



February 8, 2011

Mr. Jason Booth  
On-Scene Coordinator  
U.S. Environmental Protection Agency  
61 Forsyth Street, SW, 11th Floor  
Atlanta, Georgia 30303

**Subject:**      **Draft Removal Site Evaluation Letter Report**  
**Robinson Foundry**  
**Alexander City, Tallapoosa County, Alabama**  
**EPA Contract No. EP-W-05-054**  
**TDD No. TTEMI-05-003-0063**

Dear Mr. Booth:

The Tetra Tech Superfund Technical Assessment and Response Team (START) is submitting this letter report summarizing the removal site evaluation (RSE) activities conducted at the Robinson Foundry site in Alexander City, Tallapoosa County, Alabama. Appendix A provides figures that show the site location, a layout of the site, and the sampling locations. Appendix B provides tables showing analytical results for samples collected at the site. Appendix C is a copy of Tetra Tech's field logbook notes. Appendix D provides the laboratory analytical data packages. Appendix E is a photographic log of the RSE activities. Appendix F is a Table of Witnesses.

## **BACKGROUND**

The Robinson Foundry facility is located at 505 Robinson Court, immediately west of downtown Alexander City, Alabama, in a section of unincorporated Tallapoosa County surrounded by Alexander City (see Figure 1). Previously, the foundry cast automobile parts for the domestic automobile industry using pre-processed steel, making Robinson Foundry a secondary founding operation. The facility began operations in the mid-1940s and operated for 60 years until an economic downturn in the domestic automobile industry slowed the business. Robinson Foundry Inc. filed for Chapter 11 bankruptcy protection on January 28, 2006, in the United States Bankruptcy Court for the Middle District of Alabama. During the pendency of the Chapter 11 bankruptcy, the shareholders of Robinson Foundry, Inc. sold all capital stock to Advanced Metals Group, LLC (Advanced Metals Group), a company in the business of managing aluminum and iron foundries. Under the direction of Advanced Metals Group, Robinson Foundry Inc. was merged with Belcher Corporation of Boston, Massachusetts, another foundry under the management of Advanced Metals Group. At this time, the operations of Robinson Foundry were reportedly changed to incorporate a new heat treating process using large quantities of quenching oil, which was shipped to Alexander City, Alabama, from Massachusetts. According to anecdotal evidence from former employees, the foundry failed to reemerge from bankruptcy as a profitable enterprise, and before long the facility owners began a massive sell-off of equipment and foundry machinery, culminating with the ultimate shutdown of the facility in late 2008. In May 2009, the Robinson Foundry property was put up for auction at a Tallapoosa County tax sale as a result of deficient *ad valorem* tax obligations. No bids were offered at the sale, and accordingly, the property was bid automatically to the State of Alabama, which became the owner of the site. The site consists of several interconnected buildings that make up the main production facility, and several support buildings on the main parcel. The remainder of the property is covered by a mix of debris, discarded foundry sand, and heavy vegetation (see Figure 2).

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At the request of Tallapoosa County Emergency Management Agency (TCEMA) officials, personnel from the Alabama Department of Environmental Management (ADEM) inspected the facility in early June 2008. ADEM found hundreds of containers of oil and hazardous materials stored around the site, ranging in size from 5-gallon buckets to large 3,000-gallon tanks. ADEM contacted the EPA Emergency Response and Removal Branch for assistance. EPA On-Scene Coordinator (OSC) Alyssa Hughes initiated an emergency response at the site to deal with the imminent threat posed by the chemicals. During the emergency response, contractors gathered and characterized the wastes at the site, which were eventually shipped off site for disposal in September 2009.

Additionally, ADEM expressed concern with the large amount of foundry sand situated in the northern portion of the property immediately adjacent to the creek. Since the facility was a secondary founding operation, the sand was not a listed hazardous waste. However, the composition of foundry sand is highly variable, depending on the alloy being cast, and frequently contains high concentrations of heavy metals. ADEM feared that any contamination in the sand piles would find its way into the creek and the nearby residential neighborhood immediately downstream of the site. Additionally, areas of stained soil were noticed draining into the small stream that runs along the site's eastern boundary. ADEM requested that EPA perform an RSE of the Robinson Foundry site to gauge the potential impact to nearby human populations.

## REMOVAL SITE EVALUATION ACTIVITIES

RSE activities at the site occurred during three events. The initial event implemented the approved site-specific sampling and analysis plan (SAP), and the subsequent events collected samples to further characterize and define the contamination at the site. Each event is described below.

### JULY 2009 SAMPLING EVENT

On July 20, 2009, EPA OSC Stephen Ball met Tetra Tech START at the site to begin RSE activities. In accordance with the site-specific SAP, dated July 16, 2009, Tetra Tech collected composite and grab surface soil samples from 13 areas suspected of being contaminated by bag dust, foundry sand, spilled oils, and other industrial activities. Eleven samples were composite surface soil samples collected from various areas of the site. One sample was a grab surface soil sample collected from the foundry sand in the northern portion of the site, and one sample was a grab sediment sample collected from the creek in the northern portion of the property. All samples were analyzed for Target Analyte List (TAL) metals. Where organic contamination was suspected (locations RF-06, RF-07, and RF-12), samples were also analyzed for volatile organic compounds (VOC), semivolatile compounds (SVOC), and polychlorinated biphenyls (PCB). The sampling locations are depicted on Figure 3 in Appendix A.

### JULY 2009 RESULTS

Samples from the July 2009 sampling event were submitted to EPA's Contract Laboratory Program (CLP) laboratories for analysis of all parameters on the EPA TAL for metals and were analyzed in accordance with the EPA CLP Statement of Work (SOW) for Inorganic Analysis, Multi-Media, Multi-Concentration (ILM05.4). Selected samples from the July 2009 sampling event were also submitted for analysis of several parameters on the EPA Target Compound List (TCL), specifically VOCs, SVOCs, and PCBs. These samples were analyzed in accordance with the EPA CLP SOW for Organics Analysis, Multi-Media, Multi-Concentration (SOM01.2).

Analytical results for the July 2009 event are provided in Table 1 in Appendix B. For comparison, the Region 4 Worker (Industrial) removal action levels (RALs) for certain constituents are provided. While there are detectable levels of several compounds in the samples, only one sample exceeded any of the RALs. Sample RF-07 contained 160,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) of Aroclor1242. The RAL for



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Aroclor1242 in soil under an industrial worker exposure scenario is 82,600 µg/kg.

Analytical data from the July 2009 sampling event were subject to a quality assurance review by the EPA Science and Ecosystem and Support Division (SESD), as described in the EPA SESD laboratory data evaluation guidelines. The data validation report from SESD indicates some qualifiers to use of concentrations of the parameters. Some of the data values were qualified with a “J,” indicating that the identification of the analyte was acceptable but the reported values were an estimate. Some sample results were reported with a “U” qualifier, meaning that the analyte was not detected at or above the reporting limit; the reported number is the sample-specific laboratory-derived reporting limit for the constituent, meaning that the concentration was not determined to be present in the sample at or above that value. Other qualifiers are defined in Appendix B and in the full data report from SESD, provided in Appendix D.

Samples RF-06-SF and RF-07-SF were both non-detect for benzo(a)pyrene at the given reporting limit. All PCB results for sample RF-06-SF were qualified with an “R,” indicating that the data were unusable (rejected) because of low recovery levels of a structurally similar compound (termed a “surrogate”). Surrogates are used to assess the instrument’s ability to detect a group of analytes. A known amount of the surrogate is added to the sample before extraction and injection into the instrumentation. Low recoveries of known surrogate concentrations call into question the results of the chemically similar target analytes. No PCBs were detected at any level in sample RF-06-SF. However, the surrogate recoveries were too low to accurately determine if PCBs were not detected because the sample matrix was interfering with the analysis, or if there were simply no PCBs in the sample. The CLP laboratory attempted to use a cleaning method to augment recovery of the surrogate (and presumably any PCBs in the sample), but the method employed was unsuccessful. Thus, the results were deemed unusable.

## AUGUST 2009 SAMPLING EVENT

In response to the rejection of the PCB data from the July 2009 sampling, OSC Ball requested Tetra Tech return to the site in August 2009 and collect additional samples from location RF-06. Tetra Tech returned to the site and collected three additional composite surface soil samples from the area of RF-06. These sampling locations (RF-06A, RF-06B, and RF-06C) are depicted on Figure 3 in Appendix A.

## AUGUST 2009 RESULTS

The samples were submitted to Analytical Environmental Services, Inc. and were analyzed for total PCBs. They were processed using Florisil and an acid wash (a different method than the CLP laboratory originally used) to increase the surrogate (and presumably the PCB) recovery in accordance with standard laboratory sample cleanup procedures, as suggested in SW846 Method 8081B. The processing produced usable data, as evidenced by acceptable surrogate recoveries and positive PCB detections in the samples.

The analytical results are summarized in Table 2 in Appendix B. For comparison, the Region 4 Industrial RALs for the Arochlors are provided. None of the samples exceeded the RALs for any PCBs.

## JULY 2010 SAMPLING EVENT

Based on the positive PCB detections seen at location RF-07 in the July 2009 sampling, EPA concluded that additional sampling for PCBs was needed at the site to fully characterize any potential threats from PCB exposure. OSC Jason Booth therefore asked Tetra Tech to develop a plan to collect samples for a full PCB congener analysis. EPA felt this analysis was appropriate for the site, as the traditional Arochlor analysis was frequently inadequate in detecting heavily weathered and aged PCBs. For a full explanation of PCBs, congeners, and homologs, visit <http://www.epa.gov/osw/hazard/tsd/pcbs/index.htm>. EPA toxicologists worked with the CLP program to define a new statement of work and analytical methods for the laboratory to use for this event.



Tetra Tech mobilized back to the site July 27, 2010, to collect sediment and surface soil samples from location RF-07 and the ditch leading away from this area. Location RF-07 was subdivided into four smaller areas, and 5-point composites were collected from 0 to 6 inches below the surface at these locations (RF-23-SS, RF-24-SS, RF-25-SS, and RF-26-SS). Another grab soil sample (RF-27-SS) was collected from the drainage pathway between location RF-07 and the creek.

The initial sampling at RF-12 in July 2009 detected low levels of PCBs in the creek sediment approximately 400 feet downstream from location RF-07. Based on this detection, Tetra Tech collected three downstream samples, including one duplicate (RF-20-SED, RF-20-SED-DUP, RF-21-SED, RF-22-SED), and one upstream sediment (RF-28-SED). All five sediment samples were grab samples. The samples were analyzed for PCB congeners at a CLP laboratory. See Figure 4 for sampling locations.

## JULY 2010 RESULTS

Analytical results for the PCB congener analysis can be found in Table 3. Only one sample was found to contain levels above reference limits. RF-23-SS, which was part of the subdivided original RF-07 location, was found to contain elevated levels of TEQ (Mammalian Toxic Equivalent for PCBs) above the associated limits. The TEQ at sample RF-23-SS (5,400 nanograms per kilogram [ng/kg]) was above the industrial RAL (2,040 ng/kg).

The laboratory listed results for PCBs according to their Chemical Abstract Service (CAS) numbers so they could be easily identified as a standard PCB compounds, as PCB manufacturers produce numerous types of mixtures. Total PCBs were determined by summing all the congener PCB values, and these sums were compared with the regional RAL of the high-risk polychlorinated biphenyls. The TEQ value was calculated using a method developed by the World Health Organization (WHO), which associates multiplication factors to various compounds to yield an equivalent toxicity value related to 2,3,7,8-tetrachlorodibenzodioxin (TCDD), the most toxic chlorinated dibenzo-p-dioxin. 2,3,7,8-TCDD would have a toxicity equivalency factor (TEF) of 1, while other chemicals would have 1 or less than 1.

## DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

Tetra Tech followed sample collection procedures outlined in the final SAP and in accordance with the EPA Region 4 SESD Field Branch Quality System and Technical Procedures, dated February 2008. Field logbooks for the RSE sampling event are contained in Appendix C. Location data for each composited area and grab sample (with the exception of the subsections RF-06A, RF-06B, and RF-06C) were collected with sub-meter accuracy using a Trimble GeoXT global positioning system with real-time data-correction capabilities. These locations are shown on Figures 3 and 4 in Appendix A.

During the July 2009 field sampling event, some sampling locations deviated from the locations proposed in the final SAP in response to site conditions. Deviations in the field were documented in the logbook notes contained in Appendix C and are summarized below.

- Sample RF-11-SF was changed from a grab sample to a composite sample based on the lack of an adequately formed drainage path from the foundry sand piles.
- Sample location RF-12 was moved based on accessibility to the stream.
- Sample location RF-13 was moved based on an inability to access portions of the on-site stream. The sample type was also modified from a grab sediment sample to a grab surface soil sample and organic compounds were removed from the analysis suite, as the area sampled was suspected of being foundry sand.



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## CONCLUSIONS

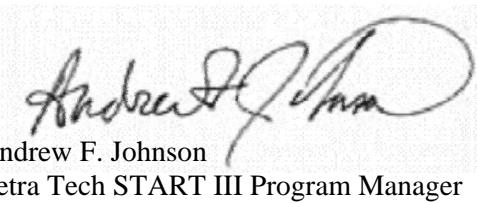
PCB contamination was originally found at location RF-07. This location was further delineated, and contamination was detected at only one location using much more sensitive testing methodologies. No contamination levels above the applicable RAL or the associated TEQ for any constituent were found in the creek or drainage pathway leading from this area. Based on the small size of the area in question, additional delineation is not warranted. EPA will select any removal or remedial actions required at the site.

If you have any questions, please call Charles Berry at (678) 775-3098.

Sincerely,



Charles Berry  
Tetra Tech START III Site Manager



Andrew F. Johnson  
Tetra Tech START III Program Manager

Enclosures (5)

cc:     Katrina Jones, EPA Project Officer  
         Darryl Walker, EPA Alternate Project Officer  
         Sandra Harrigan, START III Task Order Manager  
         Angel Reed, START III Document Control Coordinator

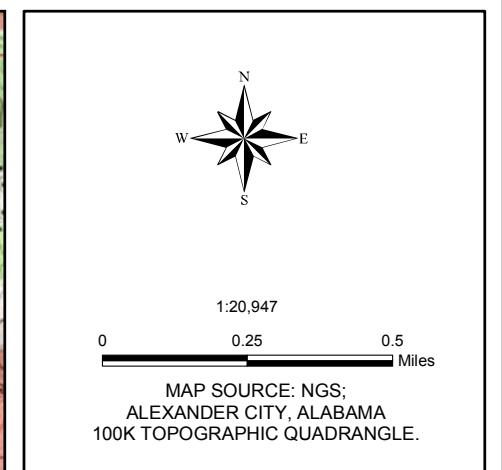
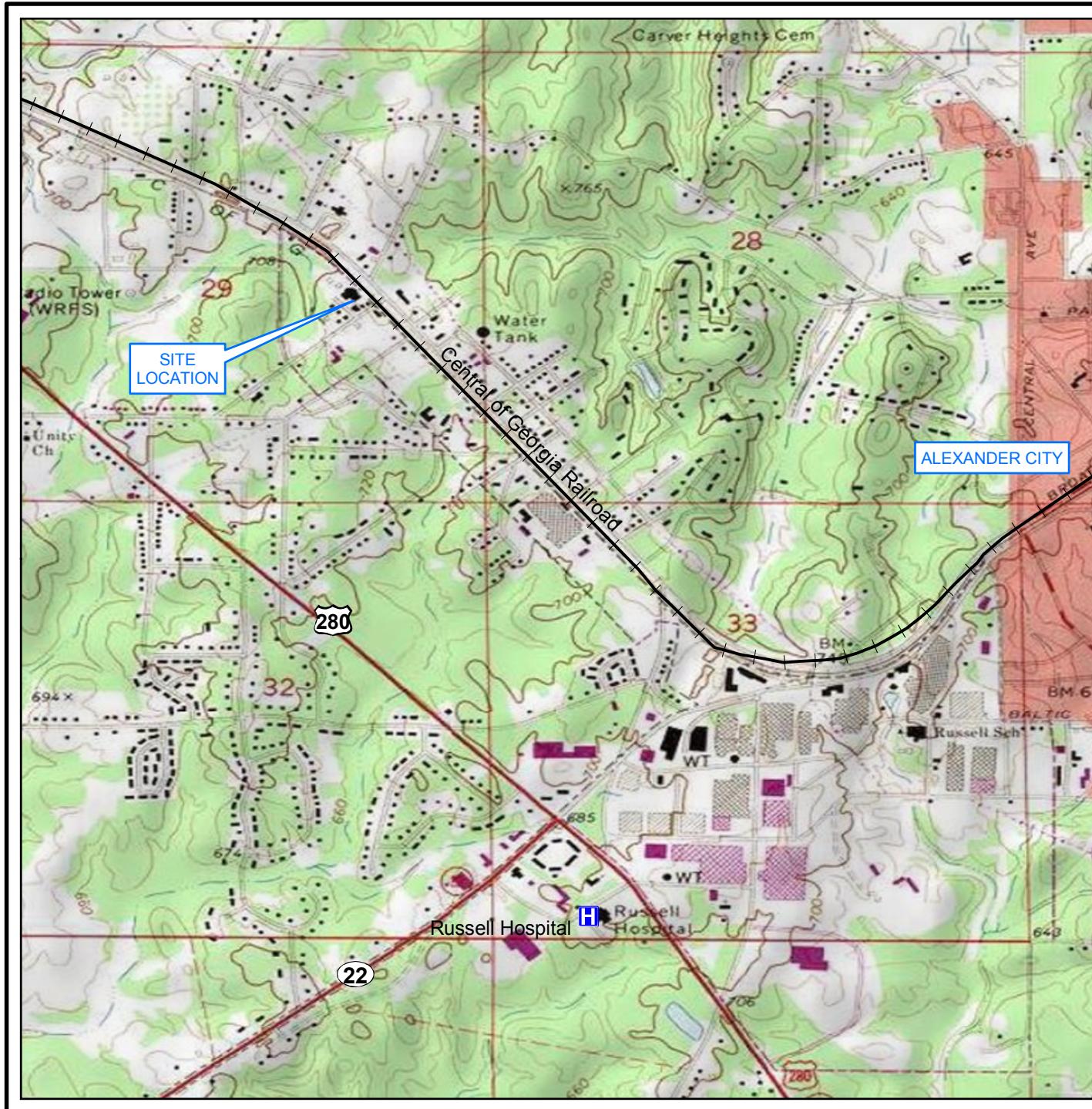


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## **APPENDIX A**

### **FIGURES**

(Four Pages)

