Trmethybenzene | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 6.0 | 0.9 U | 0.9 | 6.1 | 0.8 U | 0.8 | 5.8 | 108-67-8 |
| 1,3-Dichlorobenzene | 0.60 | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 108-73-1 |
| 1,3-Dichloropropane | 0.64 | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.60 | 0.6 | 5.8 | 142-28-9 |
| 1,4-Dichlorobenzene | 0.9 U | 0.9 | 5.8 | 1.0 U | 1.0 | 6.0 | 1.0 U | 1.0 | 6.1 | 0.9 U | 0.9 | 5.8 | $106-46-7$ |
| 2 Chlorotoluene | $0.8 \cup$ | 0.8 | 5.8 | 0.8 U | 0.8 | 6.0 | 0.9 U | 0.9 | 6.1 | 0.8 U | 0.8 | 5.8 | 105-49-8 |
| 2,2-Dichioropropane | 0.54 | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 6.1 | 0.50 | 0.5 | 5.8 | 594-20-7 |
| Benzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 71-43-2 |
| Bromobenzene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 108-86-1 |
| Bromochloromethane | 0.74 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.70 | 0.7 | 5.8 | 74-97-5 |
| Bromodichloromethane | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 75-27-4 |
| Bromoform | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 75-25-2 |
| Bromomethane | 1.2 U | 1.2 | 5.8 | 1.2 U | 1.2 | 6.0 | 1.2 U | 1.2 | 6.1 | 1.2 U | 1.2 | 5.8 | 74-83-9 |
| C-1,2-Dichloroethene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 5.1 | 0.5 U | 0.5 | 5.8 | 74-83-9 $156-59-2$ |
| Carbon tetrachioride | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 56-23-5 |
| Chiorobenzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 108-90-7 |
| Whoroethane | 1.4 U | 1.4 | 5.8 | 1.4 U | 1.4 | 6.0 | 1.5 U | 1.5 | 6.1 | 1.4 U | 1.4 | 5.8 | 75-00-3 |
| Chioromethane | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.7 U | 0.7 | 5.8 | 67-66-3 |
| cis-1,3-Dichloropropene | 0.5 | 1.0 | 5.8 5.8 | 1.14 | 1.1 | 6.0 | 1.1 U | 1.1 | 6.1 | 1.0 U | 1.0 | 5.8 | 74-87-3 |
| Dibromochloromethane | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.5 | 6.0 6.0 | 0.5 U | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 10061-01-5 |
| Dichlorodifluoromethane | 1.3 U | 1.3 | 5.8 | 1.3 U | 1.3 | 6.0 6.0 | 1.3 U | 0.6 1.3 | 6.1 | 0.6 U 1.3 U | 0.6 1.3 | 5.8 5.8 | 124-48-1 |
| Ethybenzene | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 1.3 U | 1.3 | 5.8 5.8 | 75-71-8 $100-41-4$ |
| Isopropylbenzene | $0.6 U$ | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 5.8 | $100-41-4$ $98-82-8$ |
| Methylene chloride | $0.8 \cup$ | 0.8 | 5.8 | 0.8 U | 0.8 | 6.0 | 0.9 U | 0.9 | 6.1 | 0.8 U | 0.8 | 5.8 | 75-09-2 |
| MTBE Naphthalene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 1634-04-4 |
| Naphthalene n -Butybenzene | 0.6 U 0.9 U | 0.6 0.9 | 5.8 5.8 | 0.6 U 1.0 U | 0.6 1.0 | 6.0 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | 91-20-3 |
| n-Propylbenzene | 0.7 U | 0.7 | 5.8 | 1.0.7U | 1.0 0.7 | 6.0 6.0 | 1.0 U 0.7 U | 1.0 0.7 | 6.1 | 0.9 U 0.7 U | 0.9 | 5.8 5.8 | 104-51-8 |
| p-Isopropyltoluene | 0.74 | 0.7 | 5.8 | 0.70 | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.7 U 0.7 U | 0.7 | 5.8 5.8 | $103-65-1$ $99-87-6$ |
| sec-Butybenzene | 0.74 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.7 U | 0.7 | 5.8 | 135-98-8 |
| Styrene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.5 U | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 100-42-5 |
| tert-Butybenzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.6 U | 0.6 | 5.8 | $100-42-5$ $98-06-6$ |
| Tetrachloroethene Toluene | 0.74 | 0.7 | 5.8 | 0.7 U | 0.7 | 6.0 | 0.7 U | 0.7 | 6.1 | 0.74 | 0.7 | 5.8 | 127-18-4 |
| tr-1,2-Dichloroethene | 0.7 U 0.9 U | 0.7 0.9 | 5.8 5.8 | 0.7 U 1.0 U | 0.7 | 6.0 | 0.70 | 0.7 | 6.1 | 0.70 | 0.7 | 5.8 | 108-88-3 |
| t-1,3-Dichloropropene | 0.6 U | 0.6 | 5.8 5.8 | 0.6 U | 1.0 0.6 | 6.0 6.0 | 1.0 U 0.6 U | 1.0 | 6.1 | 0.9 U | 0.9 | 5.8 5.8 | 156-60-5 |
| Trichloroethene | 0.50 | 0.5 | 5.8 | 0.5 U | 0.5 | 6.0 | 0.50 | 0.5 | 6.1 | 0.6 U 0.5 U | 0.6 0.5 | 5.8 5.8 | 10061-02-6 |
| Trichlorofuoromethane | 0.6 U | 0.6 | 5.8 | $0.6 U$ | 0.6 | 6.0 | 0.6 U | 0.6 | 6.1 | 0.5 U | 0.6 | 5.8 | $\begin{aligned} & 79-01-6 \\ & 75-69-4 \end{aligned}$ |
| Vinyl chloride | 0.74 | 0.7 | 5.8 | 0.70 | 0.7 | 6.0 | 0.80 | 0.8 | 6.1 | 0.7 U | 0.6 | 5.8 5.8 | 75-69-4 |
| Total xylenes | 0.5 U | 0.5 | 5.8 | 0.50 | 0.5 | 6.0 | 0.50 | 0.5 | 6.1 | 0.5 U | 0.5 | 5.8 | 1330-20-7 |
| (Sur)Toluene-d8 (\%) | 106 |  |  | 104 |  |  | 108 |  |  |  |  |  | $\frac{\text { ceptable limits }}{70-130 \%}$ |
| (Surr)4-BFB (\%) | 109 |  |  | 86 |  |  | 112 |  |  | $\begin{aligned} & 108 \\ & 108 \end{aligned}$ |  |  | 70-130\% |

[^43]

[^44]| Hent I.D. | SB-12 $10^{\prime}$ |  |  | SB-9 @ 8 |  |  | SB-10 @ $6^{+}$ |  |  | S8-29 © |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -phal.0. | 1104031-14 |  |  | 1104031-15 |  |  | 1104031-16 |  |  | 1104031-1 |  |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |  |
| Date Analyzed | 4/18/11 |  |  | 4/18/11 |  |  | 4/18/11 |  |  | 4/18/11 |  |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 418/14 |  |  | 4,10,11 |  |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  | Solid |  |  |  |
| Units (ppo) | $4 \mathrm{~g} / \mathrm{Kg}$ |  |  | wolkg |  |  | $u \mathrm{~g} / \mathrm{Kg}$ |  |  | $4 \mathrm{~g} / \mathrm{Kg}$ |  |  |  |
| \% Moisture | 13.8 |  |  | 11.8 |  |  |  |  |  | 13.6 |  |  |  |
|  |  | MOL | POL |  | MDL | POL |  | MOL | PQL |  | MDL | BOL | CAS ${ }^{\text {H }}$ |
| 1,1-Dichioroethane | 0.50 | 0.5 | 5.8 | 0.50 | 0.5 | 5.7 | 0.50 | 0.5 | 5.8 | 0.50 | 0.5 | 5.8 | 75-34-3 |
| 1,1- Dichloroethene | 0.60 | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.60 | 0.6 | 5.8 | 0.60 | 0.6 | 5.8 | 75-35-4 |
| 1,1,1- Trichoroethane | 0.8 U | 0.8 | 5.8 | 0.80 | 0.8 | 5.7 | 0.8 U | 0.8 | 5.8 | 0.80 | 0.8 | 5.8 | 71-55-6 |
| 1,1,1,2-Tetrachloroethane | 0.60 | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.64 | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 630-20-6 |
| 1,1,2,2-Tetrachloroethane | 0.60 | 0.6 | 5.8 | 0.60 | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.60 | 0.6 | 5.8 | $72.34-5$ |
| 1,1,2-Trichloroethane | 0.70 | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.70 | 0.7 | 5.8 | 79-00-5 |
| 1,1-Dichloropropene | 0.70 | 0.7 | 5.8 | 0.7 U | 0.7 | 5.7 | 0.70 | 0.7 | 5.8 | 0.70 | 0.7 | 5.8 | $563-58-6$ |
| 1,2-Dichoroethane | 0.50 | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.50 | 0.5 | 5.8 | 0.50 | 0.5 | 5.8 | 107-06-2 |
| 1,2-Dichoropropane | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.64 | 0.6 | 5.8 | 78-87-5 |
| 1,2,3-Trichlorobenzene | 0.74 | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 87-61-6 |
| 1,2,4-Trimethybenzene | 0.70 | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 95-63-6 |
| 1,2-Dichlorobenzene | 0.8 U | 0.8 | 5.8 | 0.80 | 0.8 | 5.7 | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 5.8 | 95-50-1 |
| 1,3,5-Trimethylbenzene | 0.8 U | 0.8 | 5.8 | 0.80 | 0.8 | 5.7 | 0.8 U | 0.8 | 5.8 | 0.80 | 0.8 | 5.8 | 108-67-8 |
| 1,3-Dichlorobenzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 540-73-1 |
| 1,3-Dichloropropane | $0.6 U$ | 0.6 | 5.8 | 0.60 | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 142-28-9 |
| 1,4-Dichlorobenzene | 0.90 | 0.9 | 5.8 | 0.94 | 0.9 | 5.7 | 0.9 U | 0.9 | 5.8 | 0.9 U | 0.9 | 5.8 | 106-46-7 |
| 2-Chlorotoluene | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 5.7 | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 5.8 | 95-49-8 |
| 2,2-Dichloropropane | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.8 | 594-20-7 |
| Benzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 71-43-2 |
| Bromobenzene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.8 | 108-86-1 |
| Bromochloromethane | 0.7 U | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.74 | 0.7 | 5.8 | 74-97-5 |
| Bromodichloromethane Bromoform | 0.5U | 0.5 | 5.8 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.54 | 0.5 | 5.8 | 75-27-4 |
| Bromoform | 0.6 U 1.2 U | 0.6 1.2 | 5.8 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 75-25-2 |
| C-1,2-Dichloroethene | 0.5 U | 0.5 | 5.8 5.8 | 1.1 U 0.5 | 1.1 0.5 | 5.7 5.7 | 1.2 U 0.5 | 1.2 | 5.8 | 1.2 U | 1.2 | 5.8 | 74-83-9 |
| Carbon tetrachloride | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 5.8 | 0.5 U | 0.5 | 5.8 5.8 | 156-59-2 |
| Chlorobenzene | 0.6 U | 0.6 | 5.8 | 0.50 | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 5.8 | 56-23-5 $108-90-7$ |
| 2. Whoroethane | 1.4 U | 1.4 | 5.8 | 1.4 U | 1.4 | 5.7 | 1.3 U | 1.3 | 5.8 | 1.4 U | 1.4 | 5.8 | 75-00-3 |
| - inloroform | 0.74 | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 67-66-3 |
| Chloromethane | 1.00 | 1.0 | 5.8 | 1.0 U | 1.0 | 5.7 | 1.0 U | 1.0 | 5.8 | 1.0 U | 1.0 | 5.8 | 74-87-3 |
| cis-1,3-Dichloropropene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.8 | 10061-01-5 |
| Dibromochloromethane | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.5 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 124-48-1 |
| Dichlorodifluoromethane | 1.30 | 1.3 | 5.8 | 1.24 | 1.2 | 5.7 | $1.3 \cup$ | 1.3 | 5.8 | 1.3 U | 1.3 | 5.8 | 75-71-8 |
| Ethylbenzene | 0.7 U | 0.7 | 5.8 5.8 | 0.7 U | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 100-41-4 |
| Isopropybenzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 98-82-8 |
| Methylene chloride MTBE | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 5.7 | 0.8 U | 0.8 | 5.8 | 0.8 U | 0.8 | 5.8 | 75-09-2 |
| MTBE Naphthalene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 1634-04-4 |
| Naphthalene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 91-20-3 |
| n-Butybenzene | 0.9 U 0.7 U | 0.9 | 5.8 | 0.9 U | 0.9 | 5.7 | 0.9 U | 0.9 | 5.8 | 0.9 U | 0.9 | 5.8 | 104-51-8 |
| n--Isopropyltoluene | 0.70 0.70 | 0.7 0.7 | 5.8 | 0.7 U | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.74 | 0.7 | 5.8 | 103-65-1 |
| sec-Butybenzene | 0.7 U | 0.7 | 5.8 | 0.7 U 0.7 U | 0.7 0.7 | 5.7 5.7 | 0.7 U 0.7 U | 0.7 | 5.8 | 0.74 | 0.7 | 5.8 | 99-87-6 |
| Styrene | 0.5 U | 0.5 | 5.8 | $0.5 \cup$ | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 5.8 | 0.70 | 0.7 | 5.8 5.8 | $135-98-8$ $100-42-5$ |
| tert-Butybenzene | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 5.8 | $100-42-5$ $98-06-6$ |
| Tetrachloroethene | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 127-18-4 |
| Toluene | 0.74 | 0.7 | 5.8 | 0.70 | 0.7 | 5.7 | 0.7 U | 0.7 | 5.8 | 0.7 U | 0.7 | 5.8 | 108-88-3 |
| tr-1,2-Dichloroethene | 0.9 U | 0.9 | 5.8 | 0.94 | 0.9 | 5.7 | 0.9 U | 0.9 | 5.8 | 0.90 | 0.9 | 5.8 | 156-60-5 |
| tr-1,3-Dichloropropene | 0.6 U | 0.6 | 5.8 | 0.50 | 0.6 | 5.7 | 0.6 U | 0.6 | 5.8 | 0.60 | 0.6 | 5.8 | 10061-02-6 |
| Trichloroethene | 0.5 U | 0.5 | 5.8 | 0.5 U | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.50 | 0.5 | 5.8 | 79-01-6 |
| Trichlorofuoromethane | 0.6 U | 0.6 | 5.8 | 0.6 U | 0.6 | 5.7 | 0.50 | 0.6 | 5.8 | 0.6 U | 0.6 | 5.8 | 75-69-4 |
| Vinyl choride | 0.74 | 0.7 | 5.8 | 0.74 | 0.7 | 5.7 | 0.70 | 0.7 | 5.8 | 0.70 | 0.7 | 5.8 | 75-01-4 |
| Total xylenes | 0.50 | 0.5 | 5.8 | 0.50 | 0.5 | 5.7 | 0.5 U | 0.5 | 5.8 | 0.50 | 0.5 | 5.8 | 1330-20-7 |
| (Sur)Toluene-d8 (\%) | 111 |  |  | 112 |  |  | 112 |  |  | 112 |  |  | ceptable Limit |
| (Surt)4-BFB (\%) | 123 |  |  | 119 |  |  | 121 |  |  | 121 |  |  | 70-130\% |

The qualifier "L" denotes that the reported value is above the calibration range. The actual value may be higher than the value given.
The qualifer I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
The qualifier "U" denotes that the analyte was not present, and the value preceding the "U" is the MOL.
Per FDEP recommendation, DI water is used instead of sodum bisulfate in fow-level soll vials

| gllent L.D. <br> lpha I.D. <br> Date Sampled <br> Date Analyzed <br> Ditution Factor <br> Matrix <br> Units (ppb) <br> \% Moisture | Method Blank <br> 1104031-19 <br> NA <br> 4/15/11 <br> 1 <br> Solid <br> $4 g / \mathrm{Kg}$ <br> NA |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | MOL | POL | CAS |
| 1,1-Dichloroethane | 0.40 | 0.4 | 5.0 | 75-34-3 |
| 1,1- Dichloroethene | 0.5 U | 0.5 | 5.0 | 75-35-4 |
| 1,1,1-Trichoroethane | 0.70 | 0.7 | 5.0 | 71-55-6 |
| 1,1,1,2-Tetrachorocthane | 0.50 | 0.5 | 5.0 | 630-20-6 |
| 1,1,2,2-Tetrachoroethane | 0.50 | 0.5 | 5.0 | $79.34-5$ |
| 1,1,2-Ttichloroethane | 0.6 U | 0.6 | 5.0 | $79.00-5$ |
| 1,1-Dichloropropene | 0.6 U | 0.6 | 5.0 | $563-58-6$ |
| 1,2-Dichloroethane | 0.40 | 0.4 | 5.0 | 107-06-2 |
| 1,2- Dichloropropane | 0.5 U | 0.5 | 5.0 | 78.87 .5 |
| 1,2,3-Trichlorobenzene | 0.6 U | 0.6 | 5.0 | $87-61-6$ |
| 1,24 -Trmethybenzene | 0.6 U | 0.6 | 5.0 | $95 \cdot 636$ |
| 1,2-Dichlorobenzene | 0.74 | 0.7 | 5.0 | 95-50-1 |
| 1,3,5-Thmethylbenzene | 0.7 U | 0.7 | 5.0 | 108-67-8 |
| 1,3-Dichlorobenzene | 0.5 U | 0.5 | 5.0 | 540-73-1 |
| 1,3-Dichloropropane | 0.54 | 0.5 | 5.0 | 142-28-9 |
| 1,4 Dichlorobenzene | 0.8 U | 0.8 | 5.0 | $106-46$-7 |
| 2 -Chlorotoluene | 0.7 U | 0.7 | 5.0 | 95-49-8 |
| 2,2-Dichloropropane | 0.40 | 0.4 | 5.0 | 594-20-7 |
| Benzene | 0.50 | 0.5 | 5.0 | 71-43-2 |
| Bromobenzene | 0.4 U | 0.4 | 5.0 | $108.86-1$ |
| Bromochloromethane | 0.6 U | 0.6 | 5.0 | 74.97 .5 |
| Bromodichoromethane | 0.4 U | 0.4 | 5.0 | 75-27-4 |
| Bromoform | $0.5 \cup$ | 0.5 | 5.0 | 75-25-2 |
| Bromomethane | 1.0 U | 1.0 | 5.0 | $74.83-9$ |
| C-1,2-Dichloroethene | 0.4 U | 0.4 | 5.0 | 156-59-2 |
| Carbon tetrachloride | 0.4 U | 0.4 | 5.0 | 56-23-5 |
| Chlorobenzene | 0.5 U | 0.5 | 5.0 | 108-90-7 |
| Waw Mhloroethane | 1.2 U | 1.2 | 5.0 | 75-00-3 |
| hioroform | 0.6 U | 0.6 | 5.0 | 67-66-3 |
| * Chloromethane | 0.9 U | 0.9 | 5.0 | $74-87-3$ |
| cis-1,3-Dichloropropene | 0.4 U | 0.4 | 5.0 | 10061-01-5 |
| Dibromochloromethane | 0.5 U | 0.5 | 5.0 | 124-48-1 |
| Dichlorodifuoromethane | 1.10 | 1.1 | 5.0 | 75-71-8 |
| Ethylbenzene | 0.60 | 0.6 | 5.0 | 100-41-4 |
| Isopropylbenzene | 0.50 | 0.5 | 5.0 | 98-82-8 |
| Methylene chloride | 0.7 U | 0.7 | 5.0 | 75-09-2 |
| MTBE | 0.5 U | 0.5 | 5.0 | 1634-04-4 |
| Naphthalene | 0.50 | 0.5 | 5.0 | 91-20-3 |
| n-Butylbenzene | 0.8 U | 0.8 | 5.0 | 104-51-8 |
| n-Propylbenzene | 0.6 U | 0.6 | 5.0 | $103-65-1$ |
| p-Isopropyltoluene | 0.6 U | 0.6 | 5.0 | 99-87.6 |
| sec-Butybenzene | 0.6 U | 0.6 | 5.0 | 135-98-8 |
| Styrene | 0.4 U | 0.4 | 5.0 | $100-42-5$ |
| tert-Butybenzene | 0.5 U | 0.5 | 5.0 | $98-06-6$ |
| Tetrachloroethene | 0.6 U | 0.6 | 5.0 | $127 \times 18.4$ |
| Toluene | 0.60 | 0.6 | 5.0 | $108-88.3$ |
| tr-1,2-Dichloroethene | 0.8 U | 0.8 | 5.0 | 156-60-5 |
| tr-1,3-Dichoropropene | 0.50 | 0.5 | 5.0 | 10061-02-6 |
| Trichoroethene | 0.40 | 0.4 | 5.0 | 79-01-6 |
| Trichorofuoromethane | 0.50 | 0.5 | 5.0 | $75-69-4$ |
| Vinyl choride | 0.60 | 0.6 | 5.0 | 75-014 4 |
| Total xylenes | 0.40 | 0.4 | 5.0 | $1330-20.7$ |
|  |  |  |  | coptoble limits |
| (Sur) Tolvene-d8 (\%) | 104 |  |  | $70-130 \%$ |
| (Surr)4-BFE (\%) | 108 |  |  | 70.130\% |