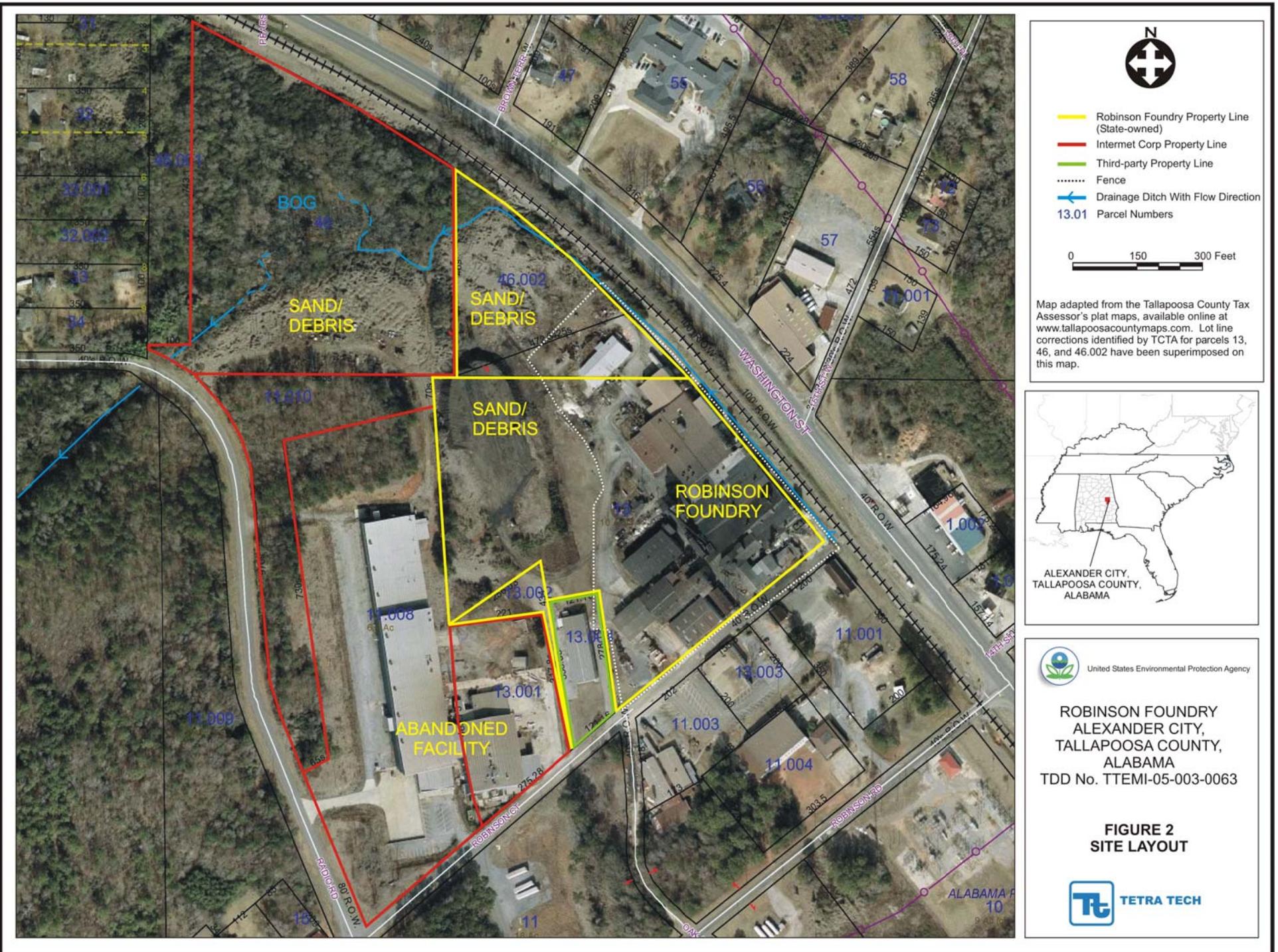


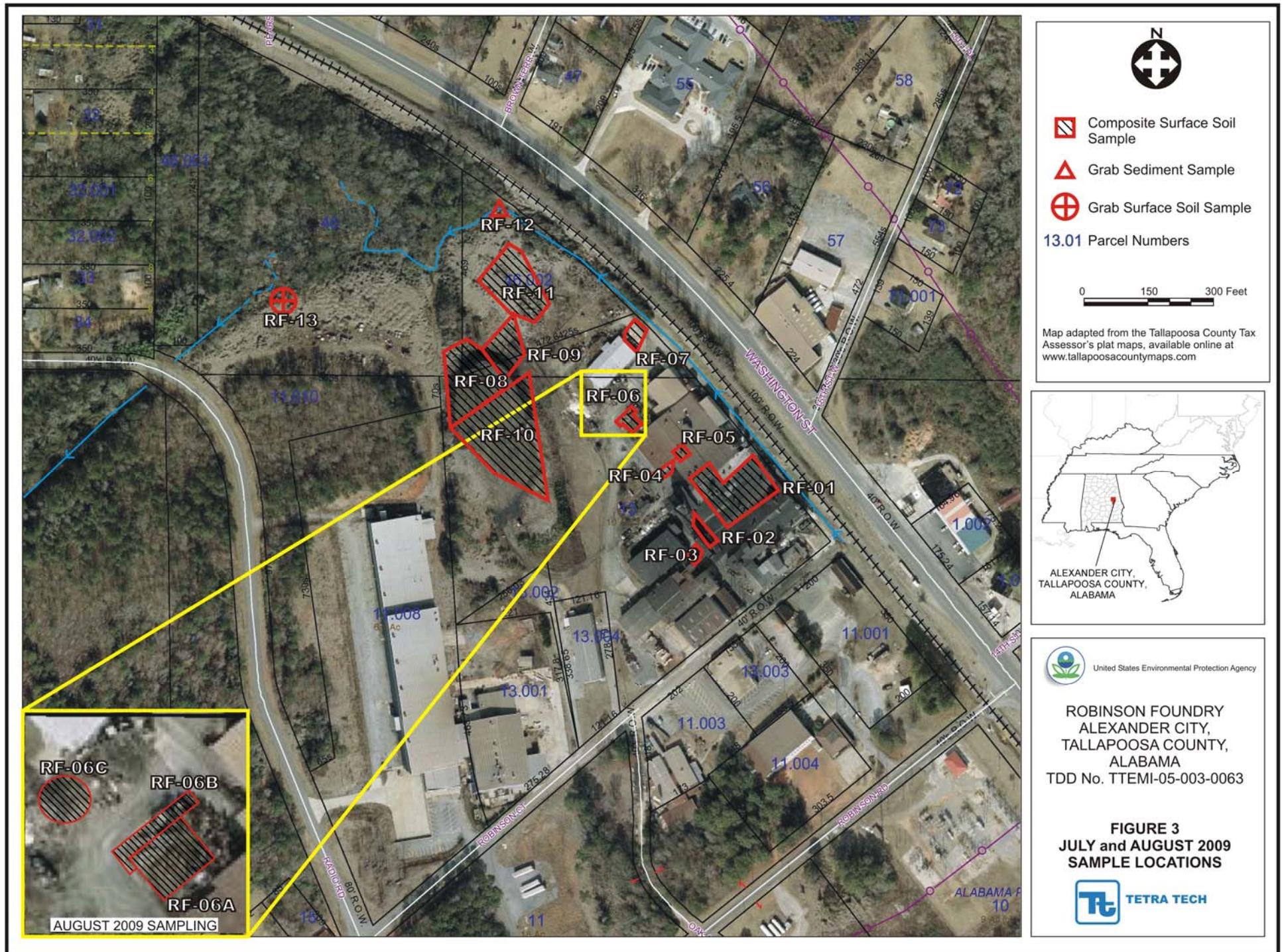
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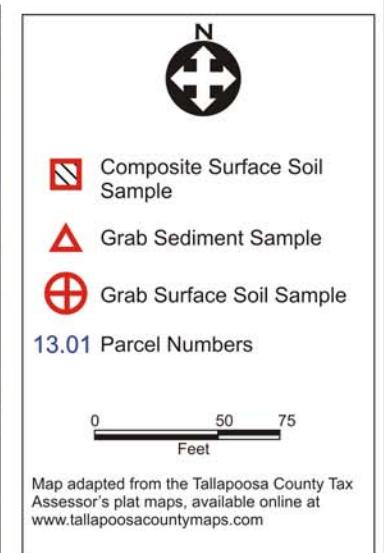
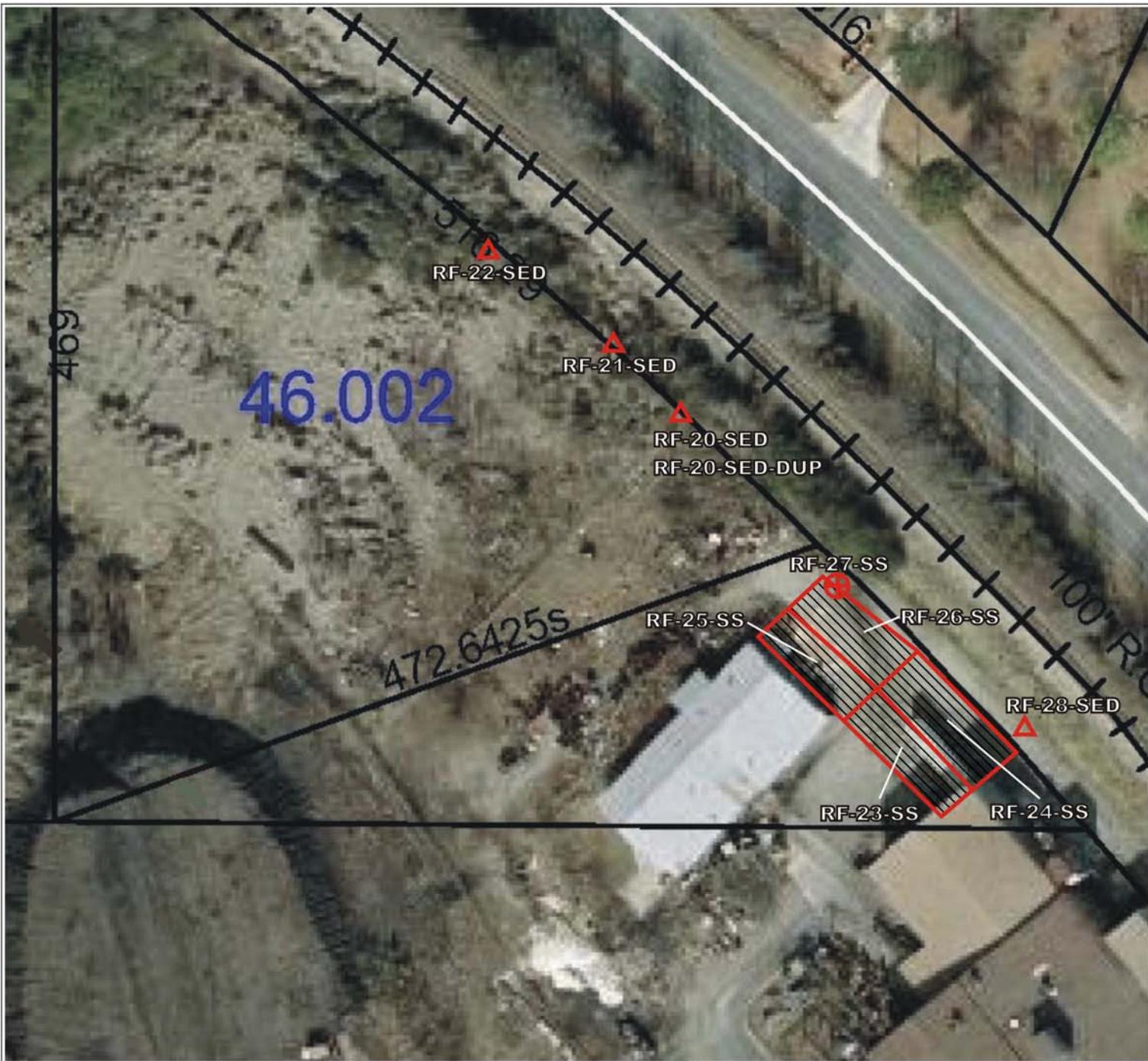
ROBINSON FOUNDRY  
ALEXANDER CITY,  
TALLAPOOSA COUNTY, ALABAMA  
TDD: TTEMI-05-003-0063

## **FIGURE 1 SITE LOCATION**









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ROBINSON FOUNDRY  
ALEXANDER CITY,  
TALLAPOOSA COUNTY,  
ALABAMA  
TDD No. TTEMI-05-003-0063

FIGURE 4  
JULY 2010  
SAMPLE LOCATIONS

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## **APPENDIX B**

### **TABLES**

(25 Pages)

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALS - Worker Soil	RF-01-SF	RF-02-SF	RF-03-SF	RF-04-SF	RF-04-SF-DUP
<b>Volatile Organic Compounds (µg/kg)</b>						
Methyl Ethyl Ketone	645,000,000	NA	NA	NA	NA	NA
<b>Semivolatile Organic Compounds (µg/kg)</b>						
2-Methylnaphthalene	13,600,000	NA	NA	NA	NA	NA
Benzo(a)anthracene	143,000	NA	NA	NA	NA	NA
Benzo(a)pyrene	23,400	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	143,000	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NL	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	143,000	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	13,700,000	NA	NA	NA	NA	NA
Chrysene	1,430,000	NA	NA	NA	NA	NA
Fluoranthene	73,300,000	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	143,000	NA	NA	NA	NA	NA
Naphthalene	2,180,000	NA	NA	NA	NA	NA
Phenanthrene	NL	NA	NA	NA	NA	NA
Pyrene	55,000,000	NA	NA	NA	NA	NA
<b>Polychlorinated Biphenyls (µg/kg)</b>						
PCB-1242 (Aroclor 1242)	82,600	NA	NA	NA	NA	NA
<b>Metals (mg/kg)</b>						
Aluminum	3,290,000	4,600	2,100	1,900	2,300	3,100
Arsenic	177 <sup>a</sup>	4.2	1.7	7.7	1.6	1.8
Barium	681,000	120	23	24	68	49
Beryllium	6,700 <sup>b</sup>	0.18 J <sup>1</sup>	0.51 U	0.55 U	0.49 U	0.48 U
Cadmium	2,700 <sup>c</sup>	8.2	0.31 J <sup>1</sup>	0.59	2.0	0.70
Calcium	NL	4,200	2,100	1,000	4,400	3,200
Chromium	154,000 <sup>d</sup>	30	24	190	18	34
Cobalt	1,010	3.1 J <sup>1</sup>	2.9 J <sup>1</sup>	11 J+	1.9 J <sup>1</sup>	2.6 J <sup>1</sup>
Copper	NL	85	48	360	42	92
Iron	2,380,000	27,000 J	57,000 J	160,000 J	20,000 J	25,000
Lead	2,200	330	4.3	7.1	50	50 J-

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALS - Worker Soil	RF-01-SF	RF-02-SF	RF-03-SF	RF-04-SF	RF-04-SF-DUP
<b>Metals (mg/kg)</b>						
Magnesium	NL	1700	660	590	750	740
Manganese	75,500 <sup>e</sup>	610	430	3,300	320	420
Mercury	93.1 <sup>f</sup>	0.20	0.099 U	0.11 U	0.10 U	0.10 U
Nickel	68,100 <sup>g</sup>	28	24	120	14	82
Potassium	NL	530	230 J <sup>1</sup>	270 J <sup>1</sup>	220 J <sup>1</sup>	330 J <sup>1</sup>
Selenium	17,000	1.6 J <sup>1</sup>	1.9 J <sup>1</sup>	2.2 J <sup>1</sup>	3.4 U	3.4 U
Silver	17,000	1.6	1.0 U	1.1 U	65	0.97 U
Sodium	NL	950	640	400 J <sup>1</sup>	180 J <sup>1</sup>	190 J <sup>1</sup>
Thallium	221 <sup>h</sup>	2.5 U	2.6 U	2.7 U	2.5 U	2.4 U
Vanadium	17,200 <sup>i</sup>	14	20	58	8.3	12
Zinc	1,020,000 <sup>j</sup>	680	20	30	180	180 J-

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALS - Worker Soil	RF-05-SF	RF-06-SF	RF-07-SF	RF-08-SF	RF-09-SF
<b>Volatile Organic Compounds (µg/kg)</b>						
Methyl Ethyl Ketone	645,000,000	NA	16	13 U	NA	NA
<b>Semivolatile Organic Compounds (µg/kg)</b>						
2-Methylnaphthalene	13,600,000	NA	5,000 U	3,900 U	NA	NA
Benzo(a)anthracene	143,000	NA	5,000 UJ	3,900 U	NA	NA
Benzo(a)pyrene	23,400	NA	5,000 UJ	3,900 U	NA	NA
Benzo(b)fluoranthene	143,000	NA	1,300 J <sup>1</sup>	3,900 U	NA	NA
Benzo(g,h,i)perylene	NL	NA	5,000 UJ	3,900 U	NA	NA
Benzo(k)fluoranthene	143,000	NA	630 J <sup>1</sup>	3,900 U	NA	NA
Bis(2-ethylhexyl)phthalate	13,700,000	NA	5,000 UJ	53,000	NA	NA
Chrysene	1,430,000	NA	2,100 J <sup>1</sup>	3,900 U	NA	NA
Fluoranthene	73,300,000	NA	5,000 UJ	1,900 J <sup>1</sup>	NA	NA
Indeno(1,2,3-cd)pyrene	143,000	NA	5,000 UJ	3,900 U	NA	NA
Naphthalene	2,180,000	NA	5,000 U	3,900 U	NA	NA
Phenanthrene	NL	NA	5,000 U	5,800	NA	NA
Pyrene	55,000,000	NA	5,000 UJ	3,300 J <sup>1</sup>	NA	NA
<b>Polychlorinated Biphenyls (µg/kg)</b>						
PCB-1242 (Aroclor 1242)	82,600	NA	R	<b>160,000</b>	NA	NA
<b>Metals (mg/kg)</b>						
Aluminum	3,290,000	2,500	10,000	7,600	3,600	3,100
Arsenic	177 <sup>a</sup>	1.5	3.9	2.5	2.0	2.1
Barium	681,000	22	170	51	35	22
Beryllium	6,700 <sup>b</sup>	0.52 U	0.32 J <sup>1</sup>	0.54 U	0.51 U	0.50 U
Cadmium	2,700 <sup>c</sup>	0.33 J <sup>1</sup>	2.9	0.48 J <sup>1</sup>	0.28 J <sup>1</sup>	0.26 J <sup>1</sup>
Calcium	NL	1,800	6,200	2,400	1,200	1,200
Chromium	154,000 <sup>d</sup>	6.7	36	37	44	45
Cobalt	1,010	5.2 U	6.0 J+	5.2 J <sup>1</sup>	3.4 J <sup>1</sup>	3.0 J <sup>1</sup>
Copper	NL	15	630	82	160	78
Iron	2,380,000	5,600 J	36,000	29,000 J	42,000 J	35,000 J
Lead	2,200	17	160 J-	36	16	13

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALS - Worker Soil	RF-05-SF	RF-06-SF	RF-07-SF	RF-08-SF	RF-09-SF
<b>Metals (mg/kg)</b>						
Magnesium	NL	720	2,800	2,800	960	890
Manganese	75,500 <sup>e</sup>	95	490	300	440	450
Mercury	93.1 <sup>f</sup>	0.11 U	0.065 UJ	0.11 U	0.10 U	0.10 U
Nickel	68,100 <sup>g</sup>	3.7 J <sup>1</sup>	52	25	36	37
Potassium	NL	240 J <sup>1</sup>	1,800	3,000	390 J <sup>1</sup>	300 J <sup>1</sup>
Selenium	17,000	3.7 U	1.7 J <sup>1</sup>	3.8 U	1.8 J <sup>1</sup>	1.5 J <sup>1</sup>
Silver	17,000	1.0 U	3.2	1.1 U	1.0 U	1.0 U
Sodium	NL	1,100	180 J <sup>1</sup>	540 U	230 J <sup>1</sup>	330 J <sup>1</sup>
Thallium	221 <sup>h</sup>	2.6 U	2.7 U	2.7 U	2.5 U	2.5 U
Vanadium	17,200 <sup>i</sup>	3.0 J <sup>1</sup>	28	24	18	14
Zinc	1,020,000 <sup>j</sup>	67	2,300 J-	190	58	35

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALs - Worker Soil	RF-10-SF	RF-11-SF	RF-12-SD	RF-13-SF
<b>Volatile Organic Compounds (µg/kg)</b>					
Methyl Ethyl Ketone	645,000,000	NA	NA	24	NA
<b>Semivolatile Organic Compounds (µg/kg)</b>					
2-Methylnaphthalene	13,600,000	NA	NA	47 J <sup>1</sup>	NA
Benzo(a)anthracene	143,000	NA	NA	130 J <sup>1</sup>	NA
Benzo(a)pyrene	23,400	NA	NA	140 J <sup>1</sup>	NA
Benzo(b)fluoranthene	143,000	NA	NA	290	NA
Benzo(g,h,i)perylene	NL	NA	NA	120 J <sup>1</sup>	NA
Benzo(k)fluoranthene	143,000	NA	NA	57 J <sup>1</sup>	NA
Bis(2-ethylhexyl)phthalate	13,700,000	NA	NA	820	NA
Chrysene	1,430,000	NA	NA	200 J <sup>1</sup>	NA
Fluoranthene	73,300,000	NA	NA	330	NA
Indeno(1,2,3-cd)pyrene	143,000	NA	NA	130 J <sup>1</sup>	NA
Naphthalene	2,180,000	NA	NA	62 J <sup>1</sup>	NA
Phenanthrene	NL	NA	NA	120 J <sup>1</sup>	NA
Pyrene	55,000,000	NA	NA	260 J <sup>1</sup>	NA
<b>Polychlorinated Biphenyls (µg/kg)</b>					
PCB-1242 (Aroclor 1242)	82,600	NA	NA	410	NA
<b>Metals (mg/kg)</b>					
Aluminum	3,290,000	6,900	4,000	6,500	20,000
Arsenic	177 <sup>a</sup>	1.1	1.0	1.3 J <sup>1</sup>	1.4 J
Barium	681,000	30	22	77	190
Beryllium	6,700 <sup>b</sup>	0.51 U	0.50 U	0.78 U	1.0
Cadmium	2,700 <sup>c</sup>	0.17 U	0.50 U	0.78 U	0.64 U
Calcium	NL	880	840	1,600	1,300
Chromium	154,000 <sup>d</sup>	21	17	11	19
Cobalt	1,010	2.7 J <sup>1</sup>	5.0 U	4.3 J <sup>1</sup>	12 J+
Copper	NL	53	66	14	7.1
Iron	2,380,000	20,000 J	18,000 J	13,000	25,000
Lead	2,200	7.8	9.9	36 J-	9.1 J-

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALs - Worker Soil	RF-10-SF	RF-11-SF	RF-12-SD	RF-13-SF
<b>Metals (mg/kg)</b>					
Magnesium	NL	1,400	930	2,500	6,700
Manganese	75,500 <sup>e</sup>	220	200	140	350
Mercury	93.1 <sup>f</sup>	0.10 U	0.10 U	0.15 U	0.13 U
Nickel	68,100 <sup>g</sup>	19	11	4.9 J <sup>1</sup>	6.3 J <sup>1</sup>
Potassium	NL	760	220 J <sup>1</sup>	1,900	5,900
Selenium	17,000	3.6 U	3.5 U	5.4 U	4.5 U
Silver	17,000	1.0 U	1.0 U	1.6 U	1.3 U
Sodium	NL	240 J <sup>1</sup>	500 U	780 U	640 U
Thallium	221 <sup>h</sup>	2.6 U	2.5 U	3.9 U	3.2 U
Vanadium	17,200 <sup>i</sup>	16	7.2	24	62
Zinc	1,020,000 <sup>j</sup>	36	34	85 J-	64 J-

**ROBINSON FOUNDRY**  
**TABLE 1**  
**JULY 2009 SAMPLING EVENT**

Notes:

a	EPA Regional Screening Level for inorganic arsenic.	µg/kg	Micrograms per kilogram
b	EPA Regional Screening Level for beryllium and compounds.	mg/kg	Milligrams per kilogram
c	EPA Regional Screening Level for dietary cadmium.	NA	Not analyzed
d	EPA Regional Screening Level for total chromium.	NL	Not listed
e	EPA Regional Screening Level for manganese (water).	PCB	Polychlorinated Biphenyl
f	EPA Regional Screening Level for elemental mercury.	R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
g	EPA Regional Screening Level for soluble salts of nickel.	RALs	Removal Action Levels
h	EPA Regional Screening Level for soluble salts of thallium.	RF	Robinson Foundry
i	EPA Regional Screening Level for metallic vanadium.	SD	Sediment
j	EPA Regional Screening Level for metallic zinc.	SF	Surface Soil
DUP	Field Duplicate	U	The analyte was analyzed for, but was not detected at or above the associated value.
EPA	Environmental Protection Agency	UJ	The analyte was analyzed for, but was not detected at or above the associated value, which is considered approximate because of deficiencies in one or more quality control criteria.
J	The identification of the analyte is acceptable; the reported value is an estimate.	<b>BOLD</b>	
J+	The identification of the analyte is acceptable; the reported value is an estimate with a possible high bias.	Shaded and bolded values are above the EPA Region 4 Worker Soil Removal Action Level.	
J-	The identification of the analyte is acceptable; the reported value is an estimate with a possible low bias.		
J <sup>1</sup>	Concentration reported is less than the lowest standard on the calibration curve or the report result is between the method detection limit and the minimum reporting limit.		

**ROBINSON FOUNDRY**  
**TABLE 2**  
**AUGUST 2009 SAMPLING EVENT**

Sample Designation	EPA Regional RALS - Worker Soil	RF-06A-SS	RF-06B-SS	RF-06C-SS
<b>Polychlorinated Biphenyls (<math>\mu\text{g}/\text{kg}</math>)</b>				
Aroclor 1242	82,600	920 J	1900 J	3100 J

Notes:

- $\mu\text{g}/\text{kg}$  Micrograms per kilogram
- J The analyte was positively identified; the associated value is an estimated concentration of the analyte in the sample.
- RF Robinson Foundry
- SS Surface soil
- U The analyte was analyzed for, but was not detected at or above the reporting limit.

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-20-SED	RF-20-SED-DUP	RF-21-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener # 1	NL	6.1 U	3.4 U	24
PCB Congener # 2	NL	2.8 U	2.1 U	12
PCB Congener # 3	NL	4.7	4.7	27
PCB Congener # 4	NL	42	24	360
PCB Congener # 5	NL	5.3 U	4.8	45
PCB Congener # 6	NL	16 U	17	220
PCB Congener # 7	NL	2.6	2.8	30
PCB Congener # 8	NL	44 U	51	670
PCB Congener # 9	NL	4.9 U	4.7	52
PCB Congener # 10	NL	2.9	1.8	32
PCB Congener # 12 and/or 13	NL	14	16	170
PCB Congener # 15	NL	130	150	2,100
PCB Congener # 16	NL	59 U	51 U	1,200
PCB Congener # 17	NL	78	65 U	1,600
PCB Congener # 18 and/or 30	NL	140	120	3,000
PCB Congener # 19	NL	25	21	360
PCB Congener # 20 and/or 28	NL	380 U	410 U	7,400 J
PCB Congener # 21 and/or 33	NL	140 U	140 U	2,500
PCB Congener # 22	NL	63 U	67 U	1,500
PCB Congener # 23	NL	0.73 U	0.64 U	4.0
PCB Congener # 24	NL	4.0	4.2	82
PCB Congener # 25	NL	16 U	18 U	280
PCB Congener # 26 and/or 29	NL	40	40	810
PCB Congener # 27	NL	18	17	380
PCB Congener # 31	NL	290	300	5,500 J
PCB Congener # 32	NL	38 U	38 U	920
PCB Congener # 34	NL	1.0 U	1.0	17
PCB Congener # 35	NL	9.8	9.9	78
PCB Congener # 36	NL	1.8 U	1.0 U	9.2 U
PCB Congener # 37	NL	120 U	130 U	1,800
PCB Congener # 39	NL	2.8	3.0	37
PCB Congener # 40 and/or 41,71	NL	230	250	3,800
PCB Congener # 42	NL	89 U	97	1,700
PCB Congener # 43	NL	16	17	330
PCB Congener # 44 and/or 47,65	NL	370	380	6,000 J
PCB Congener # 45 and/or 51	NL	80	78	1,400
PCB Congener # 46	NL	21	21	420
PCB Congener # 48	NL	66 U	66 U	1,300
PCB Congener # 49 and/or 69	NL	200	210	3,500
PCB Congener # 50 and/or 53	NL	51	56	930
PCB Congener # 52	NL	430 U	440 U	6,300 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-20-SED	RF-20-SED-DUP	RF-21-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener # 54	NL	1.0	1.2 U	15
PCB Congener # 55	NL	3.6 U	2.3 U	11 U
PCB Congener # 56	NL	35 U	30 U	220
PCB Congener # 57	NL	1.2 U	1.5 U	25
PCB Congener # 58	NL	1.2 U	1.5	33
PCB Congener # 59 and/or 62,75	NL	38	41	700
PCB Congener # 60	NL	18 U	16 U	100 U
PCB Congener # 61 and/or 70,74,76	NL	290 U	280 U	2,700
PCB Congener # 63	NL	7.2 U	6.5 U	81
PCB Congener # 64	NL	120 U	130 U	2,200
PCB Congener # 66	NL	120 U	120 U	1,100
PCB Congener # 67	NL	8.4	8.0	100
PCB Congener # 68	NL	3.1 U	2.6 U	9.8 U
PCB Congener # 72	NL	2.6	2.4	30
PCB Congener # 73	NL	4.3	5.0	260
PCB Congener # 77	12,700,000 <sup>a</sup>	5.9 U	4.8 U	29
PCB Congener # 79	NL	3.4	2.8 U	8.4 U
PCB Congener # 80	NL	2.2	2.1	9.2 U
PCB Congener # 82	NL	32	33	270
PCB Congener # 83	NL	13	15	16 U
PCB Congener # 84	NL	96	100	780
PCB Congener # 85 and/or 116,117	NL	56	53	330
PCB Congener # 86 and/or 87,97,108,119,125	NL	220	210	1,600
PCB Congener # 88 and/or 91	NL	62	63	310
PCB Congener # 89	NL	3.6	3.9	14 U
PCB Congener # 90 and/or 101,113	NL	320	310	2,100
PCB Congener # 92	NL	59	57	410
PCB Congener # 93 and/or 95,98,100,102	NL	340	370	2,600
PCB Congener # 94	NL	2.8	3.2	33 U
PCB Congener # 96	NL	4.6	5.4	50
PCB Congener # 99	NL	130	130	1,000
PCB Congener #103	NL	2.5	2.5	21
PCB Congener #105	NL	100	93	840
PCB Congener #107 and/or 124	NL	10	10	100
PCB Congener #109	NL	18	16	160
PCB Congener #110 and/or 115	NL	340	360	2,600
PCB Congener #112	42,400,000 <sup>b</sup>	0.84 U	1.1 U	9.0 U
PCB Congener #114	42,400,000 <sup>c</sup>	6.6	5.1 U	52
PCB Congener #118	NL	280	250	2,300
PCB Congener #122	42,400,000 <sup>d</sup>	3.6	3.5	36
PCB Congener #123	NL	4.4	3.9	33

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-20-SED	RF-20-SED-DUP	RF-21-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener #126	NL	1.9 U	1.8 U	6.0 U
PCB Congener #128 and/or 166	NL	62	59	610
PCB Congener #129 and/or 138,160,163	NL	420	360	3,200
PCB Congener #130	NL	27	23	220
PCB Congener #131	NL	5.0	4.9	50
PCB Congener #132	NL	130	130	1,200
PCB Congener #133	NL	5.8	4.8 U	37
PCB Congener #134	NL	21	21	160
PCB Congener #135 and/or 151,154	NL	120	110	770
PCB Congener #136	NL	41	46	300
PCB Congener #137	NL	24	20	230
PCB Congener #139 and/or 140	NL	7.2	6.8	65
PCB Congener #141	NL	60	53	500
PCB Congener #144	NL	16	15	20
PCB Congener #146	NL	51	42	370
PCB Congener #147 and/or 149	NL	280	260	2,200
PCB Congener #148	NL	0.87 U	0.45 U	1.5
PCB Congener #150	NL	0.64 U	0.52 J <sup>1</sup>	2.0
PCB Congener #152	NL	0.66 U	0.47 J <sup>1</sup>	2.2
PCB Congener #153 and/or 168	NL	300	240	2,200
PCB Congener #156 and/or 157	NL	42	39	410
PCB Congener #158	NL	39	35	340
PCB Congener #161	NL	1.2 U	1.2 U	7.8 U
PCB Congener #162	NL	1.4 U	1.5 U	7.2
PCB Congener #164	NL	26	22	200
PCB Congener #167	42,400 <sup>e</sup>	15	13	140
PCB Congener #170	NL	72	47	420
PCB Congener #171 and/or 173	NL	22	16	150
PCB Congener #172	NL	12	8.3	75
PCB Congener #174	NL	71	52	510
PCB Congener #175	NL	2.7	1.9 U	16
PCB Congener #176	NL	9.1	6.3	52
PCB Congener #177	NL	43	29	260
PCB Congener #178	NL	19	13	83
PCB Congener #179	NL	36	28	180
PCB Congener #180 and/or 193	NL	140	94	880
PCB Congener #183 and/or 185	NL	44	33	360
PCB Congener #187	NL	93	64	550
PCB Congener #189	NL	2.8	2.0	16
PCB Congener #190	NL	14	8.6	75
PCB Congener #191	NL	2.3	1.7	14

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-20-SED	RF-20-SED-DUP	RF-21-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener #194	NL	36	25	180
PCB Congener #195	NL	13	9.8	62
PCB Congener #196	NL	18	14	110
PCB Congener #197 and/or 200	NL	6.9	5.8	46
PCB Congener #198 and/or 199	NL	61	41	320
PCB Congener #201	NL	5.3	4.5	42
PCB Congener #202	NL	13	9.6	61
PCB Congener #203	NL	33	24	200
PCB Congener #205	NL	2.4	1.6	10
PCB Congener #206	NL	30	22	140
PCB Congener #207	NL	2.8	2.7	18
PCB Congener #208	NL	10	7.4	33
PCB Congener #209	NL	16	9.5	16
Monochlorobiphenyl (Total)	NL	4.7 J	4.7 J	62 J
Dichlorobiphenyl (Total)	NL	130 J	270 J	3,800 J
Trichlorobiphenyl (Total)	NL	NA	NA	NA
Tetrachlorobiphenyl (Total)	95,800,000 <sup>f</sup>	590 J	1,200 J	33,000 J
Pentachlorobiphenyl (Total)	NL	1,900 J	2,100 J	16,000 J
Hexachlorobiphenyl (Total)	NL	1,700 J	1,500 J	13,000 J
Heptachlorobiphenyl (Total)	NL	550 J	400 J	3,600 J
Nonachlorobiphenyl (Total)	NL	43 J	33 J	190 J
Octachlorobiphenyl (Total)	NL	180 J	140 J	1,000 J
Total PCBs	95,800,000 <sup>f</sup>	5,700 J	6,100 J	98,000 J
TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	2,040 <sup>g</sup>	0.69 J	0.74 J	9.2 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-22-SED	RF-23-SS	RF-24-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener # 1	NL	20	1,400 J <sup>1</sup>	58
PCB Congener # 2	NL	12 U	450 J <sup>1</sup>	48
PCB Congener # 3	NL	23	1,700 J <sup>1</sup>	160
PCB Congener # 4	NL	300	500,000	850
PCB Congener # 5	NL	23	51,000	480
PCB Congener # 6	NL	160	160,000	960
PCB Congener # 7	NL	22	2,000	72
PCB Congener # 8	NL	460	820,000	4,400
PCB Congener # 9	NL	41	4,600	120
PCB Congener # 10	NL	24	18,000	55
PCB Congener # 12 and/or 13	NL	150	23,000	1,600
PCB Congener # 15	NL	2,100	1,100,000	25,000
PCB Congener # 16	NL	790	1,700,000	4,500
PCB Congener # 17	NL	1,000	1,700,000	5,300
PCB Congener # 18 and/or 30	NL	1,900	3,500,000	10,000
PCB Congener # 19	NL	320	370,000	560
PCB Congener # 20 and/or 28	NL	6,300 J	7,100,000	59,000 J
PCB Congener # 21 and/or 33	NL	1,800	4,300,000	30,000
PCB Congener # 22	NL	1,100	1,500,000	15,000
PCB Congener # 23	NL	2.4 U	3,800	17 U
PCB Congener # 24	NL	49	110,000	390
PCB Congener # 25	NL	230 U	180,000	2,000
PCB Congener # 26 and/or 29	NL	660	1,200,000	5,700
PCB Congener # 27	NL	310	290,000	1,100
PCB Congener # 31	NL	4,400 J	6,700,000	50,000 J
PCB Congener # 32	NL	750	1,400,000	5,100
PCB Congener # 34	NL	11	24,000	160
PCB Congener # 35	NL	94	99,000	2,100
PCB Congener # 36	NL	110	18,000	24 U
PCB Congener # 37	NL	1,600	1,900,000	40,000 J
PCB Congener # 39	NL	28	86,000	530
PCB Congener # 40 and/or 41,71	NL	3,600	5,600,000	41,000
PCB Congener # 42	NL	1,800	1,900,000	18,000
PCB Congener # 43	NL	0.82 U	310,000	3,900
PCB Congener # 44 and/or 47,65	NL	5,600 J	6,900,000	56,000 J
PCB Congener # 45 and/or 51	NL	1,400	1,400,000	5,900
PCB Congener # 46	NL	410	450,000	2,700
PCB Congener # 48	NL	1,000	2,000,000	15,000
PCB Congener # 49 and/or 69	NL	3,300	3,600,000	30,000
PCB Congener # 50 and/or 53	NL	950	740,000	3,800
PCB Congener # 52	NL	6,100 J	6,300,000	46,000 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-22-SED	RF-23-SS	RF-24-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener # 54	NL	14	8,500	24
PCB Congener # 55	NL	5.8 U	35,000	800
PCB Congener # 56	NL	230	160,000	2,700
PCB Congener # 57	NL	140	39,000	220
PCB Congener # 58	NL	130	9,500 U	200
PCB Congener # 59 and/or 62,75	NL	720	820,000	7,300
PCB Congener # 60	NL	94 U	82,000	1,100
PCB Congener # 61 and/or 70,74,76	NL	2,500	3,600,000	44,000 J
PCB Congener # 63	NL	73	150,000	1,500
PCB Congener # 64	NL	2,000	3,400,000	28,000
PCB Congener # 66	NL	1,300	1,300,000	20,000
PCB Congener # 67	NL	4.9 U	180,000	1,600
PCB Congener # 68	NL	21	16,000	220
PCB Congener # 72	NL	37	33,000	450
PCB Congener # 73	NL	220	41,000	1,100
PCB Congener # 77	12,700,000 <sup>a</sup>	30	2,200 U	44
PCB Congener # 79	NL	4.6 U	1,400 U	18
PCB Congener # 80	NL	5.0 U	1,700 U	15 U
PCB Congener # 82	NL	200	1,800 U	160
PCB Congener # 83	NL	6.6 U	2,400 U	140
PCB Congener # 84	NL	750	200,000	2,300
PCB Congener # 85 and/or 116,117	NL	190	1,500 U	340
PCB Congener # 86 and/or 87,97,108,119,125	NL	1,100	9,200 U	1,200
PCB Congener # 88 and/or 91	NL	560	310,000	3,200
PCB Congener # 89	NL	34	23,000	230
PCB Congener # 90 and/or 101,113	NL	1,700	110,000	3,000
PCB Congener # 92	NL	410	40,000	800
PCB Congener # 93 and/or 95,98,100,102	NL	2,900	1,300,000	13,000
PCB Congener # 94	NL	37	30,000	300
PCB Congener # 96	NL	55	57,000	320
PCB Congener # 99	NL	830	36,000	1,400
PCB Congener #103	NL	28	18,000	150
PCB Congener #105	NL	540	1,700 J <sup>1</sup>	830
PCB Congener #107 and/or 124	NL	78	980 U	86
PCB Congener #109	NL	100	940 U	120
PCB Congener #110 and/or 115	NL	2,100	4,300	2,300
PCB Congener #112	42,400,000 <sup>b</sup>	3.6 U	1,100 U	18 U
PCB Congener #114	42,400,000 <sup>c</sup>	26	1,100 U	48
PCB Congener #118	NL	1,500	2,600	1,900
PCB Congener #122	42,400,000 <sup>d</sup>	24	1,000 U	30
PCB Congener #123	NL	28 U	940 U	39