The qualfier "L" denotes that the repored value is above the calibration range. The artuat value may be higher than the value given,
The qualifier "i" denotes that the reported value s between the MDL (Method Detection Limit) and the PQL (Practical Quantation Limit)
The qualfier "U" denotes that the analyte was not present, and the value preceding the "U" is the MDL
Per FDEP recommendation, DI water is used instead of sodum bisulfate in low-level sol vials

| Client I.D. | SB-21@ ${ }^{\text {\% }}$ |  |  | S8-20 @ $\mathbf{2}^{\prime}$ |  |  | SB-19 @ 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-1 |  |  | 1104031-2 |  |  | 1104031-3 |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Date Analyzed | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 27.4 | MOL | POL | 13.2 | MOL | $P Q L$ | 7.27 | MDL | PQL |
| Naphthalene | 0.15 | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 |
| Acenaphthylene | 0.006 U | 0.006 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| 1-Methyinaphthalene | 0.22 | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 |
| 2-Methylnaphthalene | 1.1 | 0.006 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.12 | 0.004 | 0.03 |
| Acenaphthene | 0.88 | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.53 | 0.01 | 0.03 |
| Fluorene | 0.003 U | 0.003 | 0.03 | 0.002 U | 0,002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 1.8 | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.25 | 0.003 | 0.03 |
| Anthracene | 0.33 | 0.003 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 1.14 | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.46 L | 0.003 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.23 L | 0.003 | 0.003 |
| Benzo(a)anthracene | 1.5 L | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.14 | 0.002 | 0.003 |
| Chrysene | 0.003 U | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.25 L | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.43 L | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.20 L | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.003 U | 0.003 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.10 L | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.003 U | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.15 L | 0.002 | 0.003 |
| Dibenzo(a,h)anthracene | 0.83 L | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.16 | 0.003 | 0.003 |
| Benzo(g,h,i)perylene | 1.8 L | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.18 L | 0.002 | 0.003 |
| Fideno(1,2,3-c,d)pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.11 | 0.003 | 0.003 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | NR |  |  | 90.2 |  |  | 87.2 |  |  |

[^45]| Client I.D. | SB-18@ 6" |  |  | SB-22 @ 10' |  |  | SB-23 @ 8' |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-4 |  |  | 1104031-5 |  |  | 1104031-6 |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Date Analyzed | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | ,15,11 |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 20.8 | MOL | POL | 13.7 | MDL | $P O L$ | 17.1 | MOL | POL |
| Naphthalene | 0.008 U | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.11 | 0.005 | 0.03 |
| 1-Methylnaphthalene | 0.008 U | 0.008 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.86 | 0.007 | 0.03 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.21 | 0.01 | 0.03 |
| Fluorene | 0.003 U | 0.003 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.02 | 0.002 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.004 U | 0.004 | 0.03 |
| Anthracene | 0.003 U | 0.003 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.23 L | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Pyrene | 0.09 | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Benzo(a)anthracene | 0.05 | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 2.8 L | 0.002 | 0.003 |
| Chrysene | 0.06 | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.05 | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.53 L | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.04 | 0.003 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.35 L | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.04 | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo(a,h)anthracene | 0.03 | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Benzo( $g, h, i)$ perylene | 0.05 | 0.003 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno(1,2,3-c,d)pyrene | 0.04 | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-di4 | 67.1 |  |  | 98.3 |  |  | 102 |  |  |

[^46]| Client I.D. | SB-24@ 6' |  |  | SB-25@ ${ }^{\text {' }}$ |  |  | SB-26 @ 8 ${ }^{\text {c }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha 1.D. | 1104031-7 |  |  | 1104031-9 |  |  | 1104031-10 |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Date Analyzed | 4/15/11 |  |  | 4/17/11 |  |  | 4/17/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 18.0 | MDL | $P Q L$ | 13.6 | MDL | $P O L$ | 8.53 | MDI | PQL |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| 1-Methylnaphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| 2-Methylnaphthaiene | 0.005 U | 0.005 | 0.03 | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(a)anthracene | 0.21 L | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo( $\mathrm{a}, \mathrm{h}$ ) anthracene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(g,h,i)perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno( $1,2,3-\mathrm{c}, \mathrm{d})$ pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 94.4 |  |  | 88.6 |  |  | 83.4 |  |  |

Surogate \% Recovery limits are: p-Terphenyl 66.1-120.

| Client I.D. | SB-27 © 8' |  |  | SB-28 @ 8' |  |  | SB-11 @ 8 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-11 |  |  | 1104031-12 |  |  | 1104031-13 |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Date Analyzed | 4/17/11 |  |  | 4/17/11 |  |  | 4/17/11 |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | , |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 15.3 | MDL | POL | 7.93 | MDL | POL | 14.8 | MOL | PQL |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.005 U | 0.005 | 0.03 |
| 1-Methyinaphthalene | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 | 0.007 U | 0.007 | 0.03 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | 0.005 U | 0.005 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 u | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.004 U | 0.004 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.004 U | 0.004 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Benzo(a)anthracene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo( a ,h)anthracene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Benzo( $\mathrm{g}, \mathrm{h}, \mathrm{i}$ ) perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno(1,2,3-c,d)pyrene | 0.004 U | 0.004 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.004 U | 0.004 | 0.003 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 91.9 |  |  | 84.4 |  |  | 79.4 |  |  |

NR denotes that the surrogate recovery is not reponable due to matrix interterence.
The qualfier "L" denotes that the value reported is above the calbration curve.
The qualfer "I denotes that the reported value is between the MDL Method Detection Limit and the PQL (Practical Quantiation Limit)
The qualfier "U" denotes that the anavie was not detected, and the value preceding the "U" is the Mol
Surrogate \% Recovery limits are: p-Terpheny $66.1-120$.

## Alpha Analytics, Inc. (407) 382-5742 NELAP \#E83806

| Client I.D. | SB-12@10' |  |  | SB-9 @ 8' |  |  | SB-10 @ 6' |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-14 |  |  | 1104031-15 |  |  | 1104031-16 |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | 4/14/11 |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |
| Date Analyzed | 4/17/11 |  |  | 4/17/11 |  |  | 4/17/11 |  |  |
| Dilution Factor | 1 |  |  | , |  |  | , |  |  |
| Matrix | Solid |  |  | Solid |  |  | Solid |  |  |
| Units | $\mathrm{mg} / \mathrm{kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |
| Percent Moisture | 13.8 | MDL | PQL | 11.8 | MDL | POL | 14.0 | MOL | POL |
| Naphthalene | 0.006 U | 0.007 | 0.03 | 0.006 U | 0.007 | 0.03 | 0.006 U | 0.007 | 0.03 |
| Acenaphthylene | 0.004 U | 0.005 | 0.03 | 0.004 U | 0.005 | 0.03 | 0.004 U | 0.005 | 0.03 |
| 1-Methytnaphthalene | 0.006 U | 0.007 | 0.03 | 0.006 U | 0.007 | 0.03 | 0.006 U | 0.007 | 0.03 |
| 2-Methylnaphthalene | 0.004 U | 0.005 | 0.03 | 0.004 U | 0.005 | 0.03 | 0.004 U | 0.005 | 0.03 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 | 0.01 U | 0.01 | 0.03 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Phenanthrene | 0.003 U | 0.003 | 0.03 | 0.003 U | 0.003 | 0.03 | 0.003 U | 0.003 | 0.03 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 |
| Fluoranthene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Pyrene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo(a)anthracene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Dibenzo( a , h)anthracene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Benzo( $\mathrm{g}, \mathrm{h}, \mathrm{i}$ ) perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 |
| Indeno(1,2,3-c,d)pyrene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 81.4 |  |  | 89.8 |  |  | 99.3 |  |  |

NP denotes that the surrogate recovery is not reportable due to matrix interterence.
The qualfer "L" denotes that the value reported is above the calbration curve
The qualifer " " denotes that he reported value is beween the MOL (Method Detection Limit) and the PQL (Practical Quantitation imit
The qualifer "U" denotes that the anaiyte was not detected, and the value preceding the "U" is the Mot.
Surrogate \% Recovery imits are: p-Terpheny $66.1-120$.

| Client I.D. | SB-29 @ 8 ${ }^{\text {c }}$ |  |  | Blank |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-18 |  |  | 1104031-19 |  |  |  |
| Date Sampled | 4/14/11 |  |  | NA |  |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  |  |
| Date Analyzed | 4/17/11 |  |  | 4/15/11 |  |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  |  |
| Matrix | Solid |  |  | Solid |  |  |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |  | $\mathrm{mg} / \mathrm{Kg}$ |  |  |  |
| Percent Moisture | 13.6 | MDI | PQL | NA | MOL | PQ | CAS \# |
| Naphthalene | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 | 91-20-3 |
| Acenaphthylene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | 208-96-8 |
| 1-Methylnaphthalene | 0.007 U | 0.007 | 0.03 | 0.006 U | 0.006 | 0.03 | 90-12-0 |
| 2-Methylnaphthalene | 0.005 U | 0.005 | 0.03 | 0.004 U | 0.004 | 0.03 | 91-57-6 |
| Acenaphthene | 0.01 U | 0.01 | 0.03 | 0.009 U | 0.009 | 0.03 | 83-32-9 |
| Fluorene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 86-73-7 |
| Phenanthrene | 0.003 U | 0.003 | 0.03 | 0.003 U | 0.003 | 0.03 | 85-01-8 |
| Anthracene | 0.002 U | 0.002 | 0.03 | 0.002 U | 0.002 | 0.03 | 120-12-7 |
| Fluoranthene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 206-44-0 |
| Pyrene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 129-00-0 |
| Benzo(a)anthracene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 56-55-3 |
| Chrysene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 218-01-9 |
| Benzo(b)fluoranthene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 205-99-2 |
| Benzo(k)fluoranthene | 0.002 U | 0.002 | 0.002 | 0.002 U | 0.002 | 0.002 | 207-08-9 |
| Benzo(a)pyrene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 50-32-8 |
| Dibenzo( a , h)anthracene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 53-70-3 |
| Benzo( $(\mathrm{g}, \mathrm{h}, \mathrm{i})$ perylene | 0.002 U | 0.002 | 0.003 | 0.002 U | 0.002 | 0.003 | 191-24-2 |
| Indeno( $1,2,3-\mathrm{c}, \mathrm{d}$ )pyrene | 0.003 U | 0.003 | 0.003 | 0.003 U | 0.003 | 0.003 | 193-39-5 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 90.2 |  |  | 89.9 |  |  |  |

NR denotes that the sumogate recovery is nof reportable due to matrix interference.
The qualifier " ${ }^{\text {" }}$ denotes that the value reported is above the calibration curve.
The qualifer "l" denotes that the reported value is beween the MDL (Method Detection Limit) and the PQL (Practical Quantitation $L$ imt).
The qualtier "U" denotes that the anakte was not detected, and the value preceding the "U" is the MOL.
Sumogate \% Recovery limits are: p-Terpheny 66.1-120.

| Client I.D. | SB-22@10' |  | SB-23 @ 8' |  | SB-24 @ 6' |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-5 |  | 1104031-6 |  | 1104031-7 |  |
| Date Sampled | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Extracted | 4/15/11 |  | 4/15/11 |  | 4/15/11 |  |
| Date Analyzed | 4/15/11 |  | 4/15/11 |  | 4/15/11 |  |
| Dilution Factor | 1 |  | 1 |  | , |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 13.7 |  | 17.1 |  | 18.0 |  |
| MDL | 3.5 |  | 3.6 |  | 3.7 |  |
|  |  | POL |  | POL |  | POL |
| Total Petroleum Hydrocarbons | 3.5 U | 9.0 | 520 L | 9.0 | 3.7 U | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 87.3 |  | NR |  | 38.9 |  |
| C39/ Nonatriacontane | 89.9 |  | NR |  | 69.6 |  |

## Client I.D.

Alpha I.D.
Date Sampled
Date Extracted
Date Analyzed
Dilution Factor
Matrix
Units
Percent Moisture
MDL
Total Petroleum Hydrocarbons
Surrogate \% Recovery
SB-25 @ 6'
$1104031-9$
$4 / 14 / 11$
$4 / 15 / 11$
$4 / 15 / 11$
1
Solid
$\mathrm{mg} / \mathrm{Kg}$
13.6
3.5

3.5 U

|  |
| :--- |
|  |
|  |
|  |
| $90 L$ |


| SB-26 @ 8' | SB-27 @ 8 |
| :---: | :---: |
| $\mathbf{1 1 0 4 0 3 1 - 1 0}$ | $1104031-11$ |
| $4 / 14 / 11$ | $4 / 14 / 11$ |
| $4 / 15 / 11$ | $4 / 15 / 11$ |
| $4 / 15 / 11$ | $4 / 15 / 11$ |
| 1 | 1 |
| Solid | Solid |
| $\mathrm{mg} / \mathrm{Kg}$ | $\mathrm{mg} / \mathrm{Kg}$ |
| 8.53 | 15.3 |
| 3.3 | 3.5 |

9.0
$3.3 \cup \quad \frac{P Q L}{9.0}$
$\frac{P Q L}{9.0}$

OTP
89.0
92.2

SB-28 @ 8'
1104031-12
4/14/11
4/15/11
4/15/11
1
Solid
$\mathrm{mg} / \mathrm{Kg}$
Percent Moisture
MDL
Total Petroleum Hydrocarbons
Surrogate \% Recovery
OTP
C39/ Nonatriacontane
Client I.D.
Date Sampled
Date Extracted
Date Analyzed
Dilution Factor
Matrix
Units
89.9

NR
69.6

NR denotes that the surrogate pecovery is not reportable due to matrix interference.
The qualtier "L" denotes that the value reported is above the calioration curve.
The qualifier "t" denotes that the reported value is between the MDL (Method Detection Limit) and the POL (Practical Quantitation Limit)
The qualifier "U" denotes that the analyte was not detected, and the value preceding the " $U$ " is the MDL
Surrogate \% Recovery limits are: OTP 62-109 and C-39 60-118.

| Client I.D. | SB-9 @ 8' |  | SB-10 @ 6' |  | SB-29 @ 8 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha I.D. | 1104031-15 |  | 1104031-16 |  | 1104031-18 |  |
| Date Sampled | 4/14/11 |  | 4/14/11 |  | 4/14/11 |  |
| Date Extracted | 4/15/11 |  | 4/15/11 |  | 4/15/11 |  |
| Date Analyzed | 4/15/11 |  | 4/15/11 |  | 4/15/11 |  |
| Dilution Factor | 1 |  |  |  | , |  |
| Matrix | Solid |  | Solid |  | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | 11.8 |  | 14.0 |  | 13.6 |  |
| MDL | 3.4 |  | 3.5 |  | 3.5 |  |
|  |  | PQL |  | POL |  | PQL |
| Total Petroleum Hydrocarbons | 3.40 | 9.0 | 3.5 U | 9.0 | 3.5 U | 9.0 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 75.8 |  | 73.6 |  | 68.1 |  |
| C39/ Nonatriacontane | 99.3 |  | 78.7 |  | 88.9 |  |


| Client I.D. | Blank |  |
| :--- | :---: | :--- |
| Alpha I.D. | $1104031-19$ |  |
| Date Sampled | NA |  |
| Date Extracted | $4 / 15 / 11$ |  |
| Date Analyzed | $4 / 15 / 11$ |  |
| Dilution Factor | 1 |  |
| Matrix | Solid |  |
| Units | $\mathrm{mg} / \mathrm{Kg}$ |  |
| Percent Moisture | NA |  |
| MDL | 3.0 |  |
|  |  | $\underline{P Q L}$ |
| Total Petroleum Hydrocarbons | 3.0 U | 9.0 |
|  |  |  |
| Surrogate \% Recovery | 76.4 |  |
| OTP | 93.4 |  |
| C39/ Nonatriacontane |  |  |

NR denotes that the surrogate recovery is not reportable due to matrix interference.
The qualitier " $L$ " denotes that the value reported is above the calibration curve
The qualifier "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
The qualifier "U" denotes that the analyte was not detected, and the value preceding the "U" is the MDL.
Surrogate \% Recovery limts are: OTP 62-109 and C-39 60-118.


The qualifier "L" denotes the value reported is above the calloration range. The actual value may be higher than the value given. The qualifer "" denotes that the reported vaiue is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit). The qualifier " $U$ " denotes that the analyte was not present, and the value preceding the " $U$ " is the MDL.