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-22-SED	RF-23-SS	RF-24-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener #126	NL	30 U	1,200 U	16 U
PCB Congener #128 and/or 166	NL	780	1,100 U	350
PCB Congener #129 and/or 138,160,163	NL	3,800	2,100	1,900
PCB Congener #130	NL	280	1,400 U	130
PCB Congener #131	NL	59	1,300 U	24
PCB Congener #132	NL	1,600	1,400 U	600
PCB Congener #133	NL	47	1,300 U	20
PCB Congener #134	NL	200	1,400 U	94
PCB Congener #135 and/or 151,154	NL	990	530 U	400
PCB Congener #136	NL	390	700 U	120
PCB Congener #137	NL	300	1,300 U	150
PCB Congener #139 and/or 140	NL	89	1,200 U	46
PCB Congener #141	NL	580	1,200 U	300
PCB Congener #144	NL	1.4 U	530 U	63
PCB Congener #146	NL	480	1,100 U	230
PCB Congener #147 and/or 149	NL	2,600	1,300 U	1,100
PCB Congener #148	NL	1.4 U	530 U	7.7 U
PCB Congener #150	NL	3.2	400 U	5.9 U
PCB Congener #152	NL	3.4	380 U	5.6 U
PCB Congener #153 and/or 168	NL	2,600	1,100 U	1,400
PCB Congener #156 and/or 157	NL	320	770 U	270
PCB Congener #158	NL	330	820 U	220
PCB Congener #161	NL	21 U	910 U	14 U
PCB Congener #162	NL	27 U	570 U	21 U
PCB Congener #164	NL	240	900 U	130
PCB Congener #167	42,400 <sup>e</sup>	160	650 U	94
PCB Congener #170	NL	550	670 U	250
PCB Congener #171 and/or 173	NL	210	600 U	79
PCB Congener #172	NL	100	620 U	43
PCB Congener #174	NL	690	560 U	230
PCB Congener #175	NL	22	420 U	11 U
PCB Congener #176	NL	70	320 U	25 U
PCB Congener #177	NL	350	580 U	120
PCB Congener #178	NL	120	440 U	39
PCB Congener #179	NL	270	310 U	68
PCB Congener #180 and/or 193	NL	1,200	760 J <sup>1</sup>	460
PCB Congener #183 and/or 185	NL	460	550 U	160
PCB Congener #187	NL	760	430 U	220
PCB Congener #189	NL	21	470 U	18
PCB Congener #190	NL	93	520 U	51
PCB Congener #191	NL	18	450 U	14 U

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL			
	Worker Soil	RF-22-SED	RF-23-SS	RF-24-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>				
PCB Congener #194	NL	220	840 U	100
PCB Congener #195	NL	90	830 U	39 U
PCB Congener #196	NL	150	730 U	53
PCB Congener #197 and/or 200	NL	70	470 U	22
PCB Congener #198 and/or 199	NL	440	750 U	150
PCB Congener #201	NL	59	440 U	16
PCB Congener #202	NL	78	640 U	25
PCB Congener #203	NL	260	700 U	94
PCB Congener #205	NL	13	530 U	13
PCB Congener #206	NL	200	1,100 U	120
PCB Congener #207	NL	26	790 U	16
PCB Congener #208	NL	50	720 U	47
PCB Congener #209	NL	31	1,100 U	77
Monochlorobiphenyl (Total)	NL	44 J	3,600 J	270 J
Dichlorobiphenyl (Total)	NL	3,200 J	2,700,000 J	34,000 J
Trichlorobiphenyl (Total)	NL	NA	NA	NA
Tetrachlorobiphenyl (Total)	95,800,000 <sup>f</sup>	32,000 J	38,000,000 J	330,000 J
Pentachlorobiphenyl (Total)	NL	13,000 J	2,200,000 J	32,000 J
Hexachlorobiphenyl (Total)	NL	16,000 J	2,100 J	7,600 J
Heptachlorobiphenyl (Total)	NL	4,900 J	760 J	1,700 J
Nonachlorobiphenyl (Total)	NL	280 J	1,900 UJ	190 J
Octachlorobiphenyl (Total)	NL	1,400 J	1,900 UJ	470 J
Total PCBs	95,800,000 <sup>f</sup>	92,000 J	76,000,000 J	640,000 J
TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	2,040 <sup>g</sup>	9.9 J	<b>5,400 J</b>	63 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-25-SS	RF-26-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener # 1	NL	370 U	120 U
PCB Congener # 2	NL	190 U	130 U
PCB Congener # 3	NL	400 U	150 J <sup>1</sup>
PCB Congener # 4	NL	3,600	920 J <sup>1</sup>
PCB Congener # 5	NL	1,300	360 J <sup>1</sup>
PCB Congener # 6	NL	3,900	570 J <sup>1</sup>
PCB Congener # 7	NL	450 J <sup>1</sup>	110 U
PCB Congener # 8	NL	21,000	3,000
PCB Congener # 9	NL	650 J <sup>1</sup>	120 J <sup>1</sup>
PCB Congener # 10	NL	130 J <sup>1</sup>	29 U
PCB Congener # 12 and/or 13	NL	3,000	830 J <sup>1</sup>
PCB Congener # 15	NL	39,000	28,000
PCB Congener # 16	NL	34,000	16,000
PCB Congener # 17	NL	34,000	23,000
PCB Congener # 18 and/or 30	NL	60,000	32,000
PCB Congener # 19	NL	4,200	1,800
PCB Congener # 20 and/or 28	NL	300,000	190,000
PCB Congener # 21 and/or 33	NL	200,000	92,000
PCB Congener # 22	NL	91,000	34,000
PCB Congener # 23	NL	290 U	160 U
PCB Congener # 24	NL	1,600	960 J <sup>1</sup>
PCB Congener # 25	NL	9,600	2,900
PCB Congener # 26 and/or 29	NL	40,000	16,000
PCB Congener # 27	NL	8,200	5,300
PCB Congener # 31	NL	280,000	200,000
PCB Congener # 32	NL	35,000	31,000
PCB Congener # 34	NL	1,100	720 U
PCB Congener # 35	NL	8,100	4,100
PCB Congener # 36	NL	1,000 U	960 J <sup>1</sup>
PCB Congener # 37	NL	120,000	77,000
PCB Congener # 39	NL	3,800	3,600
PCB Congener # 40 and/or 41,71	NL	330,000	280,000
PCB Congener # 42	NL	120,000	97,000
PCB Congener # 43	NL	22,000	17,000
PCB Congener # 44 and/or 47,65	NL	360,000	350,000
PCB Congener # 45 and/or 51	NL	51,000	43,000
PCB Congener # 46	NL	17,000	12,000
PCB Congener # 48	NL	84,000	96,000
PCB Congener # 49 and/or 69	NL	220,000	200,000
PCB Congener # 50 and/or 53	NL	23,000	26,000
PCB Congener # 52	NL	370,000	330,000

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-25-SS	RF-26-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener # 54	NL	300 U	230 U
PCB Congener # 55	NL	2,400 U	1,800
PCB Congener # 56	NL	13,000	9,500
PCB Congener # 57	NL	2,600	950 U
PCB Congener # 58	NL	1,500 U	870 U
PCB Congener # 59 and/or 62,75	NL	46,000	42,000
PCB Congener # 60	NL	6,800	4,000
PCB Congener # 61 and/or 70,74,76	NL	260,000	180,000
PCB Congener # 63	NL	10,000	6,700
PCB Congener # 64	NL	200,000	170,000
PCB Congener # 66	NL	120,000	68,000
PCB Congener # 67	NL	13,000	6,200
PCB Congener # 68	NL	1,200 U	1,000
PCB Congener # 72	NL	2,900	2,100
PCB Congener # 73	NL	2,500	1,500
PCB Congener # 77	12,700,000 <sup>a</sup>	1,700 U	910 U
PCB Congener # 79	NL	1,100 U	600 U
PCB Congener # 80	NL	1,100 U	680 U
PCB Congener # 82	NL	2,000 U	1,200 U
PCB Congener # 83	NL	2,100 U	1,400 U
PCB Congener # 84	NL	15,000	13,000
PCB Congener # 85 and/or 116,117	NL	1,500 U	920 U
PCB Congener # 86 and/or 87,97,108,119,125	NL	1,700	1,100
PCB Congener # 88 and/or 91	NL	22,000	19,000
PCB Congener # 89	NL	2,100 U	1,300
PCB Congener # 90 and/or 101,113	NL	12,000	7,600
PCB Congener # 92	NL	3,200 U	2,800
PCB Congener # 93 and/or 95,98,100,102	NL	100,000	86,000
PCB Congener # 94	NL	2,800	2,300
PCB Congener # 96	NL	2,600	3,000
PCB Congener # 99	NL	4,200	3,000
PCB Congener #103	NL	1,600 U	1,200
PCB Congener #105	NL	900 U	490 U
PCB Congener #107 and/or 124	NL	790 U	410 U
PCB Congener #109	NL	750 U	400 U
PCB Congener #110 and/or 115	NL	1,200 U	850 U
PCB Congener #112	42,400,000 <sup>b</sup>	1,300 U	760 U
PCB Congener #114	42,400,000 <sup>c</sup>	960 U	470 U
PCB Congener #118	NL	970 J <sup>1</sup>	560 J <sup>1</sup>
PCB Congener #122	42,400,000 <sup>d</sup>	840 U	420 U
PCB Congener #123	NL	850 U	380 U

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-25-SS	RF-26-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener #126	NL	910 U	590 U
PCB Congener #128 and/or 166	NL	680 U	950 U
PCB Congener #129 and/or 138,160,163	NL	1,000	880 U
PCB Congener #130	NL	850 U	1,200 U
PCB Congener #131	NL	760 U	1,100 U
PCB Congener #132	NL	840 U	1,200 U
PCB Congener #133	NL	770 U	1,100 U
PCB Congener #134	NL	840 U	1,200 U
PCB Congener #135 and/or 151,154	NL	410 U	750 U
PCB Congener #136	NL	290 U	560 U
PCB Congener #137	NL	780 U	1,100 U
PCB Congener #139 and/or 140	NL	720 U	1,000 U
PCB Congener #141	NL	720 U	1,000 U
PCB Congener #144	NL	380 U	750 U
PCB Congener #146	NL	690 U	970 U
PCB Congener #147 and/or 149	NL	740 U	1,100 U
PCB Congener #148	NL	390 U	740 U
PCB Congener #150	NL	300 U	560 U
PCB Congener #152	NL	290 U	530 U
PCB Congener #153 and/or 168	NL	600 U	850 U
PCB Congener #156 and/or 157	NL	640 U	920 U
PCB Congener #158	NL	520 U	700 U
PCB Congener #161	NL	540 U	780 U
PCB Congener #162	NL	460 U	650 U
PCB Congener #164	NL	570 U	770 U
PCB Congener #167	42,400 <sup>e</sup>	530 U	780 U
PCB Congener #170	NL	750 U	830 U
PCB Congener #171 and/or 173	NL	720 U	740 U
PCB Congener #172	NL	740 U	770 U
PCB Congener #174	NL	690 U	690 U
PCB Congener #175	NL	360 U	620 U
PCB Congener #176	NL	270 U	470 U
PCB Congener #177	NL	700 U	720 U
PCB Congener #178	NL	380 U	650 U
PCB Congener #179	NL	260 U	450 U
PCB Congener #180 and/or 193	NL	530 U	580 U
PCB Congener #183 and/or 185	NL	700 U	690 U
PCB Congener #187	NL	360 U	630 U
PCB Congener #189	NL	250 U	830 U
PCB Congener #190	NL	560 U	640 U
PCB Congener #191	NL	520 U	560 U

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-25-SS	RF-26-SS
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener #194	NL	470 U	2,100 U
PCB Congener #195	NL	520 U	2,100 U
PCB Congener #196	NL	400 U	1,500 U
PCB Congener #197 and/or 200	NL	280 U	970 U
PCB Congener #198 and/or 199	NL	410 U	1,500 U
PCB Congener #201	NL	290 U	920 U
PCB Congener #202	NL	360 U	1,200 U
PCB Congener #203	NL	380 U	1,500 U
PCB Congener #205	NL	280 U	1,400 U
PCB Congener #206	NL	280 U	1,500 U
PCB Congener #207	NL	230 U	1,300 U
PCB Congener #208	NL	240 U	1,400 U
PCB Congener #209	NL	220 U	930 U
Monochlorobiphenyl (Total)	NL	970 UJ	150 J
Dichlorobiphenyl (Total)	NL	72,000 J	35,000 J
Trichlorobiphenyl (Total)	NL	1,200,000 J	730,000 J
Tetrachlorobiphenyl (Total)	95,800,000 <sup>f</sup>	2,300,000 J	1,900,000 J
Pentachlorobiphenyl (Total)	NL	160,000 J	140,000 J
Hexachlorobiphenyl (Total)	NL	1,000 J	980 UJ
Heptachlorobiphenyl (Total)	NL	970 UJ	980 UJ
Nonachlorobiphenyl (Total)	NL	970 UJ	980 UJ
Octachlorobiphenyl (Total)	NL	970 UJ	980 UJ
Total PCBs	95,800,000 <sup>f</sup>	3,700,000 J	2,800,000 J
TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	2,040 <sup>g</sup>	380 J	150 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-27-SS	RF-28-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener # 1	NL	120 U	14
PCB Congener # 2	NL	110 U	33
PCB Congener # 3	NL	130 U	38
PCB Congener # 4	NL	570 J <sup>1</sup>	110
PCB Congener # 5	NL	150 J <sup>1</sup>	31
PCB Congener # 6	NL	440 J <sup>1</sup>	45
PCB Congener # 7	NL	130 U	6.9
PCB Congener # 8	NL	1,500	180
PCB Congener # 9	NL	160 U	30
PCB Congener # 10	NL	52 U	7.5
PCB Congener # 12 and/or 13	NL	330 J <sup>1</sup>	140
PCB Congener # 15	NL	8,600	1,000
PCB Congener # 16	NL	2,400	360
PCB Congener # 17	NL	4,300	480
PCB Congener # 18 and/or 30	NL	8,600	870
PCB Congener # 19	NL	1,200	67
PCB Congener # 20 and/or 28	NL	50,000	2,800
PCB Congener # 21 and/or 33	NL	6,300	1,300
PCB Congener # 22	NL	5,500	770
PCB Congener # 23	NL	150 U	2.0 U
PCB Congener # 24	NL	190 J <sup>1</sup>	27
PCB Congener # 25	NL	750 J <sup>1</sup>	140 U
PCB Congener # 26 and/or 29	NL	7,000	310
PCB Congener # 27	NL	2,400	83
PCB Congener # 31	NL	39,000	3,200
PCB Congener # 32	NL	6,600	140
PCB Congener # 34	NL	210 U	7.1
PCB Congener # 35	NL	710 J <sup>1</sup>	79
PCB Congener # 36	NL	280 J <sup>1</sup>	140
PCB Congener # 37	NL	14,000	1,500
PCB Congener # 39	NL	710 J <sup>1</sup>	34
PCB Congener # 40 and/or 41,71	NL	54,000	1,400
PCB Congener # 42	NL	23,000	610
PCB Congener # 43	NL	4,200	130
PCB Congener # 44 and/or 47,65	NL	83,000	3,200
PCB Congener # 45 and/or 51	NL	9,700	430
PCB Congener # 46	NL	2,900	82
PCB Congener # 48	NL	16,000	590
PCB Congener # 49 and/or 69	NL	53,000	2,800
PCB Congener # 50 and/or 53	NL	6,100	220
PCB Congener # 52	NL	88,000	3,400

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-27-SS	RF-28-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener # 54	NL	240 U	2.7
PCB Congener # 55	NL	530 U	34
PCB Congener # 56	NL	1,600	160 U
PCB Congener # 57	NL	520 U	13
PCB Congener # 58	NL	520 U	10
PCB Congener # 59 and/or 62,75	NL	9,500	380
PCB Congener # 60	NL	700 U	68 U
PCB Congener # 61 and/or 70,74,76	NL	28,000	2,400
PCB Congener # 63	NL	1,000	78
PCB Congener # 64	NL	21,000	640
PCB Congener # 66	NL	12,000	980
PCB Congener # 67	NL	1,600	65
PCB Congener # 68	NL	450 U	19
PCB Congener # 72	NL	500 J <sup>1</sup>	31
PCB Congener # 73	NL	350 U	43
PCB Congener # 77	12,700,000 <sup>a</sup>	570 U	40
PCB Congener # 79	NL	420 U	4.7
PCB Congener # 80	NL	440 U	2.2 U
PCB Congener # 82	NL	960 U	44
PCB Congener # 83	NL	1,000 U	49
PCB Congener # 84	NL	NA	150
PCB Congener # 85 and/or 116,117	NL	720 U	140
PCB Congener # 86 and/or 87,97,108,119,125	NL	730 U	280
PCB Congener # 88 and/or 91	NL	3,600	240
PCB Congener # 89	NL	940 U	11
PCB Congener # 90 and/or 101,113	NL	1,400	470
PCB Congener # 92	NL	880 U	94
PCB Congener # 93 and/or 95,98,100,102	NL	14,000	970
PCB Congener # 94	NL	960 U	16
PCB Congener # 96	NL	770 J <sup>1</sup>	21
PCB Congener # 99	NL	800 U	76 U
PCB Congener #103	NL	790 U	16
PCB Congener #105	NL	390 U	290
PCB Congener #107 and/or 124	NL	340 U	36
PCB Congener #109	NL	320 U	58
PCB Congener #110 and/or 115	NL	590 U	480
PCB Congener #112	42,400,000 <sup>b</sup>	610 U	58
PCB Congener #114	42,400,000 <sup>c</sup>	400 U	9.6
PCB Congener #118	NL	340 U	680
PCB Congener #122	42,400,000 <sup>d</sup>	360 U	10
PCB Congener #123	NL	340 U	14

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-27-SS	RF-28-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener #126	NL	440 U	10
PCB Congener #128 and/or 166	NL	440 U	230
PCB Congener #129 and/or 138,160,163	NL	420 U	1,300
PCB Congener #130	NL	550 U	67
PCB Congener #131	NL	490 U	6.2
PCB Congener #132	NL	550 U	190
PCB Congener #133	NL	500 U	16
PCB Congener #134	NL	540 U	26
PCB Congener #135 and/or 151,154	NL	260 U	200
PCB Congener #136	NL	180 U	43
PCB Congener #137	NL	500 U	75 U
PCB Congener #139 and/or 140	NL	470 U	15
PCB Congener #141	NL	460 U	110
PCB Congener #144	NL	240 U	27
PCB Congener #146	NL	440 U	38
PCB Congener #147 and/or 149	NL	480 U	410
PCB Congener #148	NL	250 U	1.3 U
PCB Congener #150	NL	190 U	0.94 U
PCB Congener #152	NL	180 U	0.98 U
PCB Congener #153 and/or 168	NL	390 U	950
PCB Congener #156 and/or 157	NL	330 U	160
PCB Congener #158	NL	330 U	93
PCB Congener #161	NL	350 U	38
PCB Congener #162	NL	270 U	7.3
PCB Congener #164	NL	370 U	52 U
PCB Congener #167	42,400 <sup>e</sup>	300 U	65
PCB Congener #170	NL	410 U	230
PCB Congener #171 and/or 173	NL	400 U	46
PCB Congener #172	NL	410 U	36
PCB Congener #174	NL	380 U	150
PCB Congener #175	NL	260 U	5.3
PCB Congener #176	NL	200 U	12
PCB Congener #177	NL	390 U	110
PCB Congener #178	NL	280 U	56
PCB Congener #179	NL	190 U	72
PCB Congener #180 and/or 193	NL	290 U	280
PCB Congener #183 and/or 185	NL	380 U	82
PCB Congener #187	NL	270 U	250
PCB Congener #189	NL	240 U	10
PCB Congener #190	NL	310 U	43
PCB Congener #191	NL	290 U	5.7

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

Analyte	EPA Region 4 RAL		
	Worker Soil	RF-27-SS	RF-28-SED
<b>Polychlorinated Biphenyl Congeners (ng/kg)</b>			
PCB Congener #194	NL	380 U	94
PCB Congener #195	NL	410 U	37
PCB Congener #196	NL	340 U	43
PCB Congener #197 and/or 200	NL	240 U	16
PCB Congener #198 and/or 199	NL	350 U	180
PCB Congener #201	NL	250 U	10
PCB Congener #202	NL	290 U	42
PCB Congener #203	NL	330 U	100
PCB Congener #205	NL	260 U	6.8
PCB Congener #206	NL	310 U	94
PCB Congener #207	NL	260 U	8.5
PCB Congener #208	NL	280 U	36
PCB Congener #209	NL	200 U	58
Monochlorobiphenyl (Total)	NL	1,000 UJ	85 J
Dichlorobiphenyl (Total)	NL	12,000 J	1,500 J
Trichlorobiphenyl (Total)	NL	150,000 J	12,000 J
Tetrachlorobiphenyl (Total)	95,800,000 <sup>f</sup>	420,000 J	18,000 J
Pentachlorobiphenyl (Total)	NL	22,000 J	4,200 J
Hexachlorobiphenyl (Total)	NL	1,000 UJ	4,000 J
Heptachlorobiphenyl (Total)	NL	1,000 UJ	1,400 J
Nonachlorobiphenyl (Total)	NL	1,000 UJ	140 J
Octachlorobiphenyl (Total)	NL	1,000 UJ	530 J
Total PCBs	95,800,000 <sup>f</sup>	600,000 J	42,000 J
TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	2,040 <sup>g</sup>	66 J	5.3 J

**ROBINSON FOUNDRY**  
**TABLE 3**  
**JULY 2010 SAMPLING EVENT**

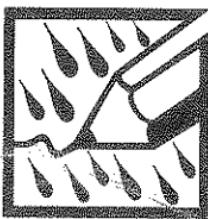
Notes:

All congener and homolog RALS were obtained from the reported Chemical Abstracts Service (CAS) numbers.

a	Value is for 3,3',4,4'-tetrachlorobiphenyl (PCB 77).
b	Value is for 2,3,4,4',5-pentachlorobiphenyl (PCB 114).
c	Value is for 2,3',4,4',5-pentachlorobiphenyl (PCB 118).
d	Value is for 2',3,4,4',5-pentachlorobiphenyl (PCB 123).
e	Value is for 3,3',4,4',5,5'-hexachlorobiphenyl (PCB 169).
f	Value is for polychlorinated biphenyls (high risk).
g	Value is for 2,3,7,8-TCDD.
DUP	Field duplicate
EPA	U.S. Environmental Protection Agency
J	The identification of the analyte is acceptable; the reported value is an estimate.
J <sup>1</sup>	Concentration reported is less than the lowest standard on the calibration curve.
ng/kg	Milligrams per kilogram
NA	Not analyzed
NL	Not listed
PCB	Polychlorinated biphenyl
RAL	EPA Region 4 Removal Action Levels
RF	Robinson Foundry
SED	Sediment
SS	Surface soil
U	The analyte was not detected at or above the reporting limit.
UJ	The analyte was not detected at or above the reporting limit; the reported value is an estimate.
<b>BOLD</b>	Shaded and bolded values are above the EPA Region 4 Worker Soil Removal Action Level.

**APPENDIX C**  
**LOGBOOK NOTES**  
(Eight Sheets)

Robinson Foundry  
TTEMI-05-003-0063



"Rite in the Rain"<sup>®</sup>  
ALL-WEATHER  
**JOURNAL**  
No. 391

7/20-21/09



Name Robinson Foundry

Address 505 Robinson Ct  
Alexander City, AL 35010

Phone \_\_\_\_\_

Project \_\_\_\_\_

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## CONTENTS

PAGE	REFERENCE	DATE
All Samples were collected in accordance with the EPA Region 4 SESD Field Branches Quality Systems & Technical Procedures, February 2008.		

<sup>2</sup>  
7/20/09

Q. Kelley

0800 START Chuck Berry & Quintal Kelley & DSC Stephen Ball arrive on site. Set up base camp. Prepare to collect RF-01-SF.

0850 START Berry collects aliquots for composite sample RF-01-SF.

0905 START Berry collects ~~first~~ grab composite surface soil Sample RF-05-SF from the open pit. Upon further investigation, it was discovered that the "filled in" sump is actually a concrete pad.

0920 START collects composite surface soil sample RF-02-SF.

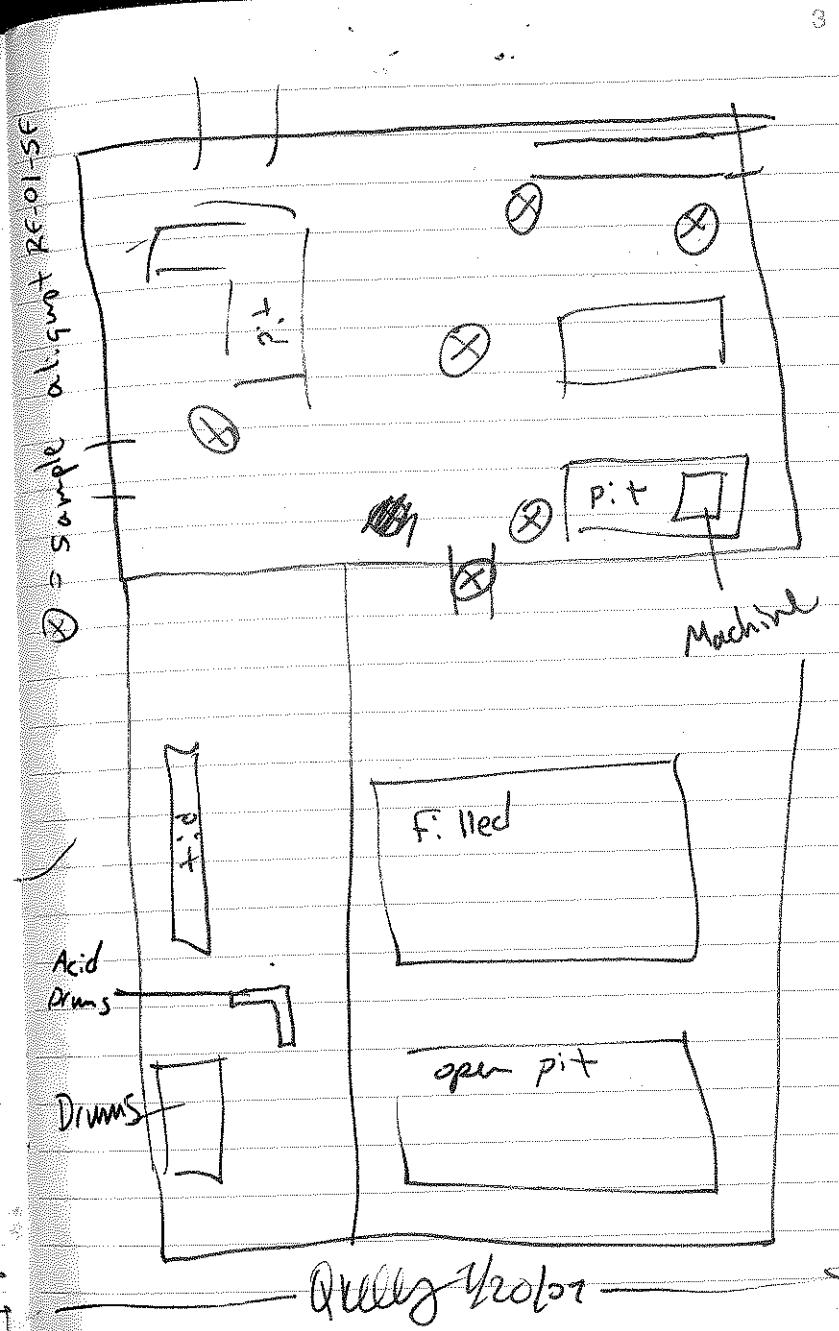
NOTE: Composite sample RF-01-SF was a 6-pt. composite.

0930 START collects composite surface soil sample RF-03-SF

0940 START collects composite surface soil sample RF-04-SF

0945 START collects duplicate sample RF-04-SF-DUP

Q. Kelley 7/20/09



7/20/09

P.Keller

0955 START collects composite surface  
Soil sample RF-08-SF. This  
Sample is designated MSMSD.

1005 START collects composite surface  
Soil sample RF-10-SF. This  
Sample is a 6-pt. composite  
w/ several types of soil: native  
Clay, fill, concrete dust, bagdust,  
foundry castings.

1015 START collects composite surface  
Soil sample RF-09-SF.

1025 START collects composite surface  
Soil sample RF-11-SF for  
metals analysis only. SAP  
stated metals & organics. This  
is a deviation from SAP.

1115 Lunch

1215 Return to site. Turn on Trimble  
will collect location data  
& SCA + Organics sampling locations.

1230 START collects rinseate blank  
for equipment.

1245 START & EPA collect GPS  
pts for each sample location.

1430 START affixes to pack

CEP33

7/20/09

1430 (cont) samples on ice

1530 Process Samples w/ forms

1600 START done for the day

*REMOVED 7/20/09*

<sup>6</sup>  
7/21/09

Q.Kelly

0700 START & EPA on site. START Sets up base camp & prepares to collect the last 4 samples.

0725 START & EPA set out to collect sediment samples from unnamed creek, RF12 & RF13.

0735 START Berry collects sediment sample RF-12-S1.

0745 START & EPA attempt to find another path to RFB.

0830 There is no path that is accessible to the creek, RFB. EPA & START decide to sample fill material from an extension of the pile. This sample will deviate from the sampling plan. It will be analyzed for metals only.

0855 START Berry collects surface soil composite sample RF-06-SF.

0920 START Berry collects surface soil composite sample RF07-SF. The grab VDA sample is collected from the drainage pathway.

QKelly 7/21/09

7

7/21/09

Q.Kelly

0930 START processes samples

1100 I packs coolers for shipment to the laboratory.

~~1100~~ Samples are packed. START & EPA demobilized from the site.

1420 START drops coolers off at FedEx.

1500 START arrives back at the office & begins to unload vehicle.  
(1600 EST)

1630 EST START finishes unloading the vehicle. This completes the field event.

7/21/09

QKelly

8 8/26/09

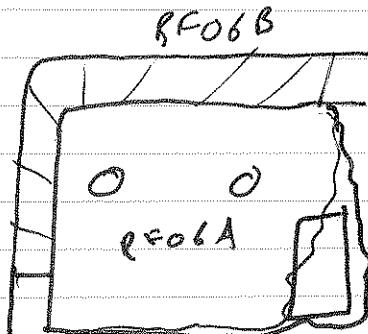
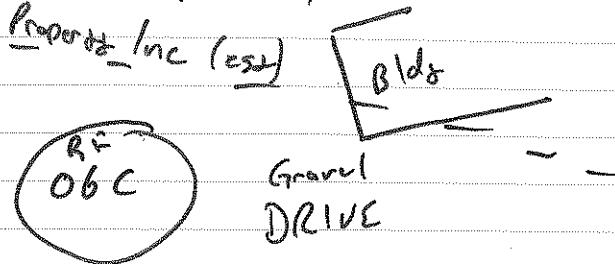
1615 Return to Locater RF06 to collect additional PCB samples

- Collect 3 samples from area.

RF06A is original RF06.

RF06B is grass strip around original RF06.

RF06C is from the gravel drive  
≈ 30 feet away from original  
RF06 to the north in the  
drainage pathway of RF06.



Cly

Bldg

8/26/09

1645 Used new bowls/specs, disposable type.

- collect 1 bldg each

- sampled for PCB only

- Will submit to AES private lab for  
washing/cleaning prior to analysis to  
overcome matrix interference.

- SMART ferry off site.

Cly

7/27/10

1000 Arrive on site. Begin set up.

Gain access through machine-shop entrance.

1040 Collect RF-10-SED from the corner of the fence outside the fence.

~~RF-10~~

1045 Collect duplicate sample

RF-20-SED-DUP from the same location.

- Both samples red clay w/ ash layer on top. Small amount of standing water in the ditch. no flow.

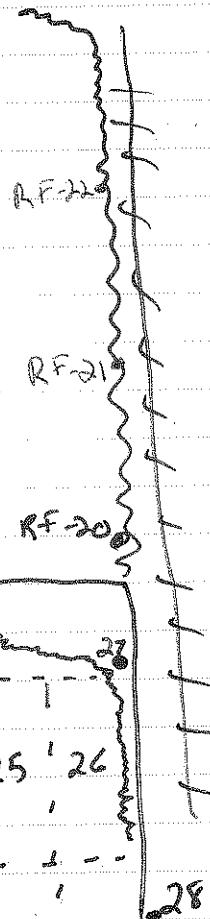
- 1.8oz jugs of slurry.

1120 Collect RF-21-SED from ditch. More water here. soft sediment is grey w/ gravel).

1135 Collect RF-22-SED from ditch. Sediment is brown &amp; sandy.

~~RF-22~~

7/27/10



elbow

7/27/10

1215 RF-23-SS 0-6" MSLMSD

2x sample volume 5pt composite

1222 Collect SED

1230 Collected RF-24-SS at 1222

RF-25-SS at 1225

RF-27-SS at 1230

~~all 5 pt composites~~1238 Collect ~~RF-28~~ RF-28-SS 5pt composites

Sample	Type	Time	Long	Lat
			Lat	Long
RF-20-SED	Grab	1040	-85.97928 <sup>20°</sup>	32.95142 <sup>9.88</sup>
RF-20-SED-DUP	Grab/Dup	1045	-85.97928 <sup>20°</sup>	32.95142 <sup>9.88</sup>
RF-21-SED	Grab	1120	-85.97935	32.951966
RF-22-SED	Grab	1133	-85.97963	32.952085
RF-23-SS	Comp	1215	-85.978852	32.951376
RF-24-SS	Comp	1222	-85.978772	32.951435
RF-25-SS	Comp	1225	-85.978977	32.951503
RF-26-SS	Comp	1238	-85.978917	32.951549
RF-27-SS	Grab	1230	-85.978949	32.951622
RF-28-SED	Grab	1335	-85.97865	32.951466

all accuracies &lt;0.0M

1245 off site for lunch —

CMB

7/27/10

1330 Collect RF-28-SED from 1/2 way  
the train tracks up "stream" from  
the rest of the samples.There is no water here, and the  
ditch is probably only active  
during rain events.- Collect a grab from 0-6" bgs.  
time at 13351400 Start off site. Samples will  
be shipped tomorrow.

CMB

**APPENDIX D**  
**ANALYTICAL DATA REPORTS**  
(156 Pages)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**August 4, 2009**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 09-0604, Robinson Foundry  
Superfund Remedial

**FROM:** Denise Goddard  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Stephen Ball

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

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**Total Metals (TMTL)**

Total Mercury	CLP Inorganics
Total Metals	CLP Inorganics



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**Report Narrative** for Work Order C093004, Project: 09-0604

Data Review and Validation Report

Site Name: Robinson Foundry, Alexander City, AL

Case No. 38815, Project No. 09-0604, Work Order No. C093004

ELEMENT Sample IDs: C093004-02 - C093004-18

Sampling Dates: 07/20-21/09

Laboratory Performing Inorganic Analysis: A4 Scientific, Inc., The Woodlands, TX

Date Received from Lab: 07/29/09

Analyses conducted: Total Metals and Mercury

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of one water and sixteen soil samples for Total Metals analysis by ICP-AES and mercury by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as five times blank levels to discount possible false positives due to contamination.

#### ICP-AES Analysis

#### PE Sample Results

The soil performance evaluation sample result for cobalt in SDG MD5BL9 was scored as warning high by the web-based SPS Web software. All positive soil sample results for cobalt were considered estimated and flagged "J". A water performance evaluation sample was not submitted to the laboratory.

#### Other QA/QC Results

Soil matrix spiked sample recovery for lead and zinc in SDG MD5BL9 were -2 and 33%, respectively. All soil sample results for lead in the above SDG were positive and were considered estimated and flagged "J". All soil sample results for zinc in the above SDG were considered estimated and flagged "J".

Serial dilution percent difference for iron in SDG MD5BL8 was 11%. All sample results for iron in the above SDG were considered estimated and flagged "J".

The percent relative standard deviation was greater than 20% for plasma multiple exposures and the reported result was greater than the method detection limit and greater than the contract required quantitation limit for arsenic in sample C093004-16. The above sample result was considered estimated and flagged "J".



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Mercury Analysis

PE Sample Results

Soil performance evaluation samples for mercury were all scored as within limits by the web-based SPS Web software. Therefore, no data qualifiers were applied for these criteria.

Other QA/QC Results

There were no other QA/QC problems for mercury analysis. Therefore, no data qualifiers were applied for these criteria.

cc: Nardina Turner



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### SAMPLES INCLUDED IN THIS REPORT

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
RF-RB-01	C093004-02	5BN4	5BN4	Equipment Rinse Blank	7/20/09 12:30	7/22/09 00:00
RF-01-SF	C093004-03	5BM0		Surface Soil	7/20/09 08:50	7/22/09 00:00
RF-02-SF	C093004-04	5BM1		Surface Soil	7/20/09 09:20	7/22/09 00:00
RF-03-SF	C093004-05	5BM2		Surface Soil	7/20/09 09:30	7/22/09 00:00
RF-04-SF	C093004-06	5BM3		Surface Soil	7/20/09 09:40	7/22/09 00:00
RF-04-SF-DUP	C093004-07	5BN5		Surface Soil	7/20/09 09:45	7/22/09 00:00
RF-05-SF	C093004-08	5BM4		Surface Soil	7/20/09 09:05	7/22/09 00:00
RF-06-SF	C093004-09	5BM5	5BM5	Surface Soil	7/21/09 08:55	7/22/09 00:00
RF-07-SF	C093004-10	5BM6	5BM6	Surface Soil	7/21/09 09:20	7/22/09 00:00
RF-08-SF	C093004-11	5BM7		Surface Soil	7/20/09 09:55	7/22/09 00:00
RF-09-SF	C093004-12	5BM8		Surface Soil	7/20/09 10:15	7/22/09 00:00
RF-10-SF	C093004-13	5BM9		Surface Soil	7/20/09 10:05	7/22/09 00:00
RF-11-SF	C093004-14	5BN0		Surface Soil	7/20/09 10:25	7/22/09 00:00
RF-12-SD	C093004-15	5BN1	5BN1	Sediment	7/21/09 07:35	7/22/09 00:00
RF-13-SF	C093004-16	5BN2		Surface Soil	7/21/09 08:30	7/22/09 00:00



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## DATA QUALIFIER DEFINITIONS

- U The analyte was not detected at or above the reporting limit.
- CLP01 Concentration reported is less than the lowest standard on calibration curve
- CLP21 %RSD >20% for ICP Multiple Exposures
- CLP26 PE sample recovery scored as warning-high.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- Q-2 Result greater than MDL but less than MRL.
- Q-5 Serial dilution precision outside method control limits
- QM-1 Matrix Spike Recovery less than method control limits
- QM-6 Matrix Spike Recovery less than 10%

## ACRONYMS AND ABBREVIATIONS

- CAS Chemical Abstracts Service
  - Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ([www.epa.gov/srs](http://www.epa.gov/srs)), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
- MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-RB-01****Lab ID: C093004-02****MD No: 5BN4 A4****Station ID:****Matrix: Equipment Rinse Blank****Date Collected: 7/20/09 12:30**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.12	U, J, Q-2, CLP01	ug/L	0.20	7/24/09	7/24/09	CLP ILM05.4 CV
7429-90-5	Aluminum	200	U	ug/L	200	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	60	U	ug/L	60	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	10	U	ug/L	10	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	200	U	ug/L	200	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	5.0	U	ug/L	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	5.0	U	ug/L	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	5000	U	ug/L	5000	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	10	U	ug/L	10	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	50	U	ug/L	50	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	25	U	ug/L	25	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	100	U	ug/L	100	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	10	U	ug/L	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	5000	U	ug/L	5000	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	15	U	ug/L	15	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	40	U	ug/L	40	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	5000	U	ug/L	5000	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	35	U	ug/L	35	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	10	U	ug/L	10	7/24/09	7/24/09	CLP ILM05.4 P
7440-23-5	Sodium	5000	U	ug/L	5000	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	25	U	ug/L	25	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	50	U	ug/L	50	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	60	U	ug/L	60	7/24/09	7/24/09	CLP ILM05.4 P