The qualfier "L" denotes the value report is above the calbration range. The actual value may be higher than the value given
The qualifer "i" denotes that the reported value is between the MOL (Method Detection Limt) and the PQL (Practical Quantitation Limit) The qualifer "U" denotes that the gnalyte was not present, and the vatue preceding the " $U$ " is the MDL.

| Client I.D. | S8-24 |  |  | SB-10 |  |  | Blank |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha 1.D. | 1104031-8 |  |  | 1104031-17 |  |  | 1104031-20 |  |  |  |
| Date Sampled | 4/14/11 |  |  | 4/14/11 |  |  | NA |  |  |  |
| Date Extracted | 4/15/11 |  |  | 4/15/11 |  |  | 4/15/11 |  |  |  |
| Date Analyzed | 4/17/11 |  |  | 4/17/11 |  |  | 4/15/11 |  |  |  |
| Dilution Factor | 1 |  |  | 1 |  |  | 1 |  |  |  |
| Matrix | Liquid |  |  | Liquid |  |  | Liquid |  |  |  |
| Units | ug/t |  |  | ug/ |  |  | ugh |  |  |  |
|  |  | MDL | PQt |  | MDL | $P Q L$ |  | MOL | PQL | CASH |
| Naphthalene | 0.15 U | 0.15 | 2.0 | 0.15 U | 0.15 | 2.0 | 0.15 U | 0.15 | 2.0 | 91-20-3 |
| Acenaphthylene | 0.58 U | 0.58 | 2.0 | 0.58 U | 0.58 | 2.0 | 0.58 U | 0.58 | 2.0 | 208-96-8 |
| 1-Methyinaphthalene | 0.71 U | 0.71 | 2.0 | 0.71 U | 0.71 | 2.0 | 0.71 U | 0.71 | 2.0 | 90-12-0 |
| 2-Methylnaphthalene | 0.63 U | 0.63 | 2.0 | 0.63 U | 0.63 | 2.0 | 0.63 U | 0.63 | 2.0 | 91-57-6 |
| Acenaphthene | 0.68 U | 0.68 | 2.0 | 0.68 U | 0.68 | 2.0 | 0.68 U | 0.68 | 2.0 | 83-32-9 |
| Fluorene | 0.17 U | 0.17 | 2.0 | 0.17 U | 0.17 | 2.0 | 0.17 U | 0.17 | 2.0 | 86-73-7 |
| Phenanthrene | 0.09 U | 0.09 | 2.0 | 0.09 U | 0.09 | 2.0 | 0.09 U | 0.09 | 2.0 | 85-01-8 |
| Anthracene | 0.06 U | 0.06 | 2.0 | 0.06 U | 0.06 | 2.0 | 0.06 U | 0.06 | 2.0 | 120-12-7 |
| Fluoranthene | 0.22 U | 0.22 | 0.2 | 0.22 U | 0.22 | 0.2 | 0.22 U | 0.22 | 0.2 | 206-44-0 |
| Pyrene | 0.20 U | 0.20 | 0.2 | 0.20 U | 0.20 | 0.2 | 0.20 U | 0.20 | 0.2 | 129-00-0 |
| Benzo(a)anthracene | 0.12 U | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 | 56-55-3 |
| Chrysene | 0.16 U | 0.16 | 0.2 | 0.16 U | 0.16 | 0.2 | 0.16 U | 0.16 | 0.2 | 218-01-9 |
| Benzo(b)fluoranthene | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 | 205-99-2 |
| Benzo(k)fluoranthene | 0.08 U | 0.08 | 0.1 | 0.08 U | 0.08 | 0.1 | 0.08 U | 0.08 | 0.1 | 207-08-9 |
| Benzo(a)pyrene | 0.12 U | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 | 0.12 U | 0.12 | 0.2 | 50-32-8 |
| Dibenzo(a,h)anthracene | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 | 0.10 U | 0.10 | 0.2 | 53-70-3 |
| Benzo( $g, h, i)$ perylene | 0.18 U | 0.18 | 0.2 | 0.18 U | 0.18 | 0.2 | 0.18 U | 0.18 | 0.2 | 191-24-2 |
| Indeno(1,2,3-c,d)pyrene | 0.15 U | 0.15 | 0.2 | 0.15 U | 0.15 | 0.2 | 0.15 U | 0.15 | 0.2 | 193-39-5 |
| Surrogate \% Recovery |  |  |  |  |  |  |  |  |  |  |
| p-Terphenyl-d14 | 98.1 |  |  | 98.9 |  |  | 85.9 |  |  |  |

NR denotes that the surrogate recovery is not reportable due to matrix interference.
The qualifier "L" denotes that the value reported is above the calibration curve.
The qualfier "]" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantivation Limit).
The qualifier " $U$ " denotes that the analyte was not detected, and the value preceding the " $U$ " is the MDL
Surrogate \% Recovery limits are: o-Terphenvi 72.4-130.

Alpha Analytics, Inc.
TRPH (3510/ FL-PRO)

| Client I.D. | SB-24 |  | SB-10 |  | Blank |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alpha L.D. | 1104031-8 |  | 1104031-17 |  | 1104031 |  |
| Date Sampled | 4/14/11 |  | 4/14/11 |  | NA |  |
| Date Extracted | 4/15/11 |  | 4/15/11 |  | 4/14/1 |  |
| Date Analyzed | 4/15/11 |  | 4/15/11 |  | 4/14/1 |  |
| Dilution Factor | 1 |  |  |  | , |  |
| Matrix | Liquid |  | Liquid |  | Liquid |  |
| Units | $\mathrm{mg} / \mathrm{L}$ |  | $\mathrm{mg} / \mathrm{L}$ |  | $\mathrm{mg} / \mathrm{L}$ |  |
| MDL | 0.20 |  | 0.20 |  | 0.20 |  |
|  |  | PQL |  | POL |  | PQL |
| Total Petroleum Hydrocarbons | 0.20 U | 0.60 | 0.20 U | 0.60 | 0.20 U | 0.60 |
| Surrogate \% Recovery |  |  |  |  |  |  |
| OTP | 76.3 |  | 84.2 |  | 79.6 |  |
| C39/ Nonatriacontane | 82.6 |  | 67.7 |  | 63.5 |  |

Alpha Analytics, Inc. (407)-382-5742

| ANALYSIS DATE : SAMPLE ID \# : |  |  |  |  | MATRIX : QC BATCH ID: | $\begin{gathered} \text { SOIL } \\ 041511 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | $\begin{gathered} \text { LCS \% } \\ \text { RECOVERY } \end{gathered}$ | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| Vinyl chloride | 0.0 | 20 | 25 | 129.4\% | 70.0\% | 130.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 24 | 122.3\% | 70.0\% | 130.0\% |
| MTBE | 0.0 | 20 | 22 | 111.1\% | 70.0\% | 130.0\% |
| 1,1- Dichloroethane | 0.0 | 20 | 23 | 112.9\% | 70.0\% | 130.0\% |
| Chloroform | 0.0 | 20 | 24 | 117.6\% | 70.0\% | 130.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 19 | 96.5\% | 70.0\% | 130.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 24 | 121.0\% | 70.0\% | 130.0\% |
| Benzene | 0.0 | 20 | 23 | 114.2\% | 70.0\% | 130,0\% |
| Trichloroethene | 0.0 | 20 | 25 | 124.9\% | 70.0\% | 130.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 22 | 112.2\% | 70.0\% | 130.0\% |
| Toluene | 0.0 | 20 | 24 | 118.6\% | 70.0\% | 130.0\% |
| Tetrachloroethene | 0.0 | 20 | 27 | 134.2\% | 70.0\% | 130.0\% |
| Chlorobenzene | 0.0 | 20 | 24 | 120.6\% | 70.0\% | 130.0\% |
| Ethylbenzene | 0.0 | 20 | 23 | 115.6\% | 70.0\% | 130.0\% |
| m,p-Xylenes | 0.0 | 40 | 49 | 122.1\% | 70.0\% | 130.0\% |
| --Xylene | 0.0 | 20 | 23 | 114.9\% | 70.0\% | 130.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 19 | 93.1\% | 70.0\% | 130.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 20 | 102.3\% | 70.0\% | 130.0\% |

ANALYSIS DATE: 4/15/11
SAMPLE ID \# : 1002006 -1

MATRIX: SOIL QC BATCH ID: O41511A

| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \end{gathered}$ | $\begin{gathered} \text { MSD \% } \\ \text { RECOVERY } \end{gathered}$ | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | MAXIMUM RPD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vonyl chloride | 0.0 | 20 | 27 | 25 | 133.7\% | 126.5\% | 5.5\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 24 | 23 | 118.7\% | 114.4\% | 3.6\% | 70.0\% | 130.0\% | 20.0\% |
| Mtbe | 0.0 | 20 | 22 | 22 | 109.3\% | 107.9\% | 1.3\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 23 | 22 | 114.1\% | 109.4\% | 4.2\% | 70.0\% | 130.0\% | 20.0\% |
| Chloroform | 0.0 | 20 | 24 | 24 | 120.1\% | 118.1\% | 1.7\% | 70.0\% | 130.0\% | 20.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 21 | 19 | 105.6\% | 96.6\% | 8.9\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 25 | 23 | 124.7\% | 116.8\% | 6.5\% | 70.0\% | 130.0\% | 20.0\% |
| 4wne | 0.0 | 20 | 23 | 23 | 116.0\% | 113.0\% | 2.6\% | 70.0\% | 130.0\% | 20.0\% |
| Trichloroethene | 0.0 | 20 | 25 | 24 | 124.3\% | 121.7\% | 2.1\% | 70.0\% | 130.0\% | 20.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 23 | 22 | 114.4\% | 110.4\% | 3.5\% | 70.0\% | 130.0\% | 20.0\% |
| Toluene | 0.0 | 20 | 24 | 23 | 121.1\% | 117.0\% | 3.4\% | 70.0\% | 130.0\% | 20.0\% |
| Tetrachloroethene | 0.0 | 20 | 26 | 26 | 130.7\% | 131.6\% | 0.7\% | 70.0\% | 130.0\% | 20.0\% |
| Chiorobenzene | 0.0 | 20 | 25 | 24 | 122.7\% | 119.5\% | 2.6\% | 70.0\% | 130.0\% | 20.0\% |
| Ethybenzene | 0.0 | 20 | 23 | 23 | 117.1\% | 114.0\% | 2.7\% | 70.0\% | 130.0\% | 20.0\% |
| m,p-Xylenes | 0.0 | 40 | 49 | 49 | 121.7\% | 121.5\% | 0.2\% | 70.0\% | 130.0\% | 20.0\% |
| o-xylene | 0.0 | 20 | 23 | 23 | 117.1\% | 113.0\% | 3.6\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 21 | 20 | 103.3\% | 98.6\% | 4.7\% | 70.0\% | 130.0\% | 20.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 21 | 18 | 102.8\% | 91.7\% | $11.4 \%$ | 70.0\% | 130.0\% | 20.0\% |



| ANALYSIS DATE: SAMPLE ID \#: | 4/15/11 <br> SAND |  |  |  |  |  |  |  | MATRIX: QC BATCH ID: | $\begin{gathered} \text { SOIL } \\ 041511 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \end{gathered}$ | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{gathered} \text { MAXIMUM } \\ \text { RPD } \end{gathered}$ |
| Naphthalene | 0.0 | 25.0 | 23.0 | 18.2 | 92.0\% | 72.8\% | 23.3\% | 70.0\% | 130.0\% | 25.0\% |
| Fluorene | 0.0 | 25.0 | 24.1 | 20.0 | 96.4\% | 80.0\% | 18.6\% | 70.0\% | 130.0\% | 25.0\% |
| Phenanthrene | 0.0 | 25.0 | 24.8 | 20.3 | 99.2\% | 81.2\% | 20.0\% | 70.0\% | 130.0\% | 25.0\% |
| Anthracene | 0.0 | 25.0 | 28.5 | 23.4 | 114.0\% | 93.6\% | 19.7\% | 70.0\% | 130.0\% | 25.0\% |
| Fluoranthene | 0.0 | 25.0 | 25.2 | 25.3 | 100.8\% | 101.2\% | 0.4\% | 70.0\% | 130.0\% | 25.0\% |
| Pyrene | 0.0 | 25.0 | 26.2 | 27.2 | 104.8\% | 108.8\% | 3.7\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)anthracene | 0.0 | 25.0 | 29.4 | 26.3 | 117.6\% | 105.2\% | 11.1\% | 70.0\% | 130.0\% | 25.0\% |
| sene | 0.0 | 25.0 | 31.5 | 28.5 | 126.0\% | 114.0\% | 10.0\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(b)fluoranthene | 0.0 | 25.0 | 29.6 | 31.9 | 118.4\% | 127.6\% | 7.5\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(k)fluoranthene | 0.0 | 25.0 | 30.2 | 31.5 | 120.8\% | 126.0\% | 4.2\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)pyrene | 0.0 | 25.0 | 31.7 | 28.9 | 126.8\% | 115.6\% | 9.2\% | 70.0\% | 130.0\% | 25.0\% |
| Dibenzo( $a, h$ )anthracene | 0.0 | 25.0 | 28.2 | 26.5 | 112.8\% | 106.0\% | 6.2\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(g, h, I) perylene | 0.0 | 25.0 | 28.8 | 25.8 | 115.2\% | 103.2\% | 11.0\% | 70.0\% | 130.0\% | 25.0\% |
| Indeno( $1,2,3-\mathrm{c}, \mathrm{d}$ ) pyrene | 0.0 | 25.0 | 30.9 | 25.6 | 123.6\% | 102.4\% | 18.8\% | 70.0\% | 130.0\% | 25.0\% |



Alpha Analytics, Inc. (407)-382-5742 NELAP \#E83806

FL-PRO
SPIKE RECOVERY REPORT

| ANALYSIS DATE: SAMPLE ID \#: | 4/15/11 <br> SAND |  |  |  |  |  |  |  | MATRIX : QC BATCH ID: | $\begin{gathered} \text { SOIL } \\ 041511 \mathrm{~A} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | MS \% RECOVERY | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{aligned} & \text { MAXIMUM } \\ & \text { RPD } \\ & \hline \end{aligned}$ |
| Total Petroum Hydrocarbons | 0.0 | 3400 | 2896 | 3273 | 85.2\% | 96.3\% | 12.2\% | 62\% | 204\% | 25.0\% |

Alpha Analytics, Inc. (407)-382-5742

| ANALYSIS DATE: SAMPLE ID \# : |  |  |  |  | $\begin{gathered} \text { MATRIX : } \\ \text { QC BATCH ID: } \end{gathered}$ | $\begin{aligned} & \text { LQUID } \\ & 041511 \mathrm{~A} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | $\begin{gathered} \text { LCS \% } \\ \text { RECOVERY } \\ \hline \end{gathered}$ | LOWER LIMIT RECOVERY | JPPER LIMIT RECOVERY |
| Vinyl chloride | 0.0 | 20 | 25 | 123.7\% | 70.0\% | 130.0\% |
| 1,1 - Dichloroethene | 0.0 | 20 | 22 | 112.1\% | 70.0\% | 130.0\% |
| MTBE | 0.0 | 20 | 18 | 91.1\% | 70.0\% | 130.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 23 | 114.3\% | 70.0\% | 130.0\% |
| Chloroform | 0.0 | 20 | 23 | 117.3\% | 70.0\% | 130.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 22 | 111.4\% | 70.0\% | 130.0\% |
| 1,1,1- Trichloroethane | 0.0 | 20 | 23 | 112.6\% | 70.0\% | 130.0\% |
| Benzene | 0.0 | 20 | 23 | 115.7\% | 70.0\% | 130.0\% |
| Trichloroethene | 0.0 | 20 | 21 | 103.9\% | 70.0\% | 130.0\% |
| 1,2-Dichloropropane | 0.0 | 20 | 22 | 110.6\% | 70.0\% | 130.0\% |
| Toluene | 0.0 | 20 | 24 | 119.9\% | 70.0\% | 130.0\% |
| Tetrachloroethene | 0.0 | 20 | 25 | 124.2\% | 70.0\% | 130.0\% |
| Chlorobenzene | 0.0 | 20 | 26 | 128.8\% | 70.0\% | 130.0\% |
| Ethylbenzene | 0.0 | 20 | 23 | 115.9\% | 70.0\% | 130.0\% |
| m,p-Xylenes | 0.0 | 40 | 51 | 128.0\% | 70.0\% | 130.0\% |
| o-Xylene | 0.0 | 20 | 24 | 118.4\% | 70.0\% | 130.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 31 | 156.0\% | 70.0\% | 130.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 17 | 86.5\% | 70.0\% | 130.0\% |

EPA 8260
SPIKE RECOVERY REPORT

ANALYSIS DATE: 4/15/11

SAMPLE ID \# : MW

MATRIX : LIOUID

QC BATCH ID: 041511A

| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \\ \hline \end{gathered}$ | MSD \% RECOVERY | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | $\begin{gathered} \text { MAXIMUM } \\ \text { RPD } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vinyl chloride | 0.0 | 20 | 25 | 24 | 124.4\% | 120.3\% | 3.4\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethene | 0.0 | 20 | 23 | 22 | 114.5\% | 112.0\% | 2.2\% | 70.0\% | 130.0\% | 20.0\% |
| MTBE | 0.0 | 20 | 19 | 20 | 94,7\% | 98.8\% | 4.3\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1-Dichloroethane | 0.0 | 20 | 23 | 23 | 114.7\% | 112.8\% | 1.7\% | 70.0\% | 130.0\% | 20.0\% |
| Chloroform | 0.0 | 20 | 24 | 24 | 120.9\% | 118.9\% | 1.7\% | 70.0\% | 130.0\% | 20.0\% |
| Carbon Tetrachloride | 0.0 | 20 | 22 | 22 | 110.2\% | 109.1\% | 1.0\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,1-Trichloroethane | 0.0 | 20 | 22 | 22 | 111.9\% | 112.3\% | 0.4\% | 70.0\% | 130.0\% | 20.0\% |
| ene | 0.0 | 20 | 24 | 23 | 121.0\% | 112.8\% | 7.0\% | 70.0\% | 130.0\% | 20.0\% |
| Trichloroethene | 0.0 | 20 | 22 | 22 | 110.7\% | 107.7\% | 2.7\% | 70.0\% | 130.0\% | 20.0\% |
| 1,2- Dichloropropane | 0.0 | 20 | 23 | 23 | 112.9\% | 116.1\% | 2.8\% | 70.0\% | 130.0\% | 20.0\% |
| Toluene | 0.0 | 20 | 24 | 23 | 119.0\% | 114.3\% | 4.1\% | 70.0\% | 130.0\% | 20.0\% |
| Tetrachoroethene | 0.0 | 20 | 24 | 23 | 118.5\% | 116.4\% | 1.7\% | 70.0\% | 130.0\% | 20.0\% |
| Chlorobenzene | 0.0 | 20 | 26 | 28 | 130.8\% | 138.3\% | 5.6\% | 70.0\% | 130.0\% | 20.0\% |
| Ethybenzene | 0.0 | 20 | 24 | 26 | 119.4\% | 127.7\% | 6.8\% | 70.0\% | 130.0\% | 20.0\% |
| m,p-Xylenes | 0.0 | 40 | 47 | 51 | 117.0\% | 127.9\% | 8.9\% | 70.0\% | 130.0\% | 20.0\% |
| 0-Xylene | 0.0 | 20 | 25 | 23 | 125.6\% | 114.8\% | 9.0\% | 70.0\% | 130.0\% | 20.0\% |
| 1,1,2,2-Tetrachloroethane | 0.0 | 20 | 30 | 33 | 150.6\% | 163.2\% | 8.1\% | 70.0\% | 130.0\% | 20.0\% |
| 1,4-Dichlorobenzene | 0.0 | 20 | 22 | 26 | 111.5\% | 131.1\% | 16.1\% | 70.0\% | 130.0\% | 20.0\% |


| MATRIX : | Liquid |
| :---: | :---: |
| QC BATCH ID: | 041511 A |


| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | LCS \% <br> RECOVERY | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Naphthalene | 0.0 | 25 | 20.0 | 80.0\% | 70.0\% | 130.0\% |
| Fluorene | 0.0 | 25 | 18.6 | $74.4 \%$ | 70.0\% | 130.0\% |
| Phenanthrene | 0.0 | 25 | 18.9 | 75.6\% | 70.0\% | 130.0\% |
| Anthracene | 0.0 | 25 | 18.6 | 74.4\% | 70.0\% | 130.0\% |
| Fluoranthene | 0.0 | 25 | 18.9 | 75.6\% | 70.0\% | 130.0\% |
| Pyrene | 0.0 | 25 | 18.3 | 73.2\% | 70.0\% | 130.0\% |
| Benzo(a)anthracene | 0.0 | 25 | 19.1 | 76.4\% | 70.0\% | 130.0\% |
| Chrysene | 0.0 | 25 | 19.0 | 76.0\% | 70.0\% | 130.0\% |
| Benzo(b)fluoranthene | 0.0 | 25 | 19.5 | 78.0\% | 70.0\% | 130.0\% |
| Benzo(k)fluoranthene | 0.0 | 25 | 20.5 | 82.0\% | 70.0\% | 130.0\% |
| Benzo(a)pyrene | 0.0 | 25 | 20.6 | 82.4\% | 70.0\% | 130.0\% |
| Dibenzo(a, h)anthracene | 0.0 | 25 | 18.6 | 74.4\% | 70.0\% | 130.0\% |
| Benzo( $9, \mathrm{~h}, \mathrm{I}$ ) perylene | 0.0 | 25 | 18.2 | 72.8\% | 70.0\% | 130.0\% |
| Indeno(1,2,3-c, d)pyrene | 0.0 | 25 | 19.2 | 76.8\% | 70.0\% | 130.0\% |