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM0 A4****D No:****Sample ID: RF-01-SF****Lab ID: C093004-03****Station ID: RF01****Matrix: Surface Soil****Date Collected: 7/20/09 8:50**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.20		mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	96		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	4600		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.1	U	mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	4.2		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	120		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.18	J, Q-2	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	8.2		mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	4200		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	30		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	3.1	J, Q-2, CLP26	mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	85		mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	27000	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	330		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	1700		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	610		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	28		mg/kg dry	4.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	530		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	1.6	J, Q-2	mg/kg dry	3.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.6		mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	950		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.5	U	mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	14		mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	680		mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P



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## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM1 A4****D No:****Sample ID: RF-02-SF****Lab ID: C093004-04****Station ID: RF02****Matrix: Surface Soil****Date Collected: 7/20/09 9:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.099	U	mg/kg dry	0.099	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	97		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	2100		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.1	U	mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.7		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	23		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.51	U	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.31	J, Q-2	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	2100		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	24		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	2.9	J, Q-2, CLP26	mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	48		mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	57000	J, Q-5	mg/kg dry	13	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	4.3		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	660		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	430		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	24		mg/kg dry	4.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	230	J, Q-2	mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	1.9	J, Q-2	mg/kg dry	3.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	640		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.6	U	mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	20		mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	20		mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P



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## Total Metals

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM2 A4**

**D No:**

**Sample ID: RF-03-SF**

**Lab ID: C093004-05**

**Station ID: RF03**

**Matrix: Surface Soil**

**Date Collected: 7/20/09 9:30**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.11	U	mg/kg dry	0.11	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	91		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	1900		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.6	U	mg/kg dry	6.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	7.7		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	24		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.55	U	mg/kg dry	0.55	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.59		mg/kg dry	0.55	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1000		mg/kg dry	550	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	190		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	11	J, CLP26	mg/kg dry	5.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	360		mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	160000	J, Q-5	mg/kg dry	35	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	7.1		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	590		mg/kg dry	550	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	3300		mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	120		mg/kg dry	4.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	270	J, Q-2	mg/kg dry	550	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	2.2	J, Q-2	mg/kg dry	3.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.1	U	mg/kg dry	1.1	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	400	J, Q-2	mg/kg dry	550	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.7	U	mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	58		mg/kg dry	5.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	30		mg/kg dry	6.6	7/24/09	7/24/09	CLP ILM05.4 P



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM3 A4**

**D No:**

**Sample ID: RF-04-SF**

**Lab ID: C093004-06**

**Station ID: RF04**

**Matrix: Surface Soil**

**Date Collected: 7/20/09 9:40**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	100		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	2300		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	5.9	U	mg/kg dry	5.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.6		mg/kg dry	0.98	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	68		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.49	U	mg/kg dry	0.49	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	2.0		mg/kg dry	0.49	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	4400		mg/kg dry	490	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	18		mg/kg dry	0.98	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	1.9	J, Q-2, CLP26	mg/kg dry	4.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	42		mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	20000	J, Q-5	mg/kg dry	9.8	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	50		mg/kg dry	0.98	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	750		mg/kg dry	490	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	320		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	14		mg/kg dry	3.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	220	J, Q-2	mg/kg dry	490	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.4	U	mg/kg dry	3.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	65		mg/kg dry	0.98	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	180	J, Q-2	mg/kg dry	490	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.5	U	mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	8.3		mg/kg dry	4.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	180		mg/kg dry	5.9	7/24/09	7/24/09	CLP ILM05.4 P



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BN5 A4****D No:****Sample ID: RF-04-SF-DUP****Lab ID: C093004-07****Station ID: RF04****Matrix: Surface Soil****Date Collected: 7/20/09 9:45**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	100		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	3100		mg/kg dry	19	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	5.8	U	mg/kg dry	5.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.8		mg/kg dry	0.97	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	49		mg/kg dry	19	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.48	U	mg/kg dry	0.48	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.70		mg/kg dry	0.48	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	3200		mg/kg dry	480	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	34		mg/kg dry	0.97	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	2.6	J, Q-2, CLP26	mg/kg dry	4.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	92		mg/kg dry	2.4	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	25000		mg/kg dry	9.7	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	50	J, QM-6	mg/kg dry	0.97	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	740		mg/kg dry	480	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	420		mg/kg dry	1.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	82		mg/kg dry	3.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	330	J, Q-2	mg/kg dry	480	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.4	U	mg/kg dry	3.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	0.97	U	mg/kg dry	0.97	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	190	J, Q-2	mg/kg dry	480	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.4	U	mg/kg dry	2.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	12		mg/kg dry	4.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	180	J, QM-1	mg/kg dry	5.8	7/24/09	7/24/09	CLP ILM05.4 P



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815**

MD No: 5BM4 A4

D No:

**Sample ID: RF-05-SF****Lab ID: C093004-08****Station ID: RF05****Matrix: Surface Soil****Date Collected: 7/20/09 9:05**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.11	U	mg/kg dry	0.11	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	95		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	2500		mg/kg dry	21	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.3	U	mg/kg dry	6.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.5		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	22		mg/kg dry	21	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.52	U	mg/kg dry	0.52	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.33	J, Q-2	mg/kg dry	0.52	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1800		mg/kg dry	520	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	6.7		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	5.2	U	mg/kg dry	5.2	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	15		mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	5600	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	17		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	720		mg/kg dry	520	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	95		mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	3.7	J, Q-2	mg/kg dry	4.2	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	240	J, Q-2	mg/kg dry	520	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.7	U	mg/kg dry	3.7	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	1100		mg/kg dry	520	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.6	U	mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	3.0	J, Q-2	mg/kg dry	5.2	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	67		mg/kg dry	6.3	7/24/09	7/24/09	CLP ILM05.4 P



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM5 A4****D No: 5BM5 A4****Sample ID: RF-06-SF****Lab ID: C093004-09****Station ID: RF06****Matrix: Surface Soil****Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.065	U, J, Q-2, CLP01	mg/kg dry	0.11	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	92		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	10000		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.4	U	mg/kg dry	6.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	3.9		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	170		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.32	J, Q-2	mg/kg dry	0.54	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	2.9		mg/kg dry	0.54	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	6200		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	36		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	6.0	J, CLP26	mg/kg dry	5.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	630		mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	36000		mg/kg dry	11	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	160	J, QM-6	mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	2800		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	490		mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	52		mg/kg dry	4.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	1800		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	1.7	J, Q-2	mg/kg dry	3.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	3.2		mg/kg dry	1.1	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	180	J, Q-2	mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.7	U	mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	28		mg/kg dry	5.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	2300	J, QM-1	mg/kg dry	6.4	7/24/09	7/24/09	CLP ILM05.4 P



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-07-SF****Lab ID: C093004-10****MD No: 5BM6 A4****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.11	U	mg/kg dry	0.11	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	92		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	7600		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.5	U	mg/kg dry	6.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	2.5		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	51		mg/kg dry	22	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.54	U	mg/kg dry	0.54	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.48	J, Q-2	mg/kg dry	0.54	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	2400		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	37		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	5.2	J, Q-2, CLP26	mg/kg dry	5.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	82		mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	29000	J, Q-5	mg/kg dry	11	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	36		mg/kg dry	1.1	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	2800		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	300		mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	25		mg/kg dry	4.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	3000		mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.8	U	mg/kg dry	3.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.1	U	mg/kg dry	1.1	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	540	U	mg/kg dry	540	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.7	U	mg/kg dry	2.7	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	24		mg/kg dry	5.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	190		mg/kg dry	6.5	7/24/09	7/24/09	CLP ILM05.4 P



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM7 A4****D No:****Sample ID: RF-08-SF****Lab ID: C093004-11****Station ID: RF08****Matrix: Surface Soil****Date Collected: 7/20/09 9:55**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	98		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	3600		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.1	U	mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	2.0		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	35		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.51	U	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.28	J, Q-2	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1200		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	44		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	3.4	J, CLP26, Q-2	mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	160		mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	42000	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	16		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	960		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	440		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	36		mg/kg dry	4.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	390	J, Q-2	mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	1.8	J, Q-2	mg/kg dry	3.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	230	J, Q-2	mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.5	U	mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	18		mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	58		mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM8 A4****D No:****Sample ID: RF-09-SF****Lab ID: C093004-12****Station ID: RF09****Matrix: Surface Soil****Date Collected: 7/20/09 10:15**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	98		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	3100		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.0	U	mg/kg dry	6.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	2.1		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	22		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.50	U	mg/kg dry	0.50	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.26	J, Q-2	mg/kg dry	0.50	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1200		mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	45		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	3.0	J, Q-2, CLP26	mg/kg dry	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	78		mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	35000	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	13		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	890		mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	450		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	37		mg/kg dry	4.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	300	J, Q-2	mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	1.5	J, Q-2	mg/kg dry	3.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	330	J, Q-2	mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.5	U	mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	14		mg/kg dry	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	35		mg/kg dry	6.0	7/24/09	7/24/09	CLP ILM05.4 P



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM9 A4****D No:****Sample ID: RF-10-SF****Lab ID: C093004-13****Station ID: RF10****Matrix: Surface Soil****Date Collected: 7/20/09 10:05**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	97		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	6900		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.1	U	mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.1		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	30		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.51	U	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.17	U	mg/kg dry	0.51	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	880		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	21		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	2.7	J, Q-2, CLP26	mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	53		mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	20000	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	7.8		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	1400		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	220		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	19		mg/kg dry	4.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	760		mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.6	U	mg/kg dry	3.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	240	J, Q-2	mg/kg dry	510	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.6	U	mg/kg dry	2.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	16		mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	36		mg/kg dry	6.1	7/24/09	7/24/09	CLP ILM05.4 P



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815**

MD No: 5BN0 A4

D No:

**Sample ID: RF-11-SF****Lab ID: C093004-14****Station ID: RF11****Matrix: Surface Soil****Date Collected: 7/20/09 10:25**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.10	U	mg/kg dry	0.10	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	98		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	4000		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	6.0	U	mg/kg dry	6.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.0		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	22		mg/kg dry	20	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.50	U	mg/kg dry	0.50	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.50	U	mg/kg dry	0.50	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	840		mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	17		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	5.0	U	mg/kg dry	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	66		mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	18000	J, Q-5	mg/kg dry	10	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	9.9		mg/kg dry	1.0	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	930		mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	200		mg/kg dry	1.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	11		mg/kg dry	4.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	220	J, Q-2	mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	3.5	U	mg/kg dry	3.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.0	U	mg/kg dry	1.0	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	500	U	mg/kg dry	500	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	2.5	U	mg/kg dry	2.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	7.2		mg/kg dry	5.0	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	34		mg/kg dry	6.0	7/24/09	7/24/09	CLP ILM05.4 P



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BN1 A4****D No: 5BN1 A4****Sample ID: RF-12-SD****Lab ID: C093004-15****Station ID: RF12****Matrix: Sediment****Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7439-97-6	Mercury	0.15	U	mg/kg dry	0.15	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	64		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	6500		mg/kg dry	31	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	9.3	U	mg/kg dry	9.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.3	J, Q-2	mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	77		mg/kg dry	31	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	0.78	U	mg/kg dry	0.78	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.78	U	mg/kg dry	0.78	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1600		mg/kg dry	780	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	11		mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	4.3	J, Q-2, CLP26	mg/kg dry	7.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	14		mg/kg dry	3.9	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	13000		mg/kg dry	16	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	36	J, QM-6	mg/kg dry	1.6	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	2500		mg/kg dry	780	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	140		mg/kg dry	2.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	4.9	J, Q-2	mg/kg dry	6.2	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	1900		mg/kg dry	780	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	5.4	U	mg/kg dry	5.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.6	U	mg/kg dry	1.6	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	780	U	mg/kg dry	780	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	3.9	U	mg/kg dry	3.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	24		mg/kg dry	7.8	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	85	J, QM-1	mg/kg dry	9.3	7/24/09	7/24/09	CLP ILM05.4 P



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D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Total Metals

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN2 A4**

**D No:**

**Sample ID: RF-13-SF**

**Lab ID: C093004-16**

**Station ID: RF13**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 8:30**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
7439-97-6	Mercury	0.13	U	mg/kg dry	0.13	7/24/09	7/24/09	CLP ILM05.4 CV
E1642941	% Solids	78		%		7/24/09	7/24/09	CLP Inorganics
7429-90-5	Aluminum	20000		mg/kg dry	26	7/24/09	7/24/09	CLP ILM05.4 P
7440-36-0	Antimony	7.7	U	mg/kg dry	7.7	7/24/09	7/24/09	CLP ILM05.4 P
7440-38-2	Arsenic	1.4	J, CLP21	mg/kg dry	1.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-39-3	Barium	190		mg/kg dry	26	7/24/09	7/24/09	CLP ILM05.4 P
7440-41-7	Beryllium	1.0		mg/kg dry	0.64	7/24/09	7/24/09	CLP ILM05.4 P
7440-43-9	Cadmium	0.64	U	mg/kg dry	0.64	7/24/09	7/24/09	CLP ILM05.4 P
7440-70-2	Calcium	1300		mg/kg dry	640	7/24/09	7/24/09	CLP ILM05.4 P
7440-47-3	Chromium	19		mg/kg dry	1.3	7/24/09	7/24/09	CLP ILM05.4 P
7440-48-4	Cobalt	12	J, CLP26	mg/kg dry	6.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-50-8	Copper	7.1		mg/kg dry	3.2	7/24/09	7/24/09	CLP ILM05.4 P
7439-89-6	Iron	25000		mg/kg dry	13	7/24/09	7/24/09	CLP ILM05.4 P
7439-92-1	Lead	9.1	J, QM-6	mg/kg dry	1.3	7/24/09	7/24/09	CLP ILM05.4 P
7439-95-4	Magnesium	6700		mg/kg dry	640	7/24/09	7/24/09	CLP ILM05.4 P
7439-96-5	Manganese	350		mg/kg dry	1.9	7/24/09	7/24/09	CLP ILM05.4 P
7440-02-0	Nickel	6.3	J, Q-2	mg/kg dry	5.1	7/24/09	7/24/09	CLP ILM05.4 P
7440-09-7	Potassium	5900		mg/kg dry	640	7/24/09	7/24/09	CLP ILM05.4 P
7782-49-2	Selenium	4.5	U	mg/kg dry	4.5	7/24/09	7/24/09	CLP ILM05.4 P
7440-22-4	Silver	1.3	U	mg/kg dry	1.3	7/24/09	7/28/09	CLP ILM05.4 P
7440-23-5	Sodium	640	U	mg/kg dry	640	7/24/09	7/24/09	CLP ILM05.4 P
7440-28-0	Thallium	3.2	U	mg/kg dry	3.2	7/24/09	7/24/09	CLP ILM05.4 P
7440-62-2	Vanadium	62		mg/kg dry	6.4	7/24/09	7/24/09	CLP ILM05.4 P
7440-66-6	Zinc	64	J, QM-1	mg/kg dry	7.7	7/24/09	7/24/09	CLP ILM05.4 P



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**August 12, 2009**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 09-0604, Robinson Foundry  
Superfund Remedial

**FROM:** Denise Goddard  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Stephen Ball

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

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**Volatile Organics (VOA)**

Volatile organic compounds

CLP VOA



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D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**Report Narrative** for Work Order C093004, Project: 09-0604

Organic Data Review and Validation

Project No. 09-0604

Case No. 38815

Element Work Order No.: C093004

Element Sample Ids.: C093004-01-02, -09-10, -15,-17

Sampling date(s): 07/20/09-07/21/09

Laboratory Performing Organic CLP Analyses: A4 Scientific, Inc., The Woodlands, TX

Site Name: Robinson Foundry, Alexander City, AL

Analyses Conducted: Volatiles, Semivolatile Extractables, Aroclors

The ESAT Work Team reviewed data for one rinsate blank and four soil samples analyzed for volatiles, semivolatile extractables and aroclors, in two sample delivery groups (SDGs). The laboratory was submitted one PES.

The samples were collected between 07/20/09 and 07/21/09, were received by the laboratory on 07/22/09, and the original data package was received on 07/29/09 by the USEPA Quality Assurance Section, Region 4 SESD/MTSB.

A supplemental submission was received on 08/06/09 in response to an USEPA request. This included corrections for aroclor-1242 originally misidentified as aroclor-1248 in soil samples C093004-10 and -15, a missing aroclor GC/MS confirmation analysis required by the SOW for soil sample C093004-10, and reanalysis of aroclor sample C093004-09 and associated QC after the sulfur cleanup was performed.

The peaks identified using manual peak selection and manual integration for the aroclor surrogate TCMX on both columns for soil sample C093004-09 for analyses performed before and after sulfur cleanup were outside the retention time window established during initial calibration. The SOW requires in Exhibit D, Section 11.1.1.1 that peaks must have retention times contained within the established RT windows in order to be identified. Results were qualified as detailed below.

The laboratory satisfied all technical and contractual analysis and extraction holding time limits.

All results associated with either erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier.

Pertinent data quality factors are discussed below.

#### Performance Evaluation Samples

1. The laboratory scored within warning limits for all spiked analytes in the soil semivolatile extractable PES. The laboratory misidentified the spiked TIC 1-methylnaphthalene as the target analyte 2-methylnaphthalene. The



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reviewer verified all methylnaphthalene hits reported by the laboratory. Acenaphthene was scored as a PES contaminant at less than the CRQL and was treated as a method blank contaminant during data qualification.

2. The soil aroclor PES had been removed from the active scoring data base by QATS. However, the laboratory reported value of 1000 ug/kg of aroclor-1248 compared favorably with the last available statistics (laboratory reported mean = 1200 with 95% confidence level limits ranging from 200-2300 ug/kg).

#### Volatiles

3. Volatile analytes associated with low DMC recoveries were "J" qualified in water rinsate blank sample C093004-02.

4. All 1,4-dioxane results (all nondetects) in both the water rinsate blank and in all soil samples were "R" qualified due to low responses (RRF < 0.05) reported in initial and continuing calibrations.

#### Semivolatile Extractables

5. Semivolatile extractable analytes associated with low DMC recoveries were "J" qualified in soil sample C093004-09.

6. The N-nitroso-di-n-propylamine and pyrene results were "J" qualified in soil sample C093004-09 due to low recoveries reported for the MS/MSD performed on this sample.

#### Aroclors

7. All aroclor results were "R" qualified for soil sample C093004-09 due to 0% surrogate recovery and matrix interferences present making it impossible to either reliably identify aroclors, if present, or to accurately quantify those present in the MS/MSD performed on this sample. The laboratory reanalyzed this sample after sulfur cleanup but improvement was not seen. Therefore, either sufficient sulfur still remained or interferences were due to another species.

8. The positive aroclor-1242 result for soil sample C093004-10 was confirmed by GC/MS and was qualified "D-1" in Element.

#### Inorganic Data Review

Site Name: Robinson Foundry, Alexander City, AL  
Case No. 38815, Project No. 09-0604, Work Order No. C093004  
ELEMENT Sample IDs: C093004-02 - C093004-18  
Sampling Dates: 07/20-21/09



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Laboratory Performing Inorganic Analysis: A4 Scientific, Inc., The Woodlands, TX  
Date Received from Lab: 07/29/09

Analyses conducted: Total Metals and Mercury

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of one water and sixteen soil samples for Total Metals analysis by ICP-AES and mercury by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as five times blank levels to discount possible false positives due to contamination.

#### ICP-AES Analysis

#### PE Sample Results

The soil performance evaluation sample result for cobalt in SDG MD5BL9 was scored as warning high by the web-based SPS Web software. All positive soil sample results for cobalt were considered estimated and flagged "J". A water performance evaluation sample was not submitted to the laboratory.

#### Other QA/QC Results

Soil matrix spiked sample recovery for lead and zinc in SDG MD5BL9 were -2 and 33%, respectively. All soil sample results for lead in the above SDG were positive and were considered estimated and flagged "J". All soil sample results for zinc in the above SDG were considered estimated and flagged "J".

Serial dilution percent difference for iron in SDG MD5BL8 was 11%. All sample results for iron in the above SDG were considered estimated and flagged "J".

The percent relative standard deviation was greater than 20% for plasma multiple exposures and the reported result was greater than the method detection limit and greater than the contract required quantitation limit for arsenic in sample C093004-16. The above sample result was considered estimated and flagged "J".