$\begin{array}{cc}\text { MATRIX: } & \text { LIQUID } \\ \text { QC BATCH ID: } & 041511 A\end{array}$

| COMPOUND | SAMPLE AMOUNT | AMOUNT SPIKED | MS <br> AMOUNT RECOVERED | MSD <br> AMOUNT RECOVERED | $\begin{gathered} \text { MS \% } \\ \text { RECOVERY } \end{gathered}$ | $\begin{gathered} \text { MSD \% } \\ \text { RECOVERY } \end{gathered}$ | RPD | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY | MAXIMUM RPD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Naphthalene | 0.0 | 25.0 | 24.3 | 23.7 | 97.2\% | 94.8\% | 2.5\% | 70.0\% | 130.0\% | 25.0\% |
| Fluorene | 0.0 | 25.0 | 21.7 | 19.4 | 86.8\% | 77.6\% | 11.2\% | 70.0\% | 130.0\% | 25.0\% |
| Phenanthrene | 0.0 | 25.0 | 19.0 | 19.2 | 76.0\% | 76.8\% | 1.0\% | 70.0\% | 130.0\% | 25.0\% |
| Anthracene | 0.0 | 25.0 | 18.8 | 18.7 | 75.2\% | 74.8\% | 0.5\% | 70.0\% | 130.0\% | 25.0\% |
| Fluoranthene | 0.0 | 25.0 | 21.7 | 21.1 | 86.8\% | 84.4\% | 2.8\% | 70.0\% | 130.0\% | 25.0\% |
| Pyrene | 0.0 | 25.0 | 21.1 | 21.6 | 84,4\% | 86.4\% | 2.3\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)anthracene | 0.0 | 25.0 | 22.2 | 24.4 | 88.8\% | 97.6\% | 9.4\% | 70.0\% | 130.0\% | 25.0\% |
| ysene | 0.0 | 25.0 | 23.1 | 25.8 | 92.4\% | 103.2\% | 11.0\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(b)fluoranthene | 0.0 | 25.0 | 22.9 | 25.0 | 91.6\% | 100.0\% | 8.8\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(k)fluoranthene | 0.0 | 25.0 | 24.0 | 25.2 | 96.0\% | 100.8\% | 4.9\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo(a)pyrene | 0.0 | 25.0 | 24.1 | 26.2 | 96.4\% | 104.8\% | 8.3\% | 70.0\% | 130.0\% | 25.0\% |
| Dibenzo(a, h)anthracene | 0.0 | 25.0 | 22.4 | 23.9 | 89.6\% | 95.6\% | 6.5\% | 70.0\% | 130.0\% | 25.0\% |
| Benzo( $(, h, h$ ) perylene | 0.0 | 25.0 | 21.4 | 23.0 | 85.6\% | 92.0\% | 7.2\% | 70.0\% | 130.0\% | 25.0\% |
| Indeno (1,2,3-c,d)pyren | 0.0 | 25.0 | 22.7 | 25.8 | 90.8\% | 103.2\% | 12.8\% | 70.0\% | 130.0\% | 25.0\% |


| ANALYSIS DATE : $4 / 14 / 11$ SAMPLE ID \#: LCS |  |  |  |  | $\begin{aligned} & \text { MATRIX : } \\ & \text { QC BATCH ID: } \end{aligned}$ | $\begin{aligned} & \text { Liquid } \\ & 041411 \mathrm{~A} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COMPOUND | SAMPLE <br> AMOUNT | AMOUNT SPIKED | LCS <br> AMOUNT RECOVERED | LCS \% RECOVERY | LOWER LIMIT RECOVERY | UPPER LIMIT RECOVERY |
| Total Petroleum Hydrocarbons | 0.0 | 1700 | 1464 | 86.1\% | 55.0\% | 118.0\% |

NALYSIS DATE: 4/14/11
SAMPLE ID \# : MW-3-20118

MATRIX : Licuid
QC BATCH ID: 041411A

MS MSD
SAMPLE AMOUNT AMOUNT AMOUNT MS \% MSD \% LOWER LIMIT UPPER LIMIT MAXIMUM
$\qquad$
$101 \%$
$20.0 \%$

Alpha Analytics
9645 E. Colonial Dr. Suite 114
Onando, Florida 32817
CHAIN-OF-CUSTODY RECORD

$\qquad$
$\partial$ (407) 382-5742 • Fax (407) 382-7195



## Technical Report for

Alpha Analytics<br>GRU Phase 2 ESA

110059-0100
Accutest Job Number: F81610

Sampling Date: 04/14/11

Report to:

```
Alpha Analytics
jbowers@alphaanalyticsorlando.com
ATTN: John Bowers
```

Total number of pages in report: 76


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.

Client Service contact: Jean Dent-Smith 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
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## Sample Summary

Alpha Analytics
GRU Phase 2 ESA
Project No: 110059-0100

| Sample Number | Collected Date | Time By | Received | Matr <br> Code | ix Type | Client <br> Sample ID |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F81610-1 | 04/14/11 | 08:15 LB | 04/18/11 | SO | Soil | SB-21@ ${ }^{\text {c }}$ |
| F81610-2 | 04/14/11 | 08:30 LB | 04/18/11 | So | Soil | SB-20@ ${ }^{\prime}$ |
| F81610-3 | 04/14/11 | 08:45 LB | 04/18/11 | SO | Soil | SB-19@ $6^{\prime}$ |
| F81610-4 | 04/14/11 | 08:50 LB | 04/18/11 | SO | Soil | SB-18@ $6^{\prime \prime}$ |
| F81610-5 | 04/14/11 | 07:33 LB | 04/18/11 | SO | Soil | SB-22@ $0^{\prime}$ |
| F81610-6 | 04/14/11 | 09:57 LB | 04/18/11 | SO | Soil | SB-23@8 |
| F81610-7 | 04/14/11 | 10:25 LB | 04/18/11 | SO | Soil | SB-24@6 |
| F81610-8 | 04/14/11 | 10:46 LB | 04/18/11 | AQ | Ground Water | SB-24 |
| F81610-9 | 04/14/11 | 11:16 LB | 04/18/11 | SO | Soil | SB-25@6 |
| F81610-10 | 04/14/11 | 11:38 LB | 04/18/11 | SO | Soil | SB-26 (a) $8^{\prime}$ |
| F81610-11 | 04/14/11 | $11: 58 \mathrm{LB}$ | 04/18/11 | SO | Soil | SB-27@8 |
| F81610-12 | 04/14/11 | 12:15 LB | 04/18/11 | SO | Soil | SB-28@ $8^{\prime}$ |
| F81610-13 | 04/14/11 | 13:48 LB | 04/18/11 | SO | Soil | SB-11@ $8^{\prime}$ |

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

## Sample Summary

Alpha Analytics
GRU Phase 2 ESA
Project No：110059－0100

| Sample Number | Collected Date | Time By | Received | Matr <br> Code | ix <br> Type | Client <br> Sample ID |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F81610－14 | 04／14／11 | 14：10 LB | 04／18／11 | SO | Soil | SB－12＠10＇ |
| F81610－15 | 04／14／11 | 14：37 LB | 04／18／11 | SO | Soil | SB－9＠ $8^{\prime}$ |
| F81610－16 | 04／14／11 | 15：00 LB | 04／18／11 | SO | Soil | SB－10＠${ }^{\text {a }}$ |
| F81610－17 | 04／14／11 | 15：20 LB | 04／18／11 | AQ | Ground Water | SB－10 |
| F81610－18 | 04／14／11 | 15：53 LB | 04／18／11 | SO | Soil | SB－29＠ $8^{\text {a }}$ |

Southeast
ACCLTEST
Lagoantontes

Sample Results

Report of Analysis

| Client Sample ID: | SB-21 @ $6^{\prime \prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample 1D: | F81610-1 | Date Sampled: $04 / 14 / 11$ |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ <br> Percent Solids: 88.0 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic ${ }^{\text {a }}$ | 1.61 | 5.0 | 1.0 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20/11 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Barium ${ }^{\text {a }}$ | 102 | 100 | 5.0 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20/11 | RS | SW8466010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Cadmium ${ }^{\text {a }}$ | 0.50 U | 2.0 | 0.50 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20/11 | RS | SW8466010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Chromium ${ }^{\text {a }}$ | 26.0 | 5.0 | 0.50 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20111 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Lead | 6.9 | 1.0 | 0.050 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{4}$ |
| Mercury | 0.0089 U | 0.089 | 0.0089 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW84674718 ${ }^{2}$ | SW846 74718 ${ }^{5}$ |
| Selenium ${ }^{\text {a }}$ | 2.0 U | 10 | 2.0 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20/11 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Silver ${ }^{\text {a }}$ | 0.50 U | 5.0 | 0.50 | $\mathrm{mg} / \mathrm{kg}$ | 10 | 04/19/11 | 04/20/11 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Instrument QC Batch: MA8885
(4) Prep QC Batch: MP20402
(5) Prep QC Batch: MP20410
(a) Elevated reporting limit(s) due to matrix interference.
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-20@ $2^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-2 | Date Sampled: 04/14/11 <br> Date Received: 04/18/11 <br> Matrix: |
| SO-Sol | Percent Solids: 93.1 |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.61 | 0.36 | 0.073 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C | SW846 3050B ${ }^{3}$ |
| Barium | 9.6 | 7.3 | 0.36 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 30500 ${ }^{3}$ |
| Cadmium | 0.036 U | 0.15 | 0.036 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C | SW846 3050B ${ }^{3}$ |
| Chromium | 5.3 | 0.36 | 0.036 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Lead | 4.1 | 0.73 | 0.036 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{\text {d }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.017 I | 0.090 | 0.0090 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.16 I | 0.73 | 0.15 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C | SW846 3050B ${ }^{3}$ |
| Silver | 0.036 U | 0.36 | 0.036 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

7 of 76
A-M,
81010 $=4$

Client Sample ID: SB-19@ $6^{\prime}$

| Lab Sample ID: | F81610-3 | Date Sampled: 04/14/11 |
| :--- | :--- | :--- |
| Matrix: | SO - Soil | Date Received: $04 / 18 / 11$ |
|  |  | Percent Solids: 68.2 |

Project: GRU Phase 2 ESA
Percent Solids: 68.2

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic ${ }^{\text {a }}$ | 3.9 | 1.1 | 0.22 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW846 6010C3 | SW846 3050B ${ }^{4}$ |
| Barium | 20.8 | 11 | 0.54 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{4}$ |
| Cadmium ${ }^{\text {a }}$ | 1.8 | 0.43 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW8466010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Chromium ${ }^{\text {a }}$ | 22.0 | 1.1 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW8466010 ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Lead ${ }^{\text {a }}$ | 36.9 | 2.2 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Mercury | 0.093 I | 0.12 | 0.012 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW84674713 ${ }^{2}$ | SW8467471B ${ }^{5}$ |
| Selenium ${ }^{\text {a }}$ | 1.8 I | 2.2 | 0.43 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW8466010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |
| Silver ${ }^{\text {a }}$ | 0.11 U | 1.1 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 2 | 04/19/11 | 04/20/11 | RS | SW846 6010C ${ }^{3}$ | SW846 3050B ${ }^{4}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Instrument QC Batch: MA8885
(4) Prep QC Batch: MP20402
(5) Prep QC Batch: MP20410
(a) Elevated reporting limit(s) due to matrix interference.
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$
MDL $=$ Method Detection Limit

| Client Sample ID: | SB-18 @ $6^{\prime \prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-4 |  |$\quad$| Date Sampled: 04/14/11 |
| :--- |
| Matrix: |
| SO-Soil |
| Project: |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 1.6 | 0.53 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Barium | 35.4 | 11 | 0.53 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.079 I | 0.21 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C | SW846 3050B ${ }^{3}$ |
| Chromium | 4.7 | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C 1 | SW846 3050B ${ }^{3}$ |
| Lead | 48.5 | 1.1 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C | SW846 3050B ${ }^{3}$ |
| Mercury | 0.11 | 0.10 | 0.010 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 74718 ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.29 I | 1.1 | 0.21 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.053 U | 0.53 | 0.053 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {- }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-22 @ 10 |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-5 | Date Sampled: | $04 / 14 / 11$ |
| Matrix: | SO-Soil | Date Received: | $04 / 18 / 11$ |
| Method: | SW846 8082A SW846 3550C | Percent Solids: 85.8 |  |
| Project: | GRU Phase 2 ESA |  |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run\#1 | XX055754.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |  |
| Run \#2 |  |  |  |  |  |  |  |  |


|  | Initial Weight |
| :--- | :--- |
| Run \#1 | 30.0 g |$\quad 10.0 \mathrm{ml}$ Final Volume

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12674-11-2 | Aroclor 1016 | 7.8 U | 19 | 7.8 | ug/kg |
| 11104-28-2 | Aroclor 1221 | 9.7 U | 19 | 9.7 | ug kg |
| 11141-16-5 | Aroclor 1232 | 9.7 U | 19 | 9.7 | ug/kg |
| 53469-21-9 | Aroclor 1242 | 7.8 U | 19 | 7.8 | ug/kg |
| 12672-29-6 | Aroclor 1248 | 7.8 U | 19 | 7.8 | ug/kg |
| 11097-69-1 | Aroclor 1254 | 7.8 U | 19 | 7.8 | ug/kg |
| 11096-82-5 | Aroclor 1260 | 7.8 U | 19 | 7.8 | $\mathrm{ug} / \mathrm{kg}$ |
| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |  |
| 877-09-8 | Tetrachloro-m-xylene | 77\% |  |  | 6\% |
| 2051-24-3 | Decachlorobiphenyl | 82\% |  |  | 7\% |


| $\mathrm{U}=$ Not detected MDL - Method Detection Limit | $\mathrm{I}=$ Result $>=$ MDL but $<\mathrm{PQL} \mathrm{J}=$ Estimated value |
| :--- | :--- |
| $\mathrm{PQL}=$ Practical Quantitation Limit | $\mathrm{V}=$ Indicates analyte found in associated method blank |
| $\mathrm{L}=$ Indicates value exceeds calibration range | $\mathrm{N}=$ Indicates presumptive evidence of a compound |


| Client Sample ID: | SB-22@10 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-5 | Date Sampled: $04 / 14 / 11$ |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ <br> Percent Solids: 85.8 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.97 | 0.44 | 0.088 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Barium | 39.2 | 8.8 | 0.44 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 30500 ${ }^{3}$ |
| Cadmium | 0.044 U | 0.18 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 8.4 | 0.44 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 7.1 | 0.88 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010 ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Mercury | 0.078 I | 0.090 | 0.0090 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW846 7471B ${ }^{2}$ | SW846 7471B ${ }^{4}$ |
| Selenium | 0.18 U | 0.88 | 0.18 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Silver | 0.044 U | 0.44 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20410
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit

[^47]| Client Sample ID: | SB-23 a 8 |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-6 | Date Sampled: $04 / 14 / 11$ |  |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ |  |
| Method: | SW846 8082A SW846 3550C | Percent Solids: 84.7 |  |
| Project: | GRU Phase 2 ESA |  |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run \#1 | XX055753.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| Run \#2 |  |  |  |  |  |  |  |


|  | Initial Weight | Final Volume |
| :--- | :--- | :--- |
| Run \#1 | 30.1 g | 10.0 ml |
| Run $\# 2$ |  |  |

## PCB List



[^48]| Client Sample ID: | SB-23 @ $8^{\prime}$ |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-6 | Date Sampled: <br> Date Received: $04 / 14 / 11$ |  |
| Matrix: | SO - Soil | Percent Solids: 84.7 |  |
| Project: | GRU Phase 2 ESA |  |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.26 I | 0.56 | 0.11 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {a }}$ | SW846 3050B ${ }^{3}$ |
| Barium | 8.11 | 11 | 0.56 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.056 U | 0.22 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C 1 | SW846 3050B ${ }^{3}$ |
| Chromium | 3.4 | 0.56 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C 1 | SW846 3050B ${ }^{3}$ |
| Lead | 9.0 | 1.1 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 $3050 \mathrm{~B}^{3}$ |
| Mercury | 0.079 I | 0.087 | 0.0087 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW846 7471B ${ }^{4}$ |
| Selenium | 0.38 I | 1.1 | 0.22 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Silver | 0.056 U | 0.56 | 0.056 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

Report of Analysis

| Client Sample ID: | SB-24 @ 6 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-7 | Date Sampled: 04/14/11 |
| Matrix: | SO - Soil | Date Received: 04/18/11 |
| Method: | SW846 8082A SW846 3550C | Percent Solids: 82.9 |
| Project: | GRU Phase 2 ESA |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run \#1 | XX055755.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| Run \#2 |  |  |  |  |  |  |  |


|  | Initial Weight | Final Volume |
| :--- | :--- | :--- |
| Run \#1 | 30.1 g | 10.0 ml |
| Run \#2 |  |  |

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12674-11-2 | Aroclor 1016 | 8.0 U | 20 | 8.0 | ug/kg |
| 11104-28-2 | Aroclor 1221 | 10 U | 20 | 10 | ug/kg |
| 11141-16-5 | Aroclor 1232 | 10 U | 20 | 10 | ug/kg |
| 53469-21-9 | Aroclor 1242 | 8.0 U | 20 | 8.0 | ug kg |
| 12672-29-6 | Aroclor 1248 | 8.0 U | 20 | 8.0 | ug/kg |
| 11097-69-1 | Aroclor 1254 | 8.0 U | 20 | 8.0 | ug/kg |
| 11096-82-5 | Aroclor 1260 | 8.0 U | 20 | 8.0 | ug/kg |
| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |  |
| 877-09-8 | Tetrachloro-m-xylene | 80\% |  |  |  |
| 2051-24-3 | Decachlorobiphenyl | 82\% |  |  |  |

[^49]| Client Sample ID: | SB-24 @ $6^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-7 | Date Sampled: $04 / 14 / 11$ |
| Matrix: | SO - Soil | Date Received: <br>  <br> Project: |
| GRU Phase 2 ESA | Percent Solids: 82.9 |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.48 I | 0.60 | 0.12 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{\text {d }}$ | SW846 30508 ${ }^{3}$ |
| Barium | 9.21 | 12 | 0.60 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010 ${ }^{1}$ | SW846 3050 ${ }^{3}$ |
| Cadmium | 0.060 U | 0.24 | 0.060 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 11.6 | 0.60 | 0.060 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Lead | 14.0 | 1.2 | 0.060 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Mercury | 0.50 | 0.096 | 0.0096 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW8467471B ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.24 U | 1.2 | 0.24 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010 ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Silver | 0.060 U | 0.60 | 0.060 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit

[^50]| Client Sample ID: | SB-24 |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-8 | Date Sampled: | $04 / 14 / 11$ |
| Matrix: | AQ-Ground Water | Date Received: 04/18/11 |  |
| Method: | SW846 8082A SW846 3510C | Percent Solids: n/a |  |
| Project: | GRU Phase 2 ESA |  |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run\#1 | XX055775.D | 1 | $04 / 20 / 11$ | NJ | $04 / 19 / 11$ | OP36836 | GXX858 |
| Run\#2 |  |  |  |  |  |  |  |


| Run \#1 | Initial Volume <br> 1040 ml |
| :--- | :--- |
| Run Final Volume |  |

## PCB List



| $\mathrm{U}=$ Not detected $\quad \mathrm{MDL}-$ Method Detection Limit | $\mathrm{I}=$ Result $>=$ MDL but $<\mathrm{PQL} J=$ Estimated value |
| :--- | :--- |
| $\mathrm{PQL}=$ Practical Quantitation Limit | $\mathrm{V}=$ Indicates analyte found in associated method blank |
| $\mathrm{L}=$ Indicates value exceeds calibration range | $\mathrm{N}=$ Indicates presumptive evidence of a compound |


| Client Sample ID: | SB-24 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-8 | Date Sampled: 04/14/11 <br> Date Received: <br> Matrix: |
| AQ-Ground Water | Percent Solids: n/a |  |