#### Mercury Analysis

#### PE Sample Results

Soil performance evaluation samples for mercury were all scored as within limits by the web-based SPS Web



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software. Therefore, no data qualifiers were applied for these criteria.

#### Other QA/QC Results

There were no other QA/QC problems for mercury analysis. Therefore, no data qualifiers were applied for these criteria.

cc: Nardina Turner



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**SAMPLES INCLUDED IN THIS REPORT**

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
RF-BS-01	C093004-01		5BN3	Trip Blank - Soil	7/21/09 08:45	7/22/09 00:00
RF-RB-01	C093004-02	5BN4	5BN4	Equipment Rinse Blank	7/20/09 12:30	7/22/09 00:00
RF-06-SF	C093004-09	5BM5	5BM5	Surface Soil	7/21/09 08:55	7/22/09 00:00
RF-07-SF	C093004-10	5BM6	5BM6	Surface Soil	7/21/09 09:20	7/22/09 00:00
RF-12-SD	C093004-15	5BN1	5BN1	Sediment	7/21/09 07:35	7/22/09 00:00



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**DATA QUALIFIER DEFINITIONS**

- U The analyte was not detected at or above the reporting limit.
- CLP16 Initial Calibration Response Erratic
- CLP17 Initial Calibration Relative Response Outside Method Control Limits
- J The identification of the analyte is acceptable; the reported value is an estimate.
- QS-3 Surrogate recovery is lower than established control limits.
- R The presence or absence of the analyte can not be determined from the data due to severe quality control problems.  
The data are rejected and considered unusable.

**ACRONYMS AND ABBREVIATIONS**

- CAS Chemical Abstracts Service  

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ([www.epa.gov/srs](http://www.epa.gov/srs)), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
- MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No:****D No: 5BN3 A4****Sample ID: RF-BS-01****Lab ID: C093004-01****Station ID:****Matrix: Trip Blank - Soil****Date Collected: 7/21/09 8:45**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	0.0		%		7/22/09	7/22/09	CLP VOA
R4-7156	(m- and/or p-)Xylene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
71-55-6	1,1,1-Trichloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
79-00-5	1,1,2-Trichloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-34-3	1,1-Dichloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
87-61-6	1,2,3-Trichlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
120-82-1	1,2,4-Trichlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
106-93-4	1,2-Dibromoethane (EDB)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
95-50-1	1,2-Dichlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
107-06-2	1,2-Dichloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
78-87-5	1,2-Dichloropropane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
541-73-1	1,3-Dichlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
106-46-7	1,4-Dichlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
123-91-1	1,4-Dioxane	120	U, R, CLP17	ug/kg dry	120	7/22/09	7/22/09	CLP SOM01.2 V
67-64-1	Acetone	12	U, J, CLP16	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
71-43-2	Benzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
74-97-5	Bromochloromethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-27-4	Bromodichloromethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-25-2	Bromoform	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
74-83-9	Bromomethane	6.0	U, J, CLP16	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-15-0	Carbon disulfide	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
56-23-5	Carbon Tetrachloride	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
108-90-7	Chlorobenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-00-3	Chloroethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
67-66-3	Chloroform	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
74-87-3	Chloromethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No:****D No: 5BN3 A4****Sample ID: RF-BS-01****Lab ID: C093004-01****Station ID:****Matrix: Trip Blank - Soil****Date Collected: 7/21/09 8:45**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
156-59-2	cis-1,2-Dichloroethene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
10061-01-5	cis-1,3-Dichloropropene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
110-82-7	Cyclohexane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
124-48-1	Dibromochloromethane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
100-41-4	Ethyl Benzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
98-82-8	Isopropylbenzene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
79-20-9	Methyl Acetate	6.0	U, J, CLP16	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
591-78-6	Methyl Butyl Ketone	12	U	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
78-93-3	Methyl Ethyl Ketone	16		ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
108-10-1	Methyl Isobutyl Ketone	12	U	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
108-87-2	Methylcyclohexane	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-09-2	Methylene Chloride	6.0	U, J, CLP16	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
95-47-6	o-Xylene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
100-42-5	Styrene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
108-88-3	Toluene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
156-60-5	trans-1,2-Dichloroethene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
10061-02-6	trans-1,3-Dichloropropene	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
79-01-6	Trichloroethene (Trichloroethylene)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
75-01-4	Vinyl chloride	6.0	U	ug/kg dry	6.0	7/22/09	7/22/09	CLP SOM01.2 V
<b>Tentatively Identified Compounds:</b>								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/22/09	7/22/09	CLP SOM01.2 V



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-RB-01****Lab ID: C093004-02****MD No: 5BN4 A4****Station ID:****Matrix: Equipment Rinse Blank****Date Collected: 7/20/09 12:30**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
R4-7156	(m- and/or p-)Xylene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
71-55-6	1,1,1-Trichloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
79-00-5	1,1,2-Trichloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-34-3	1,1-Dichloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
87-61-6	1,2,3-Trichlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
120-82-1	1,2,4-Trichlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
95-50-1	1,2-Dichlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
107-06-2	1,2-Dichloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
78-87-5	1,2-Dichloropropane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
541-73-1	1,3-Dichlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
106-46-7	1,4-Dichlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
123-91-1	1,4-Dioxane	100	U, R, CLP17	ug/L	100	7/22/09	7/22/09	CLP SOM01.2 V
67-64-1	Acetone	10	U, J, QS-3	ug/L	10	7/22/09	7/22/09	CLP SOM01.2 V
71-43-2	Benzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
74-97-5	Bromochloromethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-27-4	Bromodichloromethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-25-2	Bromoform	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
74-83-9	Bromomethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-15-0	Carbon disulfide	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
56-23-5	Carbon Tetrachloride	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
108-90-7	Chlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-00-3	Chloroethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
67-66-3	Chloroform	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
74-87-3	Chloromethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
156-59-2	cis-1,2-Dichloroethene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V



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D.A.R.T. Id: 09-0604  
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## Volatile Organics

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN4 A4**

**D No: 5BN4 A4**

**Sample ID: RF-RB-01**

**Lab ID: C093004-02**

**Station ID:**

**Matrix: Equipment Rinse Blank**

**Date Collected: 7/20/09 12:30**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
10061-01-5	cis-1,3-Dichloropropene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
110-82-7	Cyclohexane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
124-48-1	Dibromochloromethane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
100-41-4	Ethyl Benzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
98-82-8	Isopropylbenzene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
79-20-9	Methyl Acetate	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
591-78-6	Methyl Butyl Ketone	10	U	ug/L	10	7/22/09	7/22/09	CLP SOM01.2 V
78-93-3	Methyl Ethyl Ketone	10	U, J, QS-3	ug/L	10	7/22/09	7/22/09	CLP SOM01.2 V
108-10-1	Methyl Isobutyl Ketone	10	U	ug/L	10	7/22/09	7/22/09	CLP SOM01.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
108-87-2	Methylcyclohexane	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-09-2	Methylene Chloride	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
95-47-6	o-Xylene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
100-42-5	Styrene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
108-88-3	Toluene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
156-60-5	trans-1,2-Dichloroethene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
10061-02-6	trans-1,3-Dichloropropene	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
79-01-6	Trichloroethene (Trichloroethylene)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V
75-01-4	Vinyl chloride	5.0	U	ug/L	5.0	7/22/09	7/22/09	CLP SOM01.2 V

### Tentatively Identified Compounds:

R4-0000	Tentatively Identified Compounds	5	U	ug/L	5	7/22/09	7/22/09	CLP SOM01.2 V
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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-06-SF****Lab ID: C093004-09****MD No: 5BM5 A4****Station ID: RF06****Matrix: Surface Soil****D No: 5BM5 A4****Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	10		%		7/22/09	7/22/09	CLP VOA
R4-7156	(m- and/or p-)Xylene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
71-55-6	1,1,1-Trichloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
79-34-5	1,1,2,2-Tetrachloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
79-00-5	1,1,2-Trichloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-34-3	1,1-Dichloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
87-61-6	1,2,3-Trichlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
120-82-1	1,2,4-Trichlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
106-93-4	1,2-Dibromoethane (EDB)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
95-50-1	1,2-Dichlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
107-06-2	1,2-Dichloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
78-87-5	1,2-Dichloropropane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
541-73-1	1,3-Dichlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
106-46-7	1,4-Dichlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
123-91-1	1,4-Dioxane	120	U, R, CLP17	ug/kg dry	120	7/22/09	7/22/09	CLP SOM01.2 V
67-64-1	Acetone	12	U, J, CLP16	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
71-43-2	Benzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
74-97-5	Bromochloromethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-27-4	Bromodichloromethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-25-2	Bromoform	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
74-83-9	Bromomethane	6.1	U, J, CLP16	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-15-0	Carbon disulfide	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
56-23-5	Carbon Tetrachloride	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
108-90-7	Chlorobenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-00-3	Chloroethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
67-66-3	Chloroform	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
74-87-3	Chloromethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-06-SF****Lab ID: C093004-09****MD No: 5BM5 A4****Station ID: RF06****Matrix: Surface Soil****D No: 5BM5 A4****Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
156-59-2	cis-1,2-Dichloroethene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
10061-01-5	cis-1,3-Dichloropropene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
110-82-7	Cyclohexane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
124-48-1	Dibromochloromethane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
100-41-4	Ethyl Benzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
98-82-8	Isopropylbenzene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
79-20-9	Methyl Acetate	6.1	U, J, CLP16	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
591-78-6	Methyl Butyl Ketone	12	U	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
78-93-3	Methyl Ethyl Ketone	16		ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
108-10-1	Methyl Isobutyl Ketone	12	U	ug/kg dry	12	7/22/09	7/22/09	CLP SOM01.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
108-87-2	Methylcyclohexane	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-09-2	Methylene Chloride	6.1	U, J, CLP16	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
95-47-6	o-Xylene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
100-42-5	Styrene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
108-88-3	Toluene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
156-60-5	trans-1,2-Dichloroethene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
10061-02-6	trans-1,3-Dichloropropene	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
79-01-6	Trichloroethene (Trichloroethylene)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
75-01-4	Vinyl chloride	6.1	U	ug/kg dry	6.1	7/22/09	7/22/09	CLP SOM01.2 V
<b>Tentatively Identified Compounds:</b>								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/22/09	7/22/09	CLP SOM01.2 V



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM6 A4****D No: 5BM6 A4****Sample ID: RF-07-SF****Lab ID: C093004-10****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	12		%		7/22/09	7/22/09	CLP VOA
R4-7156	(m- and/or p-)Xylene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
71-55-6	1,1,1-Trichloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
79-00-5	1,1,2-Trichloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-34-3	1,1-Dichloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
87-61-6	1,2,3-Trichlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
120-82-1	1,2,4-Trichlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
106-93-4	1,2-Dibromoethane (EDB)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
95-50-1	1,2-Dichlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
107-06-2	1,2-Dichloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
78-87-5	1,2-Dichloropropane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
541-73-1	1,3-Dichlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
106-46-7	1,4-Dichlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
123-91-1	1,4-Dioxane	130	U, R, CLP17	ug/kg dry	130	7/22/09	7/22/09	CLP SOM01.2 V
67-64-1	Acetone	13	U, J, CLP16	ug/kg dry	13	7/22/09	7/22/09	CLP SOM01.2 V
71-43-2	Benzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
74-97-5	Bromochloromethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-27-4	Bromodichloromethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-25-2	Bromoform	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
74-83-9	Bromomethane	6.3	U, J, CLP16	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-15-0	Carbon disulfide	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
56-23-5	Carbon Tetrachloride	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
108-90-7	Chlorobenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-00-3	Chloroethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
67-66-3	Chloroform	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
74-87-3	Chloromethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-07-SF****Lab ID: C093004-10****MD No: 5BM6 A4****Station ID: RF07****Matrix: Surface Soil****D No: 5BM6 A4****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
156-59-2	cis-1,2-Dichloroethene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
10061-01-5	cis-1,3-Dichloropropene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
110-82-7	Cyclohexane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
124-48-1	Dibromochloromethane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
100-41-4	Ethyl Benzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
98-82-8	Isopropylbenzene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
79-20-9	Methyl Acetate	6.3	U, J, CLP16	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
591-78-6	Methyl Butyl Ketone	13	U	ug/kg dry	13	7/22/09	7/22/09	CLP SOM01.2 V
78-93-3	Methyl Ethyl Ketone	13	U	ug/kg dry	13	7/22/09	7/22/09	CLP SOM01.2 V
108-10-1	Methyl Isobutyl Ketone	13	U	ug/kg dry	13	7/22/09	7/22/09	CLP SOM01.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
108-87-2	Methylcyclohexane	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-09-2	Methylene Chloride	6.3	U, J, CLP16	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
95-47-6	o-Xylene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
100-42-5	Styrene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
108-88-3	Toluene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
156-60-5	trans-1,2-Dichloroethene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
10061-02-6	trans-1,3-Dichloropropene	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
79-01-6	Trichloroethene (Trichloroethylene)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
75-01-4	Vinyl chloride	6.3	U	ug/kg dry	6.3	7/22/09	7/22/09	CLP SOM01.2 V
<b>Tentatively Identified Compounds:</b>								
R4-0000	Tentatively Identified Compounds	6	U	ug/kg dry	6	7/22/09	7/22/09	CLP SOM01.2 V



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BN1 A4****D No: 5BN1 A4****Sample ID: RF-12-SD****Lab ID: C093004-15****Station ID: RF12****Matrix: Sediment****Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	37		%		7/22/09	7/22/09	CLP VOA
R4-7156	(m- and/or p-)Xylene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
71-55-6	1,1,1-Trichloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
79-00-5	1,1,2-Trichloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-34-3	1,1-Dichloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-35-4	1,1-Dichloroethylene (1,1-Dichloroethylene)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
87-61-6	1,2,3-Trichlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
120-82-1	1,2,4-Trichlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
106-93-4	1,2-Dibromoethane (EDB)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
95-50-1	1,2-Dichlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
107-06-2	1,2-Dichloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
78-87-5	1,2-Dichloropropane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
541-73-1	1,3-Dichlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
106-46-7	1,4-Dichlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
123-91-1	1,4-Dioxane	190	U, R, CLP17	ug/kg dry	190	7/22/09	7/22/09	CLP SOM01.2 V
67-64-1	Acetone	19	U, J, CLP16	ug/kg dry	19	7/22/09	7/22/09	CLP SOM01.2 V
71-43-2	Benzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
74-97-5	Bromochloromethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-27-4	Bromodichloromethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-25-2	Bromoform	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
74-83-9	Bromomethane	9.4	U, J, CLP16	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-15-0	Carbon disulfide	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
56-23-5	Carbon Tetrachloride	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
108-90-7	Chlorobenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-00-3	Chloroethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
67-66-3	Chloroform	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
74-87-3	Chloromethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BN1 A4****D No: 5BN1 A4****Sample ID: RF-12-SD****Lab ID: C093004-15****Station ID: RF12****Matrix: Sediment****Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
156-59-2	cis-1,2-Dichloroethene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
10061-01-5	cis-1,3-Dichloropropene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
110-82-7	Cyclohexane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
124-48-1	Dibromochloromethane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-71-8	Dichlorodifluoromethane (Freon 12)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
100-41-4	Ethyl Benzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
98-82-8	Isopropylbenzene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
79-20-9	Methyl Acetate	9.4	U, J, CLP16	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
591-78-6	Methyl Butyl Ketone	19	U	ug/kg dry	19	7/22/09	7/22/09	CLP SOM01.2 V
78-93-3	Methyl Ethyl Ketone	24		ug/kg dry	19	7/22/09	7/22/09	CLP SOM01.2 V
108-10-1	Methyl Isobutyl Ketone	19	U	ug/kg dry	19	7/22/09	7/22/09	CLP SOM01.2 V
1634-04-4	Methyl T-Butyl Ether (MTBE)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
108-87-2	Methylcyclohexane	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-09-2	Methylene Chloride	9.4	U, J, CLP16	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
95-47-6	o-Xylene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
100-42-5	Styrene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
127-18-4	Tetrachloroethene (Tetrachloroethylene)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
108-88-3	Toluene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
156-60-5	trans-1,2-Dichloroethene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
10061-02-6	trans-1,3-Dichloropropene	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
79-01-6	Trichloroethene (Trichloroethylene)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-69-4	Trichlorofluoromethane (Freon 11)	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
75-01-4	Vinyl chloride	9.4	U	ug/kg dry	9.4	7/22/09	7/22/09	CLP SOM01.2 V
<b>Tentatively Identified Compounds:</b>								
R4-0000	Tentatively Identified Compounds	9	U	ug/kg dry	9	7/22/09	7/22/09	CLP SOM01.2 V



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**August 12, 2009**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 09-0604, Robinson Foundry  
Superfund Remedial

**FROM:** Denise Goddard  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Stephen Ball

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

**Semi Volatile Organics (SVOA)**

Semivolatile organic compounds

CLP BNA



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**Report Narrative** for Work Order C093004, Project: 09-0604

Organic Data Review and Validation

Project No. 09-0604

Case No. 38815

Element Work Order No.: C093004

Element Sample Ids.: C093004-01-02, -09-10, -15,-17

Sampling date(s): 07/20/09-07/21/09

Laboratory Performing Organic CLP Analyses: A4 Scientific, Inc., The Woodlands, TX

Site Name: Robinson Foundry, Alexander City, AL

Analyses Conducted: Volatiles, Semivolatile Extractables, Aroclors

The ESAT Work Team reviewed data for one rinsate blank and four soil samples analyzed for volatiles, semivolatile extractables and aroclors, in two sample delivery groups (SDGs). The laboratory was submitted one PES.

The samples were collected between 07/20/09 and 07/21/09, were received by the laboratory on 07/22/09, and the original data package was received on 07/29/09 by the USEPA Quality Assurance Section, Region 4 SESD/MTSB.

A supplemental submission was received on 08/06/09 in response to an USEPA request. This included corrections for aroclor-1242 originally misidentified as aroclor-1248 in soil samples C093004-10 and -15, a missing aroclor GC/MS confirmation analysis required by the SOW for soil sample C093004-10, and reanalysis of aroclor sample C093004-09 and associated QC after the sulfur cleanup was performed.

The peaks identified using manual peak selection and manual integration for the aroclor surrogate TCMX on both columns for soil sample C093004-09 for analyses performed before and after sulfur cleanup were outside the retention time window established during initial calibration. The SOW requires in Exhibit D, Section 11.1.1.1 that peaks must have retention times contained within the established RT windows in order to be identified. Results were qualified as detailed below.

The laboratory satisfied all technical and contractual analysis and extraction holding time limits.

All results associated with either erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier.

Pertinent data quality factors are discussed below.

#### Performance Evaluation Samples

1. The laboratory scored within warning limits for all spiked analytes in the soil semivolatile extractable PES. The laboratory misidentified the spiked TIC 1-methylnaphthalene as the target analyte 2-methylnaphthalene. The



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reviewer verified all methylnaphthalene hits reported by the laboratory. Acenaphthene was scored as a PES contaminant at less than the CRQL and was treated as a method blank contaminant during data qualification.

2. The soil aroclor PES had been removed from the active scoring data base by QATS. However, the laboratory reported value of 1000 ug/kg of aroclor-1248 compared favorably with the last available statistics (laboratory reported mean = 1200 with 95% confidence level limits ranging from 200-2300 ug/kg).

#### Volatiles

3. Volatile analytes associated with low DMC recoveries were "J" qualified in water rinsate blank sample C093004-02.

4. All 1,4-dioxane results (all nondetects) in both the water rinsate blank and in all soil samples were "R" qualified due to low responses (RRF < 0.05) reported in initial and continuing calibrations.

#### Semivolatile Extractables

5. Semivolatile extractable analytes associated with low DMC recoveries were "J" qualified in soil sample C093004-09.

6. The N-nitroso-di-n-propylamine and pyrene results were "J" qualified in soil sample C093004-09 due to low recoveries reported for the MS/MSD performed on this sample.