Total Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.0 U | 10 | 2.0 | ug/1 | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010 ${ }^{3}$ |
| Barium | 52.61 | 200 | 5.0 | ug/ | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Cadmum | 1.0 U | 5.0 | 1.0 | ug/1 | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Chromium | 31.1 | 10 | 1.0 | ug/ | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Lead | 1.51 | 5.0 | 1.0 | ug/1 | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Mercury | 0.24 I | 1.0 | 0.050 | ug/1 | 1 | 04/22/11 | 04/22/11 LM | SW846 7470A ${ }^{2}$ | SW846 7470A ${ }^{4}$ |
| Selenium | 2.0 U | 10 | 2.0 | ug/1 | 1 | 04/20/11 | 04/20/11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Silver | 1.0 U | 10 | 1.0 | ug/ | 1 | 04/20/11 | 04/20/11 DM | SW846 6010 ${ }^{\text {l }}$ | SW846 3010A ${ }^{3}$ |

(1) Instrument QC Batch: MA8884
(2) Instrument QC Batch: MA8891
(3) Prep QC Batch: MP20412
(4) Prep QC Batch: MP20429
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-25@ $6^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-9 | Date Sampled: 04/14/11 |
| Matrix: | SO - Soil | Date Received: 04/18/11 |
| Method: | SW846 8082A SW846 3550C | Percent Solids: 84.7 |
| Project: | GRU Phase 2 ESA |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run \#1 | XX055756.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| Run H2 |  |  |  |  |  |  |  |


|  | Initial Weight | Final Volume |
| :--- | :--- | :--- |
| Run \#1 | 29.9 g | 10.0 ml |
| Run \#2 |  |  |

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12674-11-2 | Aroclor 1016 |  |  |  |  |  |
| $11104-28-2$ | Aroclor 1221 | 7.9 U | 20 | 7.9 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $11141-16-5$ | Aroclor 1232 | 9.9 U | 20 | 9.9 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $53469-21-9$ | Aroclor 1242 | 7.9 U | 20 | 9.9 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $12672-29-6$ | Aroclor 1248 | 7.9 U | 20 | 7.9 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $11097-69-1$ | Aroclor 1254 | $\mathrm{ug} / \mathrm{kg}$ |  |  |  |  |
| $11096-82-5$ | Aroclor 1260 | 7.9 U | 20 | 7.9 | $\mathrm{ug} / \mathrm{kg}$ | 20 |
|  |  |  | 7.9 | $\mathrm{ug} / \mathrm{kg}$ |  |  |
| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |  |  |
| 877-09-8 | Tetrachloro-m-xylene | $82 \%$ |  |  |  |  |
| $2051-24-3$ | Decachlorobiphenyl | $87 \%$ |  | $44-126 \%$ | $39-157 \%$ |  |


| $\mathrm{U}=$ Not detected $\quad$ MDL - Method Detection Limit | $\mathrm{I}=$ Result $>=$ MDL but $<\mathrm{PQL} \mathrm{J}=$ Estimated value |
| :--- | :--- |
| $\mathrm{PQL}=$ Practical Quantitation Limit | $\mathrm{V}=$ Indicates analyte found in associated method blank |
| $\mathrm{L}=$ Indicates value exceeds calibration range | $\mathrm{N}=$ Indicates presumptive evidence of a compound |


| Client Sample ID: | SB-25 @ 6 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-9 | Date Sampled: <br> Matrix: |
| SO-Soil | Date Received: <br> Percent Solids: <br> 04/18/11 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.64 | 0.45 | 0.090 | mg/kg | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Barium | 6.91 | 9.0 | 0.45 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {d }}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.045 U | 0.18 | 0.045 | mg/kg | 1 | 04/19/11 | 04/19/11 | RS | SW8466610C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 13.3 | 0.45 | 0.045 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {I }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 13.4 | 0.90 | 0.045 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C | SW846 3050B ${ }^{3}$ |
| Mercury | 0.85 | 0.48 | 0.048 | $\mathrm{mg} / \mathrm{kg}$ | 5 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW84674718 ${ }^{4}$ |
| Selenium | 0.20 I | 0.90 | 0.18 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Silver | 0.045 U | 0.45 | 0.045 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit MDL $=$ Method Detection Limit

[^51]
## Report of Analysis

| Client Sample ID: | SB-26 0 8 |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-10 | Date Sampled: 04/14/11 |  |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ |  |
| Method: | SW846 8082A SW8463550C | Percent Solids: 90.0 |  |
| Project: | GRU Phase 2 ESA |  |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run \#1 | XX055757.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| Run $\# 2$ |  |  |  |  |  |  |  |


|  | Initial Weight | Final Volume |
| :--- | :--- | :--- |
| Run \#1 | 30.0 g | 10.0 ml |
| Run \#2 |  |  |

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units | Q |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $12674-11-2$ | Aroclor 1016 |  |  |  |  |  |
| $11104-28-2$ | Aroclor 1221 | 7.4 U | 19 | 7.4 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $11141-16-5$ | Aroclor 1232 | 9.3 U | 19 | 9.3 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $53469-21-9$ | Aroclor 1242 | 7.4 U | 19 | 9.3 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $12672-29-6$ | Aroclor 1248 | 7.4 U | 19 | 7.4 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $11097-69-1$ | Aroclor 1254 | 7.4 U | 19 | 7.4 | $\mathrm{ug} / \mathrm{kg}$ |  |
| $11096-82-5$ | Aroclor 1260 | 7.4 U | 19 | 7.4 | $\mathrm{ug} / \mathrm{kg}$ |  |


| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |
| :--- | :--- | :--- | :--- | :--- |
| 877-09-8 | Tetrachloro-m-xylene | $81 \%$ |  | $44-126 \%$ |
| $2051-24-3$ | Decachlorobiphenyl | $87 \%$ | $39-157 \%$ |  |

[^52]| Client Sample ID: | SB-26@ $8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-10 | Date Sampled: $04 / 14 / 11$ |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ <br> Percent Solids: 90.0 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.48 | 0.42 | 0.084 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Barium | 11.9 | 8.4 | 0.42 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 $3050 \mathrm{~B}^{3}$ |
| Cadmium | 0.042 U | 0.17 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 7.0 | 0.42 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C | SW846 30508 ${ }^{3}$ |
| Lead | 21.4 | 0.84 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 C ${ }^{\text {d }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.24 | 0.093 | 0.0093 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.17 U | 0.84 | 0.17 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 30500 ${ }^{3}$ |
| Silver | 0.042 U | 0.42 | 0.042 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit

[^53]| Client Sample ID: | SB-27@ $8^{\prime}$ |  |  |
| :--- | :--- | :--- | :--- |
| Lab Sample ID: | F81610-11 | Date Sampled: $04 / 14 / 11$ |  |
| Matrix: | SO - Soil | Date Received: | $04 / 18 / 11$ |
| Method: | SW846 8082A | SW846 3550C | Percent Solids: 86.7 |
| Project: | GRU Phase 2 ESA |  |  |


|  | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Run $\# 1$ | XX055760.D | 1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| Run $\$ 2$ |  |  |  |  |  |  |  |


|  | Initial Weight | Final Volume |
| :--- | :--- | :--- |
| Run \#1 | 30.0 g | 10.0 ml |
| Run \#2 |  |  |

## PCB List



[^54]| Client Sample ID: | SB-27@ 8 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-11 |  |
| Matrix: | SO-Soil | Date Sampled: $04 / 14 / 11$ <br> Date Received: $04 / 18 / 11$ <br> Percent Solids: 86.7 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.14 I | 0.41 | 0.082 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Barium | 1.81 | 8.2 | 0.41 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {1 }}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.041 U | 0.16 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Chromium | 8.3 | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Lead | 3.9 | 0.82 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.13 | 0.092 | 0.0092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.16 U | 0.82 | 0.16 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.041 U | 0.41 | 0.041 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

Report of Analysis

| Client Sample ID: SB-28@8 <br> Lab Sample ID: F81610-12 <br> Matrix: SO-Soil <br> Method: SW846 8082A SW846 3550C <br> Project: GRU Phase 2 ESA |  |  |  |  | Date Sampled: 04/14/11 <br> Date Received: 04/18/11 <br> Percent Solids: 88.6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Run \#1 } \\ & \text { Run } \# 2 \end{aligned}$ | File ID XX055763.D | $\begin{aligned} & \text { DF } \\ & 1 \end{aligned}$ | Analyzed 04/19/11 | By | Prep Date 04/19/11 | Prep Batch OP36829 | Analytical Batch GXX857 |
|  Initial Weight Final Volume <br> Run\#1 29.9 g 10.0 ml <br> Run \#2   |  |  |  |  |  |  |  |

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12674-11-2 | Aroclor 1016 | 7.5 U | 19 | 7.5 | ug/kg |
| 11104-28-2 | Aroclor 1221 | 9.4 U | 19 | 9.4 | ug/kg |
| 11141-16-5 | Aroclor 1232 | 9.4 U | 19 | 9.4 | $\mathrm{ug} / \mathrm{kg}$ |
| 53469-21-9 | Aroclor 1242 | 7.5 U | 19 | 7.5 | ug/kg |
| 12672-29-6 | Aroclor 1248 | 7.5 U | 19 | 7.5 | ug/kg |
| 11097-69-1 | Aroclor 1254 | 7.5 U | 19 | 7.5 | ug/kg |
| 11096-82-5 | Aroclor 1260 | 7.5 U | 19 | 7.5 | ug kg |
| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |  |
| 877-09-8 | Tetrachloro-m-xylene | 79\% |  |  |  |
| 2051-24-3 | Decachlorobiphenyl | 83\% |  |  |  |

$\mathrm{U}=$ Not detected MDL - Method Detection Limit $\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{L}=$ Indicates value exceeds calibration range
$\mathrm{I}=$ Result $>=\mathrm{MDL}$ but $<\mathrm{PQL} \mathrm{J}=$ Estimated value
$V=$ Indicates analyte found in associated method blank
$\mathrm{N}=$ Indicates presumptive evidence of a compound

Report of Analysis
Page 1 of 1

| Client Sample ID: | SB-28 @ $8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-12 | Date Sampled: $04 / 14 / 11$ |
| Matrix: | SO-Soil | Date Received: $04 / 18 / 11$ <br> Percent Solids: 88.6 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed |  | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.19 I | 0.38 | 0.077 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Barium | 3.31 | 7.7 | 0.38 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.038 U | 0.15 | 0.038 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C | SW846 3050B ${ }^{3}$ |
| Chromium | 6.2 | 0.38 | 0.038 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 7.7 | 0.77 | 0.038 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 30508 ${ }^{3}$ |
| Mercury | 0.12 | 0.094 | 0.0094 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW8467471B ${ }^{2}$ | SW8467471B ${ }^{4}$ |
| Selenium | 0.15 U | 0.77 | 0.15 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.038 U | 0.38 | 0.038 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-11 @ $8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-13 | Date Sampled: 04/14/11 <br> Date Received: 04/18/11 <br> Matrix: |
| SO-Soil | Percent Solids: 86.5 |  |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.171 | 0.40 | 0.081 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 $3050 \mathrm{~B}^{3}$ |
| Barium | 2.9 I | 8.1 | 0.40 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {a }}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.040 U | 0.16 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {I }}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 9.2 | 0.40 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C 1 | SW846 3050B ${ }^{3}$ |
| Lead | 6.3 | 0.81 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 C 1 | SW846 3050B ${ }^{3}$ |
| Mercury | 0.15 | 0.095 | 0.0095 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 7471B ${ }^{2}$ | SW846,7471B ${ }^{4}$ |
| Selenium | 0.16 U | 0.81 | 0.16 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.040 U | 0.40 | 0.040 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010 ${ }^{1}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=$ MDL but $<\mathrm{PQL}$

| Client Sample ID: | SB-12 @ 10 |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-14 |  |
| Matrix: | SO-Soil | Date Sampled: 04/14/11 <br> Date Received: 04/18/11 <br> Percent Solids: 87.0 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.82 | 0.49 | 0.098 | mg/kg | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{1}$ | SW84630508 ${ }^{3}$ |
| Barium | 23.3 | 9.8 | 0.49 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |
| Cadmium | 0.049 U | 0.20 | 0.049 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{\text {1 }}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 7.9 | 0.49 | 0.049 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Lead | 10.0 | 0.98 | 0.049 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW846 6010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Mercury | 0.24 | 0.093 | 0.0093 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20111 LM | SW846 7471日 ${ }^{2}$ | SW846 7471B ${ }^{4}$ |
| Selenium | 0.20 U | 0.98 | 0.20 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ! | SW846 3050B ${ }^{3}$ |
| Silver | 0.049 U | 0.49 | 0.049 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 RS | SW8466010C ${ }^{\text {- }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$U=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: | SB-9 @ $8^{\prime}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-15 | Date Sampled: 04/14/11 |
| Matrix: | SO-Soil | Date Received: 04/18/11 <br> Percent Solids: 87.5 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed | By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.241 | 0.43 | 0.085 | mg/kg | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{\text {1 }}$ | SW846 30508 ${ }^{3}$ |
| Barium | 6.0 I | 8.5 | 0.43 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Cadmium | 0.043 U | 0.17 | 0.043 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010C ${ }^{1}$ | SW846 30508 ${ }^{3}$ |
| Chromium | 5.8 | 0.43 | 0.043 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{1}$ | SW846 3050 ${ }^{3}$ |
| Lead | 8.1 | 0.85 | 0.043 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW846 6010C ${ }^{\text {d }}$ | SW846 3050B ${ }^{3}$ |
| Mercury | 0.13 | 0.091 | 0.0091 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 | LM | SW846 74718 ${ }^{2}$ | SW846 $7471 \mathrm{~B}^{4}$ |
| Selenium | 0.17 U | 0.85 | 0.17 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {1 }}$ | SW846 3050B ${ }^{3}$ |
| Silver | 0.043 U | 0.43 | 0.043 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/19/11 | 04/19/11 | RS | SW8466010 ${ }^{\text {l }}$ | SW846 3050B ${ }^{3}$ |

(1) Instrument QC Batch: MA8880
(2) Instrument QC Batch: MA8883
(3) Prep QC Batch: MP20402
(4) Prep QC Batch: MP20411
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit

[^55]| Client Sample ID: | SB-10@ 6 |  |
| :--- | :--- | :--- |
| Lab Sample ID: F81610-16  <br> Matrix: SO-Soil Date Sampled: $04 / 14 / 11$ <br> Date Received: $04 / 18 / 11$ <br> Percent Solids: 78.9 <br> Project: GRU Phase 2 ESA  |  |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.241 | 0.44 | 0.087 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Barium | 5.3 I | 8.7 | 0.44 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Cadmum | 0.044 U | 0.17 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Chromium | 4.6 | 0.44 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Lead | 9.0 | 0.87 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Mercury | 0.40 | 0.099 | 0.0099 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW84674718 ${ }^{1}$ | SW846 $7471 \mathrm{~B}^{3}$ |
| Selenium | 0.17 U | 0.87 | 0.17 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Silver | 0.044 U | 0.44 | 0.044 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |

(1) Instrument QC Batch: MA8883
(2) Instrument QC Batch: MA8889
(3) Prep QC Batch: MP20411
(4) Prep QC Batch: MP20416
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

Accutest Laboratories
Report of Analysis
Page 1 of 1

| Client Sample ID： | SB－10 |  |
| :--- | :--- | :--- |
| Lab Sample ID： | F81610－17 | Date Sampled：04／14／11 <br> Matrix： |
| AQ－Ground Water | Date Received：04／18／11 <br> Percent Solids：n／a |  |
| Project： | GRU Phase 2 ESA |  |

Total Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 2.0 U | 10 | 2.0 | ug／1 | 1 | 04／20／11 | 04／20／11 DM | SW8466010C ${ }^{\text {d }}$ | SW846 3010A ${ }^{3}$ |
| Barium | 42.8 I | 200 | 5.0 | ug 1 | 1 | 04／20／11 | 04／20／11 DM | SW846 6010C ${ }^{\text {d }}$ | SW846 3010A ${ }^{3}$ |
| Cadmium | 1.0 U | 5.0 | 1.0 | ug／1 | 1 | 04／20／11 | 04／20／11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Chromium | 20.9 | 10 | 1.0 | ug／ | 1 | 04／20／11 | 04／20／11 DM | SW846 6010C！ | SW846 3010A ${ }^{3}$ |
| Lead | 11.9 | 5.0 | 1.0 | ug／1 | 1 | 04／20／11 | 04／20／11 DM | SW8466010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Mercury | 0.11 I | 1.0 | 0.050 | ug／1 | 1 | 04／22／11 | 04／22／11 LM | SW846 7470A ${ }^{2}$ | SW846 7470A ${ }^{4}$ |
| Selenium | 2.0 U | 10 | 2.0 | ug／1 | 1 | 04／20／11 | 04／20／11 DM | SW846 6010C ${ }^{1}$ | SW846 3010A ${ }^{3}$ |
| Silver | 1.0 U | 10 | 1.0 | ug／1 | 1 | 04／20／11 | 04／20／11 DM | SW846 6010 ${ }^{\text {l }}$ | SW846 3010A ${ }^{3}$ |

（1）Instrument QC Batch：MA8884
（2）Instrument QC Batch：MA8891
（3）Prep QC Batch：MP20412
（4）Prep QC Batch：MP20429
$\mathrm{PQL}=$ Practical Quantitation Limit
MDL $=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

| Client Sample ID: SB-29 @ $8^{\prime}$ <br> Lab Sample ID: F81610-18 <br> Matrix: SO-Soil <br> Method: SW846 8082A SW846 3550C <br> Project: GRU Phase 2 ESA |  |  |  |  | Date Sampled: $04 / 14 / 11$ <br> Date Received: $04 / 18 / 11$ <br> Percent Solids: 85.9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Run \#1 } \\ & \text { Run \#2 } \end{aligned}$ | File ID XX055764.D | $\begin{aligned} & \text { DF } \\ & 1 \end{aligned}$ | Analyzed 04/19/11 | By $\mathrm{NJ}$ | Prep Date $04 / 19 / 11$ | Prep Batch OP36829 | Analytical Batch GXX857 |
|  Initial Weight <br> Run \#1 30.3 g <br> Run \#2  <br>   |  |  |  |  |  |  |  |

## PCB List

| CAS No. | Compound | Result | PQL | MDL | Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12674-11-2 | Aroclor 1016 | 7.7 U | 19 | 7.7 | ug/kg |
| 11104-28-2 | Aroclor 1221 | 9.6 U | 19 | 9.6 | $\mathrm{ug} / \mathrm{kg}$ |
| 11141-16-5 | Aroclor 1232 | 9.6 U | 19 | 9.6 | $\mathrm{ug} / \mathrm{kg}$ |
| 53469-21-9 | Aroclor 1242 | 7.7 U | 19 | 7.7 | $\mathrm{ug} / \mathrm{kg}$ |
| 12672-29-6 | Aroclor 1248 | 7.7 U | 19 | 7.7 | ug/kg |
| 11097-69-1 | Aroclor 1254 | 7.7 U | 19 | 7.7 | ug/kg |
| 11096-82-5 | Aroclor 1260 | 7.7 U | 19 | 7.7 | ug/kg |
| CAS No. | Surrogate Recoveries | Run\# 1 | Run\# 2 | Limits |  |
| 877-09-8 | Tetrachloro-m-xylene | 62\% |  | 44-126\% |  |
| 2051-24-3 | Decachlorobiphenyl | 67\% |  | 39-157\% |  |

$U=$ Not detected $\quad$ MDL - Method Detection Limit
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{L}=$ Indicates value exceeds calibration range
$\mathrm{I}=$ Result $>=\mathrm{MDL}$ but $<\mathrm{PQL} \mathrm{J}=$ Estimated value
$V=$ Indicates analyte found in associated method blank
$\mathrm{N}=$ Indicates presumptive evidence of a compound

Report of Analysis

| Client Sample ID: | SB-29@ $8^{\circ}$ |  |
| :--- | :--- | :--- |
| Lab Sample ID: | F81610-18 | Date Sampled: 04/14/11 |
| Matrix: | SO-Soil | Date Received: 04/18/11 <br> Percent Solids: 85.9 |
| Project: | GRU Phase 2 ESA |  |

## Metals Analysis

| Analyte | Result | PQL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arsenic | 0.15 I | 0.46 | 0.092 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW8466010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Barium | 3.81 | 9.2 | 0.46 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Cadmium | 0.046 U | 0.18 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010 ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Chromium | 8.0 | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Lead | 12.8 | 0.92 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Mercury | 0.30 | 0.086 | 0.0086 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/20/11 | 04/20/11 LM | SW846 7471B ${ }^{\text {1 }}$ | SW846 74718 ${ }^{3}$ |
| Selenium | 0.18 U | 0.92 | 0.18 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010 ${ }^{2}$ | SW846 3050B ${ }^{4}$ |
| Silver | 0.046 U | 0.46 | 0.046 | $\mathrm{mg} / \mathrm{kg}$ | 1 | 04/21/11 | 04/21/11 RS | SW846 6010C ${ }^{2}$ | SW846 3050B ${ }^{4}$ |

(1) Instrument QC Batch: MA8883
(2) Instrument QC Batch: MA8889
(3) Prep QC Batch: MP20411
(4) Prep QC Batch: MP20416
$\mathrm{PQL}=$ Practical Quantitation Limit
$\mathrm{MDL}=$ Method Detection Limit
$\mathrm{U}=$ Indicates a result $<$ MDL
$\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

## Southeast

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody


F81610: Chain of Custody
Page 1 of 3


F81610: Chain of Custody
Page 2 of 3


COOLER INFORMATION


CIT SEAL NOT PRESENT OR NOT INTACT CHAIN OF CUSTODY NOT RECEIVED (COC)
ANALYSIS REQUESTED IS UNCLEAR OR MISSING
SAMPLE DATES OR TMMES UNCLEAR OR MISSING
temperature criterla not met
wet ice present
TRIP BLANK INFORMATION

trip blank provided
$\chi$ trap blank not provided
X trip blank not on coc
trup blank intact
TRUP BLANK NOT INTACT RECEIVED WATER TRIP BLANR $\square$ received soll trip blank

MISC. INFORMATION
NUMBER OF ENCORES? 25-GRAM NUMBER OF 5035 FIELD KITS?
NUMBER OF LAB FILTERED METALS ? 5-GRAM $\qquad$
$\qquad$

TEMPERATURE INFORMAIION


IR therm m $\qquad$ CORR. FACTOR + 0.4 OBSERVED TEMPS: $\qquad$ $\frac{20}{30}$ CORRECTED TEMPS

## SAMPLE INFORMATION

$\square$ Sample labels present on all bottles
$\triangle$ INCORRECT NIMBER OF CONTAINERS USED SAMPLE RECEIVED MPROPERLY PRESERVED INSUFFICIENT VOLUME FOR ANAL YSIS DATES/TMMES ON COC DO NOT MATCH SAMPLE LABEL ID'S ON COC DO NOT MATCH LABEL voc vials have hradspace (Macro bubbles) bottles received but anal ysis not requested No bottles recerved for anal ysis requested UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS SAMPLE CONTANNER(S) RECEIVED BROKEN \% solids jar not received 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S residual chlorine present

$$
\text { \{APPICABLE TO EPA } 600 \text { SERIES OR NORTH CAROLINA ORGANICS\} }
$$


$\qquad$


F81610: Chain of Custody
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## Southeast

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| OP36829-MB | XX055752.D1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |  |
|  |  |  |  |  |  |  |  |

The QC reported here applies to the following samples:
Method: SW846 8082A
F81610-5, F81610-6, F81610-7, F81610-9, F81610-10, F81610-11, F81610-12, F81610-18

| CAS No. | Compound | Result | RL | MDL | Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12674-11-2 | Aroclor 1016 | ND | 17 | 6.7 | ug/kg |
| 11104-28-2 | Aroclor 1221 | ND | 17 | 8.3 | $\mathrm{ug} / \mathrm{kg}$ |
| 11141-16-5 | Aroclor 1232 | ND | 17 | 8.3 | ug/kg |
| 53469-21-9 | Aroclor 1242 | ND | 17 | 6.7 | ug/kg |
| 12672-29-6 | Aroclor 1248 | ND | 17 | 6.7 | ug/kg |
| 11097-69-1 | Aroclor 1254 | ND | 17 | 6.7 | ug/kg |
| 11096-82-5 | Aroclor 1260 | ND | 17 | 6.7 | ug/kg |


| CAS No. | Surrogate Recoveries |  | Limits |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| 877-09-8 | Tetrachloro-m-xylene | $84 \%$ | $44-126 \%$ |
| $2051-24-3$ | Decachlorobiphenyl | $89 \%$ | $39-157 \%$ |


| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| OP36836-MB | XX055774.D1 | $04 / 20 / 11$ | NJ | $04 / 19 / 11$ | OP36836 | GXX858 |  |

The QC reported here applies to the following samples:
Method: SW846 8082A

F81610-8

## CAS No. Compound

12674-11-2 Aroclor 1016
11104-28-2 Aroclor 1221
11141-16-5 Aroclor 1232
53469-21-9 Aroclor 1242
12672-29-6 Aroclor 1248
11097-69-1 Aroclor 1254
11096-82-5 Aroclor 1260

Result

| ND | 0.50 | 0.20 | $\mathrm{ug} / 1$ |
| :--- | :--- | :--- | :--- |
| ND | 0.50 | 0.25 | $\mathrm{ug} / 1$ |
| ND | 0.50 | 0.25 | $\mathrm{ug} / 1$ |
| ND | 0.50 | 0.20 | $\mathrm{ug} / 1$ |
| ND | 0.50 | 0.20 | $\mathrm{ug} / 1$ |
| ND | 0.50 | 0.20 | $\mathrm{ug} / 1$ |
| ND | 0.50 | 0.20 | $\mathrm{ug} / 1$ |

## Limits

877-09-8 Tetrachloro-m-xylene
87\% 38-127\%
2051-24-3 Decachlorobiphenyl $\quad 84 \% \quad 25-137 \%$

## CAS No. Surrogate Recoveries

## Blank Spike Summary

Job Number: F81610
Account: ALPHA Alpha Analytics
Project: GRU Phase 2 ESA

| Sample OP36829-BS | $\begin{aligned} & \text { File ID DF } \\ & \text { XX055751.D1 } \end{aligned}$ | Analyzed 04/19/11 | $\begin{aligned} & \mathrm{By} \\ & \mathrm{NJ} \end{aligned}$ | Prep Date 04/19/11 | Prep Batch <br> OP36829 | Analytical Batch GXX857 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

F81610-5, F81610-6, F81610-7, F81610-9, F81610-10, F81610-11, F81610-12, F81610-18

CAS No. Compound
12674-11-2 Aroclor 1016
11096-82-5 Aroclor 1260

| Spike <br> $\mathbf{u g} / \mathrm{kg}$ | BSP <br> $\mathbf{u g} / \mathbf{k g}$ | BSP <br> $\%$ | Limits |
| :--- | :--- | :--- | :--- |
| 133 | 126 | 95 | $69-117$ |
| 133 | 148 | 111 | $71-121$ |

BSP

88\% 44-126\%
877-09-8 Tetrachloro-m-xylene
90\%
44-126\%
2051-24-3 Decachlorobiphenyl
39-157\%

| Sample | File ID | DF | Analyzed | By | Prep Date <br> OP36836-BS | Prep Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  | Analytical Batch |  |  |
| XX055773.D1 |  |  |  |  |  |  |

The QC reported here applies to the following samples:
F81610-8

| CAS No. | Compound | Spike <br> ug/l | BSP <br> ug/l | BSP <br> $\%$ | Limits |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 12674-11-2 Aroclor 1016 | 4 | 3.6 | 90 | $76-117$ |  |
| $11096-82-5$ | Aroclor 1260 | 4 | 3.9 | 98 | $65-117$ |
|  |  |  |  |  |  |
| CAS No. | Surrogate Recoveries | BSP | Limits |  |  |
| 877-09-8 | Tetrachloro-m-xylene | $85 \%$ | $38-127 \%$ |  |  |
| 2051-24-3 | Decachlorobiphenyl | $87 \%$ | $25-137 \%$ |  |  |
| (a) Insufficient sample for MS/MSD. |  |  |  |  |  |

Method: SW846 8082A

Matrix Spike/Matrix Spike Duplicate Summary
Job Number: F81610
Account: ALPHA Alpha Analytics
Project: GRU Phase 2 ESA

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| OP36829-MS | XX055758.D1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 Batch |
| OP36829-MSD | XX055759.D1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
| F81610-10 | XX055757.D1 | $04 / 19 / 11$ | NJ | $04 / 19 / 11$ | OP36829 | GXX857 |
|  |  |  |  |  |  |  |

The QC reported here applies to the following samples:
Method: SW846 8082A

F81610-5, F81610-6, F81610-7, F81610-9, F81610-10, F81610-11, F81610-12, F81610-18

CAS No. Compound

12674-11-2 Aroclor 1016
11096-82-5 Aroclor 1260

CAS No. Surrogate Recoveries
877-09-8 Tetrachloro-m-xylene
2051-24-3 Decachlorobiphenyl

| F81610-10 <br> $\mathbf{u g} / \mathbf{k g}$ | $\mathbf{Q}$ | Spike <br> $\mathbf{u g} / \mathbf{k g}$ | MS <br> $\mathbf{u g} / \mathbf{k g}$ | MS <br> $\%$ | MSD <br> $\mathbf{u g} / \mathbf{k g}$ | MSD <br> $\%$ | RPD | Limits <br> Rec/RPD |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 19 U | 149 | 125 | 84 | 122 | 83 | 2 | $69-117 / 26$ |  |
| 19 U | 149 | 149 | 100 | 153 | 104 | 3 | $71-121 / 30$ |  |


| MS | MSD | F81610-10 | Limits |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| $82 \%$ | $82 \%$ | $81 \%$ | $44-126 \%$ |
| $86 \%$ | $86 \%$ | $87 \%$ | $39-157 \%$ |

## Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries


Assoctated semples mp20402: F81510-1, F81610-2, F81610-3, F81610-4, F81610-5, E81610-6, F81610-7, F816109, F81610-10, P81610-11, Fe1610-12, B1610-13, F81610-14, 681610-15
pesults < Mut are shown as zexo for caloulation purposes
(*) Outskde of QC Bimits
(anr) Analyte not requested

```
                                    boghn Number: selbug
                                    Account: ATpmA - Alpha Raalytices
                                    Project: GRU Dhase 又 ESA
```



Antimory

| Ansenic | 1. 6 | 1.8 (3) | 11.8 | $0-20$ | 1.6 | 81.0 | (a) | 90.9 | 67.3 | $80-120$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barium | 102 | 96.7 (a) | 5.3 | 0-20 | 102 | 184 | (a) | 90.9 | 90.2 | 80-120 |
| Beryelkum |  |  |  |  |  |  |  |  |  |  |
| Cadmium | 0.060 | 0.051 (a) | 16.2 | --20 | 0.060 | 2.2 | (a) | 2.27 | 94.2 | $80-120$ |
| Calciur |  |  |  |  |  |  |  |  |  |  |
| chromium | 26.0 | 25.3 (a) | 2.7 | 0-20 | 26.0 | 33.0 | (a) | 9.09 | 77.01 | 80-120 |

Cobalt
Copper
Iron

| Lead | 6.9 | 6.6 | 4.4 | $0-20$ | 6.9 | 28.8 | 22.7 | 96.4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Magnestum

Manganese
Molybdenum
Nickel
potassum

| Sekentum | 0.0 | 0.0 | (a) | NC | 0-20 | 0.0 | 84.1 |  | 90.9 | 92.5 | $80-120$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shlver | 0.0 | 0.0 | (a) | NC | 0-20 | 0.0 | 2.2 | (a) | 2.27 | 96.8 | 80-120 |

sodium

Strontiun
Thad inum
Tin

Ticanium
Vnamaium
zinc
 9, 581610-10, F81610-11, F81610-12, F81610-13, m81610-14, 981610-15

Resulta $\quad$ DD are shown as zero for calenlation purpobes
(*) Oucside of QC Himbs
(M) Matrix Spike Rec. outside of OC Inmts
(anr) Analyte not requested
(a) Eievated reportina Limt $(s)$ due fo metrix interference.
(b) Spike recovery indicetes pospible matrix interferance and/of sample nonhonogenelty.

> Wonn humber: E81610
> Account: Apha - Apha Aralytics
> Broject: GRu phase 2 psk
Qc Batch Te: Mezohoz Mewhous: SWBA6 6010 C

Matrix Type: saly
Prep Dete:
$04 / 19 / 21$

|  | E81610-1 | Splkelot |  | MSp | DC |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Metat | Original MSD | MPEYMCPL | Rec | \%pb | Limit |

Aluminam

Aneimory

| Arsenic | 1.6 | 72.5 (a) 77.8 | 91.1 | 11.1 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Bavium | 102 | 179 (a) 77.8 | 98.9 | 2.8 | 20 |

Beryllum

| Cadmum | 0.060 | 2.0 | (2) | 1.95 | 99.7 | 9.5 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Calcium:
Chromium $26.0 \quad 34.5$ (a) $7.78 \quad 109.2 \quad 4.4$
cobalt
copper
Eron

| Lead | 6.9 | 26.1 | 19.5 | 98.7 | 9.8 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Magnesium
Manganese
Molybdenum
Nickel

Potasstum

| Selentum | 0.0 | 74.3 | (a) 77.8 | 95.5 | 12.4 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Silver | 0.0 | 1.9 | (a) | 1.95 | 97.6 | 14.6 |
|  | 0.0 |  |  |  |  |  |

Sodium
strontium
Thallum
Tin

Bitanium
Vanadium
zind
Ascochated samples MP20402: F81610-1, E81610-2, F81610-3, F81610-4, F81610-5, F81610-5, F81610-4, E816109, 581610-10, F81610-11, F81610-12, F81610-13, F81610-14, F81610-15

Results chat are shown as zero for calculation purposes
(*) Outside of QC limite
(H) Matrix Shike Rec. Outside of Q Ihnta
(anr) Analyte not reguested
(a) Elevated reporting limit (s) due to matrix interference.
vogin number: 81610
Account: MPNA - Aypa Analvtics

$$
\text { project: GRU phase } 2 \text { ESA }
$$

```
w Sazch u0; mpzo40
Methods: Swede 60100
Matrex wype: solsDD
    Unite: mg/kg
```

Prep Dace:
$04 / 19 / 13$


Aluminum
Antimony

| Axsentc | 94.8 | 100 | 94.1 | $80-120$ |
| :--- | :---: | :---: | :---: | :---: |
| Barium | 104 | 100 | 104.0 | $80-120$ |

Beryl130m
Cacmium $\quad 2.5 \quad 2.5 \quad 100.0 \quad 80-120$

Cabelam
Chmomium $10.8 \quad 10 \quad 108.0 \quad 90 \mathrm{~m} 120$

Cobalt
Copper
Trom
Lead 24.0 25 95.0 80-120

Magnesium
Manganese

Molybaenum
Nickel

Eotassium

| Selenium | 92.7 | 100 | 92.7 | $80-120$ |
| :--- | :--- | :--- | :--- | :--- |
| $51+y e r$ | 2.5 | 2.5 | 100.0 | $80-120$ |

Soctum

Strontium
Whellum

Tin

Titenimm
Vantanum
annc
Assochated samples Me20402: F82610-1, F81610-2, E81610-3, F81610-4, F81610-5, F81610-6, E81610-7, F816109, 581610-10, $281610-11, ~ E 81610-12$, E81610-13, 581610-14, 581610-15

Results < wh are shom as zero for calouation purposes
(*) outsice of oc Inmits
(anr\} Analyte not recuested

```
QC Batch %O: MP20402
```

Matrix Trpe: SOLDD
Methods: 5\$846 60100

Prep bace: 04/19/11

|  | 581610-1 |  | Q |
| :---: | :---: | :---: | :---: |
| Netal | Omignal SDI 1:5 | SDIE | Limuts |

A1.aminum
Antimony

| Arsento | 32.3 | 0.00 | $100.0(6) 0-10$ |  |
| :--- | :--- | :--- | :--- | :--- |
| Bariun | 2030 | 2170 | 6.9 | $0-10$ |

Beryilium
Cedmiun $1.20 \quad 0.00 \quad 100.0(a) 0-10$

Cabebum

| Chromium | 517 | 536 | 3.6 | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |

Cobalt
copper
ron
Lead 137160 16.8*(b) 0-10
Magnesimm
Manganese
Molybderum
Nickel

Potassium

| Selenim | 0.00 | 0.00 | NC | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |
| Siver | 0.00 | 0.00 | NC | $0-10$ |

Sodium
strontwum
Thatymum
Tin
Wtantura

Vanadurm
2 inc
Nssochated samples Mp20402: F81610-1, F81610-2, F61610-3, m81610-4, 581610-5, F81610-6, F81610-7, 5e1610w 9, 581610-10, 581610-11, $881610-12, ~ 581610-13,581610-14,581610-15$

Resints $s$ TD, are shown as zero For calcuation purposes
(*) Outejue of © 1mits
(anr) Analyte mot wequestea
(a) Percent difference acceptable due to low inithal sample concentration (e 50 times IDt
(o) Sental dibuthon inchoutes posshble matrix interfenence.

## 

> Logit Number: 681610
> Account: ALPHA - Klphanahytios
> Project: GRU Phase 2 ESA

Qe Eatch YD: Me20402
Methods: Swg 46 boloc
Matris Mype: SoLTr Writs: ug/a


Aluminum
Antimony

| Arsenic | 9.8 | 10 | 32.3 | 31.654 | 130.6 | 0.2 | 5 | 100 | 98.9 | $80-120$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bawemm | 9.8 | 10 | 2033 | 1992.34 | 2269 | \%.2 | 12.5 | 250 | 410.7 | 80-120 |
| Beryllium |  |  |  |  |  |  |  |  |  |  |
| Cadmium | 9.8 | 10 | 1.2 | 1.175 | 52.8 | 0.2 | 2.5 | 50 | 103.2 | $80-120$ |
| Cabchum |  |  |  |  |  |  |  |  |  |  |
| Chromiun | 9.8 | 10 | 516.9 | 506.562 | 560.9 | 0.2 | 2.5 | 50 | 108.7 | $80-120$ |

Cobalt
Copper:
Iron


Magnesium
Manganese
Molybdenum
Wickel
Potassium

| Seienium | 9.8 | 10 | 0 | 0 | 109.8 | 0.2 | 5 | 100 | 109.8 | $80-120$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Siver | 9.8 | 10 | 0 | 0 | 49.6 | 0.2 | 2.5 | 50 | 99.2 | $80-120$ |

Sodium
strontium

Thativum
Tin

Titanam
Vanamium
zinc
 9, 581610-10, F81610-11, F82 610-12, F81610-13, F81610-14, 581610-15

Resulta < TDL are shown as zero for caloulation purposes
(*) Outsice of oc Limites
(**) Cotr, sample result = Rat * (sample volume / final volume)
(anr) knalyte not requested


Kesults \& TDL are shom as zero for caloulation purposes
(anr) Analyte not requested


Mogin Number: E81.610
Bocount: ArPbA - Anthe Anarytioc profece: GRU phase 2 ESA

| De Bateh ID: MP20400 | Methocs: Sugth 7473s |
| :---: | :---: |
| matrix mype: suty | Units: mg/kg |
| Prey Date: |  |


| Metal | $\begin{aligned} & \text { E81550-1 } \\ & \text { original mso } \end{aligned}$ | Spikelot nGRUMS : | \% Rec | $\begin{aligned} & \mathrm{MSD} \\ & \mathrm{RPD} \end{aligned}$ | $0 C$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mercury | 0.0210 .36 | 0.286 | 118.5 | 2.8 | 20 |

Assochated eamples Mp20410: p81610-1, 581610-2, 581610-3, 581610-4, m81610-5
Results < mi are shown as zevo for caloutation purposes
(*) Outside of CC Inits
(W) Matrix spike Rec. outside of QC Mimits
(anr) Analyte not requested

## SPIEE BEAKE KND WAB CONTROL SAMETE SUMMERY

```
                    Login Nomber: E81610
                                    Bccount: AMPHA - NDphe Anamytacs
                                    project: gRU phase 2 EsA
QC betch MD: mpze410 methods: 5wel6 7471m
Matrix Type: SomDD
                                    Un|ts: mglkg
```

Prep Date: 04/20/11

| Metam | $B S P$ <br> Result | splkelot HCKYms | s Rec | Qc <br> IImits |
| :---: | :---: | :---: | :---: | :---: |
| Mercury | 0.25 | 0.25 | 100.0 | 80-120 |

Assoctated samples Me20410: E81610-1, E81610-2, F816:0-3, F81610-4, E81610-5
Results < WoL ame shown as zero for calculathon purposes
(*) outside of de limits
(anx) Analyte not requested

## serial dmution resumis sumatry

Login Number: E81610
Account: AMPHA - Npha Analythes Project: GRU Phase 2 EsA
ge batch LD: Ne20410
Watedx Tyye: Sotro
Methocis: SW846 44718

Prep Date: $\quad$ 专/26/11.


Mexcury $0.246 \quad 0.00 \quad 100.0(3) 0-10$

Resulte < Tph are shown as zero for calculathon purposes
(*) outsicie of की $11 \mathrm{~m}+\mathrm{s}$
(ant Anabyte not cequested
(a) Peucent diference acceptable due to low initiai sample concentration (a 50 times phi).

```
                    BlAN* RESUTTS SUMMARY
                                    Part 2 - Method Blanks
Login Number: E81610
Accoum: Mipha - Alpha Mnalytica Project: GRU Phase 2 ESA
```

Methods: SM846 74TB units: ma/ka

Cc gatch TD: MP2041
Matrix Type: BOLT

Prep Date: $0 / 20 / 11$


Associated samples mp20411: E81610-6, F81610-7, E81610-9, F81510-10, Fe1610-11, F81610-12, F81610-13, 581610-14, $581610-15, ~ 581610-16,581610-18$

Pesults 4 WD are ghown as zero for calculation purposes
(*) Outside of QC Inmes
(arr) Analyte mot requested

> Loghn Mumer: E81610
> Account: Ahpun - Nipha Analytios Project: GRU Phase 2 ES

 581610-14, 581610-15, F81610-16, Fe1610-18

Resulte < Mo are shown as zero for calculation purposes
(*) Outside of gC Mintus
(M) Matrix Soike Rec. OUtside of $0 C$ limits
(any) Analyte not reguested
(a) Rpp acceptable due to low duplicate and sampie concentrathona.

## MATRX SPIRE AND DUPBCREE RESUMTE SUMMAR


 8．0．6Lu－1，58．610－15，F810．0－10，58．010－18

Resuits＜TDL are chown as zero for calculethon purposes
（W）Matrix Spike kec．outside of QC iimits
（anc）hratyte not requested

```
Login mumber: 581610 Account: mbrA - Apha Analytica Project: cru Chase 2 ESA
Methods: Swatb 7471
Units: ma/ku
```

Qc katch In: Me20411
Matrix Type: BOLTD
Exep Date: 04/20/11


Mercury $0.24 \quad 0.25 \quad 96.0 \quad 80-120$

Associated samples ME2041, E81610-6, F81610-7, F81610-9, 681510-10, 681610-11, 581610-12, $481610-13$, E81610-14, E81610-15, E81610-16, 581610-18

Results < WL are shown as eero for caloulatlon purposes
(*) Outside of C (1inites
(ary) Anelyte not requested

## SERIAL DTUMTON RESULYS GMMRY

Login Number: E81610
Account; AlpuA - Apha gnelytics
project: GRU Phase 2 ESA

| Q Batch प0: Meroanl | Methods: SWench 741 B |
| :---: | :---: |
| Matrix Type: Sourb | Units: va/i |

Erep Date: ba/20/is

|  | 583610-6 |  | 90 |
| :---: | :---: | :---: | :---: |
| Metal | Origina Sot $1: 5$ | BLE | Mimits |

Mermery $0.913 \quad 0.00 \quad 100.0(2) 0-10$
 T816.0-14, 581510-15, 581610-16, Fe1610-18

Results < Iot are shown as zero for calonlation purposes
(*) Outalde of QC limits
(ans) Amalyte not requested
(a) percent difserence acceptable due to low initial ample concentration (a 50 timea tom,

> BLAR RESUTSS SUMMARY
> Part 2 - Methoc Bianks
> wogin numbes: 881610
> Account: AhPH - Apha Rnalythos
> Project: GRU Phase 2 EgA

| QC Batch ID : R220412 | Wethods: SWe46 6010c |
| :---: | :---: |
| Matrix mype: moveous | Units: ught |

Prep Pete: 0 Q/20/11

| Meta | R $\mathrm{R}^{\text {P }}$ | Ind | MUE. | $\begin{aligned} & \text { MB } \\ & \text { Maw } \end{aligned}$ | Snnal |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Aluminum | $20 \%$ | 20 | 25 |  |  |
| Antimony | 6.0 | 1 | 2 |  |  |
| Arsenic | 10 | 3 | 2 | $-3.1$ | $<10$ |
| Barium | 200 | 1 | 5 | $-0.10$ | $<200$ |
| gerymilum | 4.9 | . 1 | 1 |  |  |
| Cacmium | 5.0 | . 1 | 1 | 0.0 | $<5.0$ |
| Calchum | 1000 | 50 | 100 |  |  |
| Chrombur | 10 | I | 1 | 0.0 | $<10$ |
| cobalt | 50 | 1 | 1 |  |  |
| copper | 25 | 1 | 2 |  |  |
| Iron | 300 | 34 | 35 |  |  |
| -ead | 5.0 | 1 | 1 | -1.3 | $<5.0$ |
| Magnestum | 5000 | 50 | 1.00 |  |  |
| Manganese | 15 | 1 | 1 |  |  |
| Molybaenum | 50 | 1 | 2 |  |  |
| nuctel | 40 | 1 | 2 |  |  |
| Potassium | 10000 | 50 | 500 |  |  |
| Selenium | 10 | 2 | 2 | $-3.6$ | $<10$ |
| Sinver | 10 | 1. | 1 | $-0.40$ | $<10$ |
| Socium | 10900 | 750 | 1900 |  |  |
| strontium | 10 | 1 | 1 |  |  |
| Thallum | 10 | 1 | 1.9 |  |  |
| Tin | 50 | 1. | 1 |  |  |
| Titantum | 10 | 1.1 | 2 |  |  |
| Vanadium | 50 | 1 | 1 |  |  |
| zinc | 20 | 1. | 5 |  |  |

*ssociated amoles Mp20412: 781610-8, wg1510-17
Results < Lut are shomn as zero for caloulation purposes
(*) Outside of QC Limits
(anc) Analyte not requested

MARRTX SPTKE AND DUPLYCARE RESUETS SUMMRPY

> rogin Wumber: F81610
> sccount: AtpHa - Alphe Analytics Project: GRU Phase 2 ESA



| Arsenie | 0.0 | 1790 | 2000 | 89.5 | 0.6 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Barium | 36.9 | 1970 | 2000 | 96.7 | 0.5 | 20 |

seryly Sum

| Cadmium | 0.0 | 45.8 | 50 | 91.6 | 0.0 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Calcium | anr |  |  |  |  |  |
| Chrontum | 1.1 | 184 | 200 | 91.5 | 0.5 | 20 |

cobait
Copper
Iron Enc

| Leac | 0.0 | 433 | 500 | 86.6 | 0.2 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Magnestum anz
Manganese and
mo ybcemm
Nickei
potassium

| Selenium | 0.0 | 1790 | 2000 | 89.5 | 0.0 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SLiver | 0.0 | 45.0 | 50 | 90.0 | 1.6 | 20 |

Sodium anr
stronthm
Thallium
Min

Thtanium
vanadium
zinc
Assoctated samoles Mph0412: p81510-8, Eb16.0-17
Results < inh are shown as zero for calouahion purposes
(*) Outside of Q IImits
(N) Matrix Splke Ree. Outside of oc Inmits
(anr) Amalyte not requested


Logir Mumber: 882610
Accontt: AnkHR - Apha dnalytics project: Gry phase 2 ESA

```
OC Eatch TD: M220412
Matmix Type: Agusous
Merhocs: Sw%46 6010c
    Units: ug/1
```


Abumbem anx
Antimoty

| Axseriso | 0.00 | 0.00 | WC | $0-10$ |
| :---: | :---: | :---: | :---: | :---: |
| Barium | 36.9 | 40.1 | 8.7 | -10 |

Beryidium

| Cacmium | 0.00 | 0.00 | NC |
| :--- | :--- | :--- | :--- | :--- |

Calcium any
Chromium $1.10 \quad 0.00 \quad 100.0$ (a) 0-10
cobatt
Copper
Eron anx
Lead 0.00 NC 0.00 -10
Magnesium Ens
Manganese anm
Mo ypodenum
Wickel
potassium

| serentum | 0.00 | 0.00 | NC | $0-10$ |
| :--- | :--- | :--- | :--- | :--- |
| shiver | 0.00 | 0.00 | NC | $0-10$ |

Sodium any
Strontium
Thellium
min
attaniom
Vanadium
zinc
Assoctated samples mazoatz: Fet610-8, E81610-17
Results < IDE are shown as zero for caloutation purposes
(*) Outside of Qc limits
(anr) Analyte not requested

```


\section*{post dicestare sprae sumyany}

> hogin Number: perbio
> hocount: ALpHA - Apha Analythos
> project: GRU phase 2 EBA

QC Batch TD: MP2Qa12
Matwix Rype: Roveous
Methods: SW846 60100
Units: uglt


Antimory
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline Axsentc & 9.8 & 10 & \(\bigcirc\) & 0 & 99.3 & 0.2 & 5 & 100 & 93.3 & 80-120 \\
\hline Bars.m & 9.8 & 10 & 36.9 & 36.152 & 294.2 & 0.2 & 12.5 & 250 & 103.2 & \(80-120\) \\
\hline \multicolumn{11}{|l|}{Berythium} \\
\hline Cacmurut & 9.8 & 10 & 0 & 0 & 51 & 0.2 & 2.5 & 50 & 102.0 & 80-120 \\
\hline \multicolumn{11}{|l|}{Calcium} \\
\hline Chronium & 9.8 & 10 & 1.1 & 1.078 & 50.6 & 0.2 & 2.5 & 50 & 99.0 & 80-120 \\
\hline \multicolumn{11}{|l|}{cobalt} \\
\hline \multicolumn{11}{|l|}{coper} \\
\hline \multicolumn{11}{|l|}{Iron} \\
\hline Lead & 9.8 & 10 & 0 & 0 & 45.5 & 0.2 & 2.5 & 50 & 92.0 & 80-120 \\
\hline \multicolumn{11}{|l|}{Magrestum} \\
\hline \multicolumn{11}{|l|}{Manganese} \\
\hline \multicolumn{11}{|l|}{Molybaerum} \\
\hline \multicolumn{11}{|l|}{Whokel} \\
\hline \multicolumn{11}{|l|}{Potassium} \\
\hline Selentum & 9.8 & 10 & 0 & 0 & 96.3 & 0.2 & 5 & 100 & 96.3 & 80-120 \\
\hline swaer & 9.8 & 10 & 0 & 0 & 50.2 & 0.2 & 2.5 & 50 & 100.4 & \(80-120\) \\
\hline
\end{tabular}
sodium
strontium

Thathicm
ma

Tbanium
Vanadium
zinc
Assochated samples me20412 : wat610-8, be1610-17
Results < Dhe are shown as zero for caloulathon purposes
(*) Outside of Qe limites
(**) Cox. sample result Baw * (sample volumef frad volumet
(anc) Analyte not requested

(*) Outside of QC limets
(anc) mande mot recuest
(anr) analyte not requested


\footnotetext{
a) Splse recovery indicates possibie matrux interferemce andfor ample nomomogeneity.
}


A1umam
Antimony
\begin{tabular}{lllllll} 
Arsenc & 0.52 & 88.7 & 110 & 80.2 & 27.1 (a) 20 \\
Bansum & 25.5 & 128 & 110 & 93.2 & 22.6 (a) 20
\end{tabular}

Berylizum
Cacmium \(0.0 \quad 2.3 \quad 2.75 \quad 83.6 \quad 24.4\) (e) 20

Cabcum
\begin{tabular}{lllllll} 
Chromium & 5.0 & 15.2 & 11 & 92.7 & 17.9 & 20
\end{tabular}

Cobalt

Copper
Iron
\begin{tabular}{llllllll} 
Head & 4.8 & 31.5 & 27.5 & 97.1 & 20.3 & (a) 20
\end{tabular}

Magnestum

Manganese
mo yodenum
Nacket

Potassium
\begin{tabular}{llllll} 
Selenium & 0.38 & 87.5 & 110 & \(79.2 N(b) 27.0\) (a) 20 \\
Siver & 0.0 & 2.4 & 2.75 & \(76.4 \mathrm{~N}^{2}(\mathrm{~b}) 21.1\) (a) 20
\end{tabular}

Sodium

Btrontium
had 1 wum
Tin

Mtentym

Vanadium
zinc
Assoctated samples MP20416: Falb10-16, p81610-18

Results < TDL are Bhown as zero for culcularion purposes
(*) Outs ide of QC IImits
(M) Matrix Spike Rec. Outside of QC Imits
(anc) Andyye not requested
(a) High RPD due to posslble sample nonhomoceneity
(b) Spike recovery indicates possible matriy interference and/or abmpe nonhomogeneity.

Wegln Number: F816.0
Accoust: Arpha - Abpha Analytics
Project: GRU Phase 2 ESA
 Matrix Type: Somp

Q4/21/11
\begin{tabular}{|c|c|c|c|}
\hline & SSP & Splrekot & QC \\
\hline Metal & Result & MPEMMCPL gec & Limits \\
\hline
\end{tabular}

Antrimony
\begin{tabular}{lllll} 
Argenic & 98.2 & 100 & 98.2 & \(80-120\) \\
Barium & 107 & 100 & 107.0 & \(80-120\) \\
Berylinum & & & & \\
Cachmum & 2.6 & 2.5 & 104.0 & \(80-120\)
\end{tabular}

Calcium
chrombur \(10.7 \quad 107.0 \quad 80-120\)
cobalt
copper
wron
Leac \begin{tabular}{llll}
24.9 & 25 & 99.6 & \(80-120\)
\end{tabular}

Magnesium
Mancanese
Molybdenum
Wekel

Potassium
\begin{tabular}{lllll} 
Selenium & 97.2 & 100 & 97.2 & \(80-120\) \\
Shiver & 2.4 & 2.5 & 96.0 & \(80-120\)
\end{tabular}

Sodium
strontinm
Thambum
Tin
witanium
vanedium
zinc
Associated samples MPQ0416: F81610-16, E81610-18
2esblts r Tot are shom as zero for calculation purposes
(*) Outside of oc iimltus
(anc) Ankuyte not requested


A lumbum
Antimony
\begin{tabular}{llll} 
Arsenic & 22.6 & 16.0 & 37.9 (a) \(0-10\) \\
Barium & 574 & 662 & \(15.3 *(b) 0-10\)
\end{tabular}

Beryllimm
Cacmunum
0.00
\(0.00 \quad \mathrm{No}\)
\(0-10\)

Cabcum

Chromium
113
130
14.8*(b) 0-10

Cobalt

Copper
ron


Magnes ium
Manganese

Molyocenum
Nickel
potassium
\begin{tabular}{llllll} 
Selentum & 8.50 & 11.9 & 40.0 & (a) \(0-10\) \\
Silver & 0.00 & 0.00 & NE & \(0-10\)
\end{tabular}

Sodicm

Strontium
Thaty ium
arn

Titandum

Vanadiun
zine
Associatec samples Mp20416: F81610-16, F81610-18

Resuhts \(<\) Thm are Shomn as zero for calculation purposes
(*) Outstae of gc limits
(anm Aralyte not requested
(a) percent diference acceptable due to low initial dample concentration (o so times tow
(b) Serial dinthon indicates possible metwix finterfecence.



Resmits < TDL zre shom as zero for caloulation purposes
(*) Outside of aC Limits
(ans) snalyte not requested

Togin Vumber： 81610
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Prep Date: $04 / 22 / 11$

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Prep Date: 04/22/11
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\hline
\end{tabular}

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\title{
APPENDIX F BENZO(A)PYRENE CONVERSION TABLE
}

\title{
Benzo(a)pyrene Conversion Table
}

For Direct Exposure Soil Cleanup Target Levels
Site Name
Location:
Facility ID No.:

GRU Facilities Properties
Parcel 1

SB-3
4/13/2011

8

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " " " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the " \(J\) " qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " \(M\) " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 0.010 & 0.1 & 0.001 \\
\hline Benzo(b)fluoranthene & 0.001 & 0.1 & 0.000 \\
\hline Benzo(k)fluoranthene & 0.010 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.009 & 1.0 & 0.009 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & \(J\) & reported value \\
ND at MDL & MDL & reported (estimated) value \\
\(<\) MDL & Estimated & T & \(1 / 2\) reported value \\
\(\geq\) MDL but <PQL & Estimated & reported (estimated) value \\
\(\geq\) MDL but <PQL & Not estimated & & reported (estimated) value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
GRU Facilities Properties
Location:
Parcel 1
Facility ID No.:

Soil Sample No.
Sample Date
Location:
Depth (ft): \(\qquad\)

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " \(I\) " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the " \(J\) " qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the " 1 " qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " M " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.020 & 1.0 & 0.020 \\
\hline Benzo(a)anthracene & 0.010 & 0.1 & 0.001 \\
\hline Benzo(b)fluoranthene & 0.010 & 0.1 & 0.001 \\
\hline Benzo(k)fluoranthene & 0.080 & 0.01 & 0.001 \\
\hline Chrysene & 0.110 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.020 & 1.0 & 0.020 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ;\) DE Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square \mathbf{0 . 0}\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Summary Criteria for Table Entries} \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
\hline Various & Estimated & J & reported (estimated) value \\
\hline ND at MDL & MDL & U & 1/2 reported value \\
\hline < MDL & Estimated & T & reported (estimated) value \\
\hline \(\geq\) MDL but < PQL & Estimated & I & reported (estimated) value \\
\hline \(\geq \mathrm{MDL}\) but < PQL & Not estimated & M & \(1 / 2\) reported value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

For Direct Exposure Soil Cleanup Target Levels
\begin{tabular}{ll} 
Site Name: \\
Location: \\
Facility ID No.: & GRU Facilities Properties \\
\cline { 2 - 2 } \\
\begin{tabular}{ll} 
Soil Sample No. \\
Sample Date \\
Location: \\
Depth (ft):
\end{tabular} & SB-6 \\
\hline
\end{tabular}

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "l" qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " U " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " T " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " M " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.002 & 1.0 & 0.002 \\
\hline Benzo(a)anthracene & 0.110 & 0.1 & 0.011 \\
\hline Benzo(b)fluoranthene & 0.030 & 0.1 & 0.003 \\
\hline Benzo(k)fluoranthene & 0.002 & 0.01 & 0.000 \\
\hline Chrysene & 0.020 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.003 & 1.0 & 0.003 \\
\hline Indeno(1,2,3-cd)pyrene & 0.003 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ;\) DE Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline \multicolumn{7}{|c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
Various & Estimated & \(J\) & reported (estimated) value \\
ND at MDL & MDL & \(U\) & \(1 / 2\) reported value \\
\(<M D L\) & Estimated & Teported (estimated) value \\
\(\geq M D L\) but \(<P Q L\) & Estimated & & reported (estimated) value \\
\(\geq M D L\) but <PQL & Not estimated & & \(1 / 2\) reported value \\
\hline
\end{tabular}

\title{
Benzo(a)pyrene Conversion Table
}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
Location:
Facility ID No.:

GRU Facilities Properties
Parcel 1
\(\qquad\)
SB-7
4/13/2011

8

Soil Sample No.
Sample Date
Location:
Depth (ft):
\begin{tabular}{l} 
Benzo(a)pyrene \\
For Direct Exposure Soil \\
GRU Facilities Properties \\
\hline Parcel 1 \\
\hline \\
\hline SB-7 \\
\hline \(4 / 13 / 2011\) \\
\hline 8 \\
\hline
\end{tabular}

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " \(l\) " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " \(T\) " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " \(M\) " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 0.001 & 0.1 & 0.000 \\
\hline Benzo(b)fluoranthene & 0.060 & 0.1 & 0.006 \\
\hline Benzo(k)fluoranthene & 0.001 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & J & reported value \\
ND at MDL & MDL & U & reported (estimated) value \\
\(<\) MDL & Estimated & T & \(1 / 2\) reported value \\
\(\geq\) MDL but < PQL & Estimated & reported (estimated) value \\
\(\geq\) MDL but <PQL & Not estimated & \(M\) & reported (estimated) value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

\section*{For Direct Exposure Soil Cleanup Target Levels}

Site Name:
GRU Facilities Properties
Location:
Facility ID No.: \(\qquad\)

Soil Sample No.
Sample Date
Location:
Depth (ft):
\begin{tabular}{l} 
Benzo(a)pyrene \\
For Direct Exposure So \\
GRU Facilities Properties \\
\hline Parcel 1 \\
\hline \\
\hline SB-8 \\
\hline \(4 / 13 / 2011\) \\
\hline 8 \\
\hline
\end{tabular}

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " \(T\) " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 0.400 & 0.1 & 0.040 \\
\hline Benzo(b)fluoranthene & 0.001 & 0.1 & 0.000 \\
\hline Benzo(k)fluoranthene & 0.001 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ;\) DE Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline \multicolumn{5}{|c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & J & reported value \\
ND at MDL & MDL & U & reported (estimated) value \\
\(<\) MDL & Estimated & T & \(1 / 2\) reported value \\
\(\geq\) MDL but < PQL & Estimated & 1 & reported (estimated) value \\
\(\geq\) MDL but <PQL & Not estimated & M & reported (estimated) value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

\section*{For Direct Exposure Soil Cleanup Target Levels}

Site Name:
Location:
Facility ID No.:

GRU Facilities Properties
Parcel 1

SB-16
4/13/2011

6

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", "T" or " 1 " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " \(T\) " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "।" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 0.060 & 0.1 & 0.006 \\
\hline Benzo(b)fluoranthene & 0.001 & 0.1 & 0.000 \\
\hline Benzo(k)fluoranthene & 0.001 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
Various & Estimated & J & reported (estimated) value \\
ND at MDL & MDL & U & \(1 / 2\) reported value \\
\(<M D L\) & Estimated & T & reported (estimated) value \\
\(\geq M D L\) but \(<\mathrm{PQL}\) & Estimated & reported (estimated) value \\
\(\geq M D L\) but \(<\mathrm{PQL}\) & Not estimated & M & \(1 / 2\) reported value \\
\hline
\end{tabular}

\title{
Benzo(a)pyrene Conversion Table
}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
Location:
Facility ID No.:

Soil Sample No.
Sample Date
Location:
Depth (ft):

GRU Facilities Properties
Parcel 1

SB-17
4/13/2011
0.5

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " J ", " T " or " l " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " T " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.100 & 1.0 & 0.100 \\
\hline Benzo(a)anthracene & 0.020 & 0.1 & 0.002 \\
\hline Benzo(b)fluoranthene & 0.160 & 0.1 & 0.016 \\
\hline Benzo(k)fluoranthene & 0.030 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}
\(D E\) Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; D E\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.1\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
Various & Estimated & \(J\) & reported (estimated) value \\
ND at MDL & MDL & \(U\) & \(1 / 2\) reported value \\
\(<\) MDL & Estimated & \(T\) & reported (estimated) value \\
\(\geq M D L\) but \(<\) PQL & Estimated & reported (estimated) value \\
\(\geq M D L\) but \(<\) PQL & Not estimated & \(M\) & \(1 / 2\) reported value \\
\hline
\end{tabular}

\title{
Benzo(a)pyrene Conversion Table \\ For Direct Exposure Soil Cleanup Target Levels
}

Site Name:
GRU Facilities Properties
Location:
Facility ID No.: \(\qquad\)

Soil Sample No.
Sample Date
Location:
Depth (ft):

SB-18
4/14/2011
0.5

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " J ", " \(T\) " or " l " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " \(T\) " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " \(M\) " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.040 & 1.0 & 0.040 \\
\hline Benzo(a)anthracene & 0.050 & 0.1 & 0.005 \\
\hline Benzo(b)fluoranthene & 0.050 & 0.1 & 0.005 \\
\hline Benzo(k)fluoranthene & 0.040 & 0.01 & 0.000 \\
\hline Chrysene & 0.060 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.030 & 1.0 & 0.030 \\
\hline Indeno(1,2,3-cd)pyrene & 0.040 & 0.1 & 0.004 \\
\hline DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ;\) DE Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\) \\
\multicolumn{4}{|c|}{ Total Benzo(a)pyrene Equivalents \(=\)} \\
\hline
\end{tabular}

The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline \multicolumn{4}{|c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & \(J\) & reported value \\
ND at MDL & MDL & \(U\) & reported (estimated) value \\
\(<\) MDL & Estimated & T & \(1 / 2\) reported value \\
\(\geq M D L\) but \(<P Q L\) & Estimated & reported (estimated) value \\
\(\geq\) MDL but <PQL & Not estimated & reported (estimated) value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

\section*{For Direct Exposure Soil Cleanup Target Levels}

Site Name:
Location:
Facility ID No.:
GRU Facilities Properties
Parcel 2
\(\qquad\)
Soil Sample No.
Sample Date
Location:
Depth (ft):
\begin{tabular}{l} 
SB-19 \\
\hline \(4 / 13 / 2011\) \\
\hline 0.5
\end{tabular}

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " " " qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the " \(J\) " qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " \(T\) " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " M " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.150 & 1.0 & 0.150 \\
\hline Benzo(a)anthracene & 0.140 & 0.1 & 0.014 \\
\hline Benzo(b)fluoranthene & 0.200 & 0.1 & 0.020 \\
\hline Benzo(k)fluoranthene & 0.100 & 0.01 & 0.001 \\
\hline Chrysene & 0.250 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.160 & 1.0 & 0.160 \\
\hline Indeno(1,2,3-cd)pyrene & 0.110 & 0.1 & 0.011 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.4\)
The concentration shown EXCEEDS the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Summary Criteria for Table Entries} \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
\hline Various & Estimated & J & reported (estimated) value \\
\hline ND at MDL & MDL & U & 1/2 reported value \\
\hline < MDL & Estimated & T & reported (estimated) value \\
\hline \(\geq\) MDL but < PQL & Estimated & 1 & reported (estimated) value \\
\hline \(\geq\) MDL but < PQL & Not estimated & M & \(1 / 2\) reported value \\
\hline
\end{tabular}

\title{
Benzo(a)pyrene Conversion Table
}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
Location:
Facility ID No.:
GRU Facilities Properties
Parcel 2

SB-21
4/14/2011
Sample Date
Location:
Depth (ft):
\(\qquad\)

Soil Sample No.

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a " \(J\) ", " \(T\) " or " "qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " T " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "l" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " M " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|c|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.002 & 1.0 & 0.002 \\
\hline Benzo(a)anthracene & 1.500 & 0.1 & 0.150 \\
\hline Benzo(b)fluoranthene & 0.430 & 0.1 & 0.043 \\
\hline Benzo(k)fluoranthene & 0.002 & 0.01 & 0.000 \\
\hline Chrysene & 0.002 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.830 & 1.0 & 0.830 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline \multicolumn{4}{|l|}{DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)} \\
\hline \multicolumn{3}{|r|}{Total Benzo(a)pyrene Equivalents \(=\)} & 1.0 \\
\hline \multicolumn{4}{|l|}{The concentration shown EXCEEDS the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).} \\
\hline \multicolumn{4}{|l|}{The concentration shown EXCEEDS the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).} \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Summary Criteria for Table Entries} \\
\hline Detection & Concentration Reported & Data Qualifier & Enter \\
\hline Various & Quantified with certainty & None & reported value \\
\hline Various & Estimated & J & reported (estimated) value \\
\hline ND at MDL & MDL & U & 1/2 reported value \\
\hline < MDL & Estimated & T & reported (estimated) value \\
\hline \(\geq\) MDL but < PQL & Estimated & 1 & reported (estimated) value \\
\hline \(\geq \mathrm{MDL}\) but < PQL & Not estimated & M & \(1 / 2\) reported value \\
\hline
\end{tabular}

\title{
Benzo(a)pyrene Conversion Table
}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
Location:
Facility ID No.:
GRU Facilities Properties
Parcel 2

Soil Sample No.
Sample Date
Location:
Depth (ft):
\(\qquad\)

SB-23
4/14/2011

8
INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "l" qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the " \(J\) " qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "|" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|c|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 2.800 & 0.1 & 0.280 \\
\hline Benzo(b)fluoranthene & 0.530 & 0.1 & 0.053 \\
\hline Benzo(k)fluoranthene & 0.350 & 0.01 & 0.004 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline \multicolumn{4}{|l|}{\(\overline{\text { DE Residential }=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE} \text { Industrial }=0.7 \mathrm{mg} / \mathrm{kg}}\)} \\
\hline \multicolumn{3}{|l|}{Total Benzo(a)pyrene Equivalents \(=\)} & 0.3 \\
\hline \multicolumn{4}{|l|}{The concentration shown EXCEEDS the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).} \\
\hline
\end{tabular}

The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & J & reported value \\
ND at MDL & MDL & U & reported (estimated) value \\
\(<\) MDL & Estimated & T & \(1 / 2\) reported value \\
\(\geq\) MDL but \(<\) PQL & Estimated & reported (estimated) value \\
\(\geq\) MDL but \(<\) PQL & Not estimated & reported (estimated) value \\
\hline
\end{tabular}

\section*{Benzo(a)pyrene Conversion Table}

For Direct Exposure Soil Cleanup Target Levels
Site Name:
Location:
GRU Facilities Properties
Parcel 2
Facility ID No.:

Soil Sample No.
Sample Date
Location:
Depth (ft):
\(\qquad\)

SB-24
4/14/2011

6

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "l" qualifier). Enter the contaminant concentrations (in \(\mathrm{mg} / \mathrm{kg}\) ) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):
1. If quantified with certainty, or estimated and has the " \(J\) " qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the " \(U\) " qualifier) enter \(1 / 2\) of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the " T " qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the " 1 " qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the " \(M\) " qualifier) enter \(1 / 2\) of the reported value.
\begin{tabular}{|l|c|c|c|}
\hline Contaminant & Concentration (mg/kg) & Toxic Equivalency Factor & Benzo(a)pyrene Equivalents \\
\hline Benzo(a)pyrene & 0.001 & 1.0 & 0.001 \\
\hline Benzo(a)anthracene & 0.210 & 0.1 & 0.021 \\
\hline Benzo(b)fluoranthene & 0.001 & 0.1 & 0.000 \\
\hline Benzo(k)fluoranthene & 0.001 & 0.01 & 0.000 \\
\hline Chrysene & 0.001 & 0.001 & 0.000 \\
\hline Dibenz(a,h)anthracene & 0.002 & 1.0 & 0.002 \\
\hline Indeno(1,2,3-cd)pyrene & 0.002 & 0.1 & 0.000 \\
\hline
\end{tabular}

DE Residential \(=0.1 \mathrm{mg} / \mathrm{kg} ; \mathrm{DE}\) Industrial \(=0.7 \mathrm{mg} / \mathrm{kg}\)
Total Benzo(a)pyrene Equivalents \(=\square 0.0\)
The concentration shown does not exceed the Residential Direct Exposure SCTL of \(0.1 \mathrm{mg} / \mathrm{kg}\).
The concentration shown does not exceed the Industrial Direct Exposure SCTL of \(0.7 \mathrm{mg} / \mathrm{kg}\).
\begin{tabular}{|l|l|l|l|}
\hline & \multicolumn{3}{c|}{ Summary Criteria for Table Entries } \\
\hline Detection & Concentration Reported & Data Qualifier & \\
\hline Various & Quantified with certainty & None & Enter \\
Various & Estimated & \(J\) & reported value \\
ND at MDL & MDL & U & \(1 / 2\) reported value \\
\(<\) MDL value \\
\(\geq\) MDL but < PQL & Estimated & T & reported (estimated) value \\
\(\geq\) MDL but <PQL & Estimated & reported (estimated) value \\
\hline
\end{tabular}```


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    Samples anaiyzed by EMSL Analyical. Inc. Onando. FL NVLAF Lab Code $101151-0$

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    Samples analyzed by EMS. Analyical inc. Oriando. FL NVLAP Lab Code $101151-0$

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    Samples analyzed by EMSL Analyical, Inc. Ortando. FL NVIAP Lab Code 1011510

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    Samples analyzed by EMSL Anaiytical. Inc. Orando. FL NVLAP Lab Code 101151-0

[^33]:    Moisture Coment Codes: $\mathbf{0}=\mathrm{Ory}$. M-Monst: W Wet; $S$ : Sumated

[^34]:    The qualfier "L" denotes that the reported value is above the calbration range. The actual value may be higher than the value given
    The quamter " denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
    The guamer $u$ " denotes that the analyte was not present, and the value preceding the " $U$ is the MDL.
    Per FDEP recommendation, DI water is used instead of sodum bisufate in low-ievel soll vials

[^35]:    The qualifier "L" denotes that the reported value is above the calbration range. The actual value may be higher than the value given.
    The qualifer "I" denotes that the reported value is between the MOL (Method Detection Limit) and the PQL (Practical Quantitation Limit),
    The qualifier "U" denotes that the analyte was not present, and the value preceding the " $U$ " is the MDL.
    Per FDEP recommendation, DI water is used instead of sodum bisulfate in low-tevel soll vials

[^36]:    NR denotes that the surrogate recovery is not reportable due to matrix interterence.

[^37]:    NR denotes that the surogate recovery is not reportable due to matrix interference
    The qualtier "L denotes that the value reported is above the calbration curve.
    The qualier "I denotes that the reported value is between the MoL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
    The qualifer "U" denotes that the analyte was not detected, and the value preceding the "U" is the MOL
    Surogate \% Recovery limits are: p-Terphenyl 66.1-120.

[^38]:    NR denotes that the sumrogate recovery is not reportable due to matrix interference
    The qualfier "L" denotes that the value reported is above the calbration curve.
    The qualfier "I denotes that he reported value is between the MDL (Method Detection Limit and the PQL (Practical Quantiation Limit)
    The qualfier "U" denotes that the anatyte was not detected, and the value preceding the "U" is the MDL.
    Surogate \% Recovery imits are: p-Terphenyl 66.1-120.

[^39]:    NR denotes that the surrogate recovery is not reportable due to matrix interference.
    The qualifier " $L$ " denotes that the value reported is above the calibration curve.
    The quallier "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL. (Practical Quantitation Limit).
    The qualifier "U" denotes that the analyte was not detected, and the value preceding the "U" is the MOL.
    Surrogate \% Recovery limits are: OTP 62-109 and C-39 60-118.

[^40]:    R denotes that the surrogate recovery is not reportable due to matrix interference.
    qualifer "L" denotes that the value reported is above the calibration curve.
    The qualifer "p" denotes that the reported value is between the MDL (Method Detection Limit) and the $P Q L$ (Practical Quantitation Limit).
    The qualifier "U" denotes that the analyte was not detected, and the value preceding the "U" is the MOL.
    Surrogate \% Recovery imits are: p-Terpheny1 72.4-130.

[^41]:    Soil samples reported on a dry weight basis unless otherwise indicated on result page.

[^42]:    $\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
    $\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

[^43]:    The qualifier "L" denotes that the reported value is above the calbration range. The actual value may be higher than the value given.
    The qualifer "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit)
    The qualifer " $U$ " denotes that the analyte was not present, and the value preceding the " $U$ " is the MDL
    Per FDEP recommendation, CI water is used instead of sodium bisulfate in low-level soil vials

[^44]:    The qualifer " $L$ " denotes that the reported value is above the calbration range. The actual value may be higher than the value given.
    The qualifier "I" denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
    The qualifier "U" denotes that the analyte was not present, and the value preceding the "U" is the MDL.
    Per FDEP recommendation, DI water is used instead of sodium bisulfate in low-level soil vials

[^45]:    T denotes that the surtogate recovery is not reportable due to matrix interference.
    The qualfier "L denotes that the vatue reported is above the calibration curve.
    The qualifier "F denotes that the repoted value is between the MOL (Method Detecton Limit) and the PQL (Practical Quantation Limit).
    The qualfier "U" denotes that the analyte was not detected, and the value preceding the " 4 " is the Mou
    Suroaate \% Recover limits are p-Terpheny $66.1-120$.

[^46]:    NR denotes that the surrogate recovery is not reportable due to matrix interference.
    te qualfer ". "denotes that the value reported is above the calibration curve.
    The qualfier "f denotes that the reported value is between the MDL (Method Detection Limit) and the PQL (Practical Quantitation Limit).
    The qualifier " $U$ " denotes that the anayte was not detected, and the value preceding the "U" is the MDL
    Surrogate \% Recovery limits are: p-Terphenyl 66.1-120.

[^47]:    $\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
    $\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

[^48]:    $U=$ Not detected $\quad$ MDL - Method Detection Limit $\mathrm{PQL}=$ Practical Quantitation Limit
    $\mathrm{L}=$ Indicates value exceeds calibration range
    $\mathrm{I}=$ Result $>=$ MDL but $<$ PQL $\mathrm{J}=$ Estimated value
    $V=$ Indicates analyte found in associated method blank
    $\mathrm{N}=$ Indicates presumptive evidence of a compound

[^49]:    $\mathrm{U}=$ Not detected $\quad$ MDL - Method Detection Limit $\mathrm{PQL}=$ Practical Quantitation Limit
    $\mathrm{L}=$ Indicates value exceeds calibration range
    $\mathrm{I}=$ Result $>=\mathrm{MDL}$ but $<\mathrm{PQL} \mathrm{J}=$ Estimated value
    $V=$ Indicates analyte found in associated method blank
    $\mathrm{N}=$ Indicates presumptive evidence of a compound

[^50]:    $\mathrm{U}=$ Indicates a resuli $<\mathrm{MDL}$
    $\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

[^51]:    $\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
    $1=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

[^52]:    $U=$ Not detected $\quad$ MDL - Method Detection Limit $\mathrm{PQL}=$ Practical Quantitation Limit
    $L=$ Indicates value exceeds calibration range
    $\mathrm{I}=$ Result $>=\mathrm{MDL}$ but $<\mathrm{PQL} \mathrm{J}=$ Estimated value
    $V=$ Indicates analyte found in associated method blank
    $\mathrm{N}=$ Indicates presumptive evidence of a compound

[^53]:    $\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
    $\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

[^54]:    $\mathrm{U}=\mathrm{Not}$ detected
    MDL - Method Detection Limit
    $\mathrm{PQL}=$ Practical Quantitation Limit
    $\mathrm{L}=$ Indicates value exceeds calibration range
    $I=$ Result $>=$ MDL but $<\mathrm{PQL} \quad J=$ Estimated value
    $V=$ Indicates analyte found in associated method blank
    $\mathrm{N}=$ Indicates presumptive evidence of a compound

[^55]:    $\mathrm{U}=$ Indicates a result $<\mathrm{MDL}$
    $\mathrm{I}=$ Indicates a result $>=\mathrm{MDL}$ but $<\mathrm{PQL}$