#### Aroclors

7. All aroclor results were "R" qualified for soil sample C093004-09 due to 0% surrogate recovery and matrix interferences present making it impossible to either reliably identify aroclors, if present, or to accurately quantify those present in the MS/MSD performed on this sample. The laboratory reanalyzed this sample after sulfur cleanup but improvement was not seen. Therefore, either sufficient sulfur still remained or interferences were due to another species.

8. The positive aroclor-1242 result for soil sample C093004-10 was confirmed by GC/MS and was qualified "D-1" in Element.

#### Inorganic Data Review

Site Name: Robinson Foundry, Alexander City, AL  
Case No. 38815, Project No. 09-0604, Work Order No. C093004  
ELEMENT Sample IDs: C093004-02 - C093004-18  
Sampling Dates: 07/20-21/09



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Laboratory Performing Inorganic Analysis: A4 Scientific, Inc., The Woodlands, TX

Date Received from Lab: 07/29/09

Analyses conducted: Total Metals and Mercury

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of one water and sixteen soil samples for Total Metals analysis by ICP-AES and mercury by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as five times blank levels to discount possible false positives due to contamination.

#### ICP-AES Analysis

#### PE Sample Results

The soil performance evaluation sample result for cobalt in SDG MD5BL9 was scored as warning high by the web-based SPS Web software. All positive soil sample results for cobalt were considered estimated and flagged "J". A water performance evaluation sample was not submitted to the laboratory.

#### Other QA/QC Results

Soil matrix spiked sample recovery for lead and zinc in SDG MD5BL9 were -2 and 33%, respectively. All soil sample results for lead in the above SDG were positive and were considered estimated and flagged "J". All soil sample results for zinc in the above SDG were considered estimated and flagged "J".

Serial dilution percent difference for iron in SDG MD5BL8 was 11%. All sample results for iron in the above SDG were considered estimated and flagged "J".

The percent relative standard deviation was greater than 20% for plasma multiple exposures and the reported result was greater than the method detection limit and greater than the contract required quantitation limit for arsenic in sample C093004-16. The above sample result was considered estimated and flagged "J".

#### Mercury Analysis

#### PE Sample Results

Soil performance evaluation samples for mercury were all scored as within limits by the web-based SPS Web



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software. Therefore, no data qualifiers were applied for these criteria.

#### Other QA/QC Results

There were no other QA/QC problems for mercury analysis. Therefore, no data qualifiers were applied for these criteria.

cc: Nardina Turner



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**SAMPLES INCLUDED IN THIS REPORT**

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
RF-RB-01	C093004-02	5BN4	5BN4	Equipment Rinse Blank	7/20/09 12:30	7/22/09 00:00
RF-06-SF	C093004-09	5BM5	5BM5	Surface Soil	7/21/09 08:55	7/22/09 00:00
RF-07-SF	C093004-10	5BM6	5BM6	Surface Soil	7/21/09 09:20	7/22/09 00:00
RF-12-SD	C093004-15	5BN1	5BN1	Sediment	7/21/09 07:35	7/22/09 00:00



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## DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
CLP01	Concentration reported is less than the lowest standard on calibration curve
CLP15	TIC Results Reported as Identified by Lab - IDs Not Verified
J	The identification of the analyte is acceptable; the reported value is an estimate.
N	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification.
NJ	Presumptive evidence that analyte is present; reported as a tentative identification with an estimated value.
QC-1	Analyte concentration low in continuing calibration verification standard
QM-1	Matrix Spike Recovery less than method control limits
QS-3	Surrogate recovery is lower than established control limits.

## ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service  Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ( <a href="http://www.epa.gov/srs">www.epa.gov/srs</a> ), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-RB-01****Lab ID: C093004-02****MD No: 5BN4 A4****Station ID:****Matrix: Equipment Rinse Blank****Date Collected: 7/20/09 12:30**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1319-77-3	(3-and/or 4-)Methylphenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
92-52-4	1,1-Biphenyl	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
95-95-4	2,4,5-Trichlorophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
88-06-2	2,4,6-Trichlorophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
120-83-2	2,4-Dichlorophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
105-67-9	2,4-Dimethylphenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
51-28-5	2,4-Dinitrophenol	10	U, J, QC-1	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
121-14-2	2,4-Dinitrotoluene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
606-20-2	2,6-Dinitrotoluene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
91-58-7	2-Chloronaphthalene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
95-57-8	2-Chlorophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
534-52-1	2-Methyl-4,6-dinitrophenol	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
91-57-6	2-Methylnaphthalene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
95-48-7	2-Methylphenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
88-74-4	2-Nitroaniline	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
88-75-5	2-Nitrophenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
91-94-1	3,3'-Dichlorobenzidine	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
99-09-2	3-Nitroaniline	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
101-55-3	4-Bromophenyl phenyl ether	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
59-50-7	4-Chloro-3-methylphenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
106-47-8	4-Chloroaniline	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
7005-72-3	4-Chlorophenyl phenyl ether	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
100-01-6	4-Nitroaniline	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
100-02-7	4-Nitrophenol	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
83-32-9	Acenaphthene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
208-96-8	Acenaphthylene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
98-86-2	Acetophenone	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
120-12-7	Anthracene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
1912-24-9	Atrazine	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B



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## Semi Volatile Organics

Project: 09-0604, Robinson Foundry

Contract Lab Case: 38815

MD No: 5BN4 A4

D No: 5BN4 A4

Sample ID: RF-RB-01

Lab ID: C093004-02

Station ID:

Matrix: Equipment Rinse Blank

Date Collected: 7/20/09 12:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
100-52-7	Benzaldehyde	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
56-55-3	Benzo(a)anthracene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
50-32-8	Benzo(a)pyrene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
205-99-2	Benzo(b)fluoranthene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
191-24-2	Benzo(g,h,i)perylene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
207-08-9	Benzo(k)fluoranthene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
85-68-7	Benzyl butyl phthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
111-44-4	bis(2-Chloroethyl) Ether	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
39638-32-9	Bis(2-chloroisopropyl) ether	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
117-81-7	Bis(2-ethylhexyl) phthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
105-60-2	Caprolactam	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
86-74-8	Carbazole	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
218-01-9	Chrysene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
53-70-3	Dibenzo(a,h)anthracene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
132-64-9	Dibenzofuran	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
84-66-2	Diethyl phthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
131-11-3	Dimethyl phthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
84-74-2	Di-n-butylphthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
117-84-0	Di-n-octylphthalate	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
206-44-0	Fluoranthene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
86-73-7	Fluorene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
118-74-1	Hexachlorobenzene (HCB)	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
87-68-3	Hexachlorobutadiene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
77-47-4	Hexachlorocyclopentadiene (HCCP)	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
67-72-1	Hexachloroethane	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
193-39-5	Indeno (1,2,3-cd) pyrene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
78-59-1	Isophorone	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
91-20-3	Naphthalene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
98-95-3	Nitrobenzene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
621-64-7	n-Nitroso di-n-Propylamine	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815**

MD No: 5BN4 A4

D No: 5BN4 A4

**Sample ID: RF-RB-01****Lab ID: C093004-02****Station ID:****Matrix: Equipment Rinse Blank****Date Collected: 7/20/09 12:30**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
87-86-5	Pentachlorophenol	10	U	ug/L	10	7/22/09	7/23/09	CLP SOM01.2 B
85-01-8	Phenanthrene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
108-95-2	Phenol	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B
129-00-0	Pyrene	5.0	U	ug/L	5.0	7/22/09	7/23/09	CLP SOM01.2 B

**Tentatively Identified Compounds:**

143-07-7	Dodecanoic acid	5	NJ, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B
111-06-8	Hexadecanoic acid, butyl ester	10	NJ, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B
57-10-3	n-Hexadecanoic acid	6	NJ, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B
123-95-5	Octadecanoic acid, butyl ester	10	NJ, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B
14786-82-4	Phenol, 4-methoxy-3-methyl-	10	NJ, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B
R4-6501	Unidentified Compound(s)	200	J, CLP15	ug/L	7/22/09	7/23/09	CLP SOM01.2 B



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM5 A4****D No: 5BM5 A4****Sample ID: RF-06-SF****Lab ID: C093004-09****Station ID: RF06****Matrix: Surface Soil****Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	10		%		7/22/09	7/24/09	CLP BNA
1319-77-3	(3-and/or 4-)Methylphenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
92-52-4	1,1-Biphenyl	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
95-94-3	1,2,4,5-Tetrachlorobenzene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
58-90-2	2,3,4,6-Tetrachlorophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
95-95-4	2,4,5-Trichlorophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
88-06-2	2,4,6-Trichlorophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
120-83-2	2,4-Dichlorophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
105-67-9	2,4-Dimethylphenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
51-28-5	2,4-Dinitrophenol	10000	U, J, QC-1	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
121-14-2	2,4-Dinitrotoluene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
606-20-2	2,6-Dinitrotoluene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
91-58-7	2-Chloronaphthalene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
95-57-8	2-Chlorophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
534-52-1	2-Methyl-4,6-dinitrophenol	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
91-57-6	2-Methylnaphthalene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
95-48-7	2-Methylphenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
88-74-4	2-Nitroaniline	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
88-75-5	2-Nitrophenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
91-94-1	3,3'-Dichlorobenzidine	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
99-09-2	3-Nitroaniline	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
101-55-3	4-Bromophenyl phenyl ether	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
59-50-7	4-Chloro-3-methylphenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
106-47-8	4-Chloroaniline	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
7005-72-3	4-Chlorophenyl phenyl ether	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
100-01-6	4-Nitroaniline	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
100-02-7	4-Nitrophenol	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
83-32-9	Acenaphthene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
208-96-8	Acenaphthylene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
98-86-2	Acetophenone	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
120-12-7	Anthracene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B



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D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM5 A4**

**D No: 5BM5 A4**

**Sample ID: RF-06-SF**

**Lab ID: C093004-09**

**Station ID: RF06**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1912-24-9	Atrazine	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
100-52-7	Benzaldehyde	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
56-55-3	Benzo(a)anthracene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
50-32-8	Benzo(a)pyrene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
205-99-2	Benzo(b)fluoranthene	1300	J, QS-3, CLP01	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
191-24-2	Benzo(g,h,i)perylene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
207-08-9	Benzo(k)fluoranthene	630	J, QS-3, CLP01	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
85-68-7	Benzyl butyl phthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
111-91-1	Bis(2-chloroethoxy)methane	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
111-44-4	bis(2-Chloroethyl) Ether	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
39638-32-9	Bis(2-chloroisopropyl) ether	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
117-81-7	Bis(2-ethylhexyl) phthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
105-60-2	Caprolactam	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
86-74-8	Carbazole	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
218-01-9	Chrysene	2100	J, QS-3, CLP01	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
53-70-3	Dibenzo(a,h)anthracene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
132-64-9	Dibenzofuran	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
84-66-2	Diethyl phthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
131-11-3	Dimethyl phthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
84-74-2	Di-n-butylphthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
117-84-0	Di-n-octylphthalate	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
206-44-0	Fluoranthene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
86-73-7	Fluorene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
118-74-1	Hexachlorobenzene (HCB)	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
87-68-3	Hexachlorobutadiene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
77-47-4	Hexachlorocyclopentadiene (HCCP)	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
67-72-1	Hexachloroethane	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
193-39-5	Indeno (1,2,3-cd) pyrene	5000	U, J, QS-3	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
78-59-1	Isophorone	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
91-20-3	Naphthalene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
98-95-3	Nitrobenzene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B



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D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM5 A4**

**D No: 5BM5 A4**

**Sample ID: RF-06-SF**

**Lab ID: C093004-09**

**Station ID: RF06**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
621-64-7	n-Nitroso di-n-Propylamine	5000	U, J, QM-1	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
87-86-5	Pentachlorophenol	10000	U	ug/kg dry	10000	7/22/09	7/24/09	CLP SOM01.2 B
85-01-8	Phenanthrene	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
108-95-2	Phenol	5000	U	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
129-00-0	Pyrene	5000	U, J, QS-3, QM-1	ug/kg dry	5000	7/22/09	7/24/09	CLP SOM01.2 B
<b>Tentatively Identified Compounds:</b>								
R4-6500	Petroleum Product:	N, CLP15			7/22/09	7/24/09	CLP SOM01.2 B	
R4-6501	Unidentified Compound(s)	200000	J, CLP15	ug/kg dry	7/22/09	7/24/09	CLP SOM01.2 B	



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Region 4 Science and Ecosystem Support Division

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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM6 A4****D No: 5BM6 A4****Sample ID: RF-07-SF****Lab ID: C093004-10****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	12		%		7/22/09	7/23/09	CLP BNA
1319-77-3	(3-and/or 4-)Methylphenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
92-52-4	1,1-Biphenyl	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
95-94-3	1,2,4,5-Tetrachlorobenzene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
58-90-2	2,3,4,6-Tetrachlorophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
95-95-4	2,4,5-Trichlorophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
88-06-2	2,4,6-Trichlorophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
120-83-2	2,4-Dichlorophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
105-67-9	2,4-Dimethylphenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
51-28-5	2,4-Dinitrophenol	7500	U, J, QC-1	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
121-14-2	2,4-Dinitrotoluene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
606-20-2	2,6-Dinitrotoluene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
91-58-7	2-Chloronaphthalene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
95-57-8	2-Chlorophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
534-52-1	2-Methyl-4,6-dinitrophenol	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
91-57-6	2-Methylnaphthalene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
95-48-7	2-Methylphenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
88-74-4	2-Nitroaniline	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
88-75-5	2-Nitrophenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
91-94-1	3,3'-Dichlorobenzidine	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
99-09-2	3-Nitroaniline	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
101-55-3	4-Bromophenyl phenyl ether	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
59-50-7	4-Chloro-3-methylphenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
106-47-8	4-Chloroaniline	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
7005-72-3	4-Chlorophenyl phenyl ether	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
100-01-6	4-Nitroaniline	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
100-02-7	4-Nitrophenol	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
83-32-9	Acenaphthene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
208-96-8	Acenaphthylene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
98-86-2	Acetophenone	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
120-12-7	Anthracene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM6 A4****D No: 5BM6 A4****Sample ID: RF-07-SF****Lab ID: C093004-10****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1912-24-9	Atrazine	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
100-52-7	Benzaldehyde	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
56-55-3	Benzo(a)anthracene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
50-32-8	Benzo(a)pyrene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
205-99-2	Benzo(b)fluoranthene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
191-24-2	Benzo(g,h,i)perylene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
207-08-9	Benzo(k)fluoranthene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
85-68-7	Benzyl butyl phthalate	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
111-91-1	Bis(2-chloroethoxy)methane	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
111-44-4	bis(2-Chloroethyl) Ether	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
39638-32-9	Bis(2-chloroisopropyl) ether	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
117-81-7	Bis(2-ethylhexyl) phthalate	53000		ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
105-60-2	Caprolactam	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
86-74-8	Carbazole	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
218-01-9	Chrysene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
53-70-3	Dibenzo(a,h)anthracene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
132-64-9	Dibenzofuran	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
84-66-2	Diethyl phthalate	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
131-11-3	Dimethyl phthalate	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
84-74-2	Di-n-butylphthalate	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
117-84-0	Di-n-octylphthalate	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
206-44-0	Fluoranthene	1900	J, CLP01	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
86-73-7	Fluorene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
118-74-1	Hexachlorobenzene (HCB)	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
87-68-3	Hexachlorobutadiene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
77-47-4	Hexachlorocyclopentadiene (HCCP)	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
67-72-1	Hexachloroethane	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
193-39-5	Indeno (1,2,3-cd) pyrene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
78-59-1	Isophorone	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
91-20-3	Naphthalene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
98-95-3	Nitrobenzene	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM6 A4****D No: 5BM6 A4****Sample ID: RF-07-SF****Lab ID: C093004-10****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
621-64-7	n-Nitroso di-n-Propylamine	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
87-86-5	Pentachlorophenol	7500	U	ug/kg dry	7500	7/22/09	7/23/09	CLP SOM01.2 B
85-01-8	Phenanthrene	5800		ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
108-95-2	Phenol	3900	U	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B
129-00-0	Pyrene	3300	J, CLP01	ug/kg dry	3900	7/22/09	7/23/09	CLP SOM01.2 B

<b>Tentatively Identified Compounds:</b>							
612-00-0	Benzene, 1,1'-ethylenbis-	30000	NJ, CLP15	ug/kg dry		7/22/09	7/23/09
R4-6500	Petroleum Product:		N, CLP15			7/22/09	7/23/09
R4-6501	Unidentified Compound(s)	700000	NJ, CLP15	ug/kg dry		7/22/09	7/23/09



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## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BN1 A4****D No: 5BN1 A4****Sample ID: RF-12-SD****Lab ID: C093004-15****Station ID: RF12****Matrix: Sediment****Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	37		%		7/22/09	7/23/09	CLP BNA
1319-77-3	(3-and/or 4-)Methylphenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
92-52-4	1,1-Biphenyl	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
95-95-4	2,4,5-Trichlorophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
88-06-2	2,4,6-Trichlorophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
120-83-2	2,4-Dichlorophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
105-67-9	2,4-Dimethylphenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
51-28-5	2,4-Dinitrophenol	520	U, J, QC-1	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
121-14-2	2,4-Dinitrotoluene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
606-20-2	2,6-Dinitrotoluene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
91-58-7	2-Chloronaphthalene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
95-57-8	2-Chlorophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
534-52-1	2-Methyl-4,6-dinitrophenol	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
91-57-6	2-Methylnaphthalene	47	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
95-48-7	2-Methylphenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
88-74-4	2-Nitroaniline	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
88-75-5	2-Nitrophenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
91-94-1	3,3'-Dichlorobenzidine	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
99-09-2	3-Nitroaniline	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
101-55-3	4-Bromophenyl phenyl ether	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
59-50-7	4-Chloro-3-methylphenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
106-47-8	4-Chloroaniline	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
7005-72-3	4-Chlorophenyl phenyl ether	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
100-01-6	4-Nitroaniline	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
100-02-7	4-Nitrophenol	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
83-32-9	Acenaphthene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
208-96-8	Acenaphthylene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
98-86-2	Acetophenone	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
120-12-7	Anthracene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B



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## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN1 A4**

**D No: 5BN1 A4**

**Sample ID: RF-12-SD**

**Lab ID: C093004-15**

**Station ID: RF12**

**Matrix: Sediment**

**Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
1912-24-9	Atrazine	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
100-52-7	Benzaldehyde	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
56-55-3	Benzo(a)anthracene	130	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
50-32-8	Benzo(a)pyrene	140	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
205-99-2	Benzo(b)fluoranthene	290		ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
191-24-2	Benzo(g,h,i)perylene	120	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
207-08-9	Benzo(k)fluoranthene	57	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
85-68-7	Benzyl butyl phthalate	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
111-91-1	Bis(2-chloroethoxy)methane	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
111-44-4	bis(2-Chloroethyl) Ether	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
39638-32-9	Bis(2-chloroisopropyl) ether	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
117-81-7	Bis(2-ethylhexyl) phthalate	820		ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
105-60-2	Caprolactam	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
86-74-8	Carbazole	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
218-01-9	Chrysene	200	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
53-70-3	Dibenzo(a,h)anthracene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
132-64-9	Dibenzofuran	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
84-66-2	Diethyl phthalate	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
131-11-3	Dimethyl phthalate	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
84-74-2	Di-n-butylphthalate	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
117-84-0	Di-n-octylphthalate	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
206-44-0	Fluoranthene	330		ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
86-73-7	Fluorene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
118-74-1	Hexachlorobenzene (HCB)	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
87-68-3	Hexachlorobutadiene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
77-47-4	Hexachlorocyclopentadiene (HCCP)	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
67-72-1	Hexachloroethane	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
193-39-5	Indeno (1,2,3-cd) pyrene	130	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
78-59-1	Isophorone	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
91-20-3	Naphthalene	62	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
98-95-3	Nitrobenzene	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## Semi Volatile Organics

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN1 A4**

**D No: 5BN1 A4**

**Sample ID: RF-12-SD**

**Lab ID: C093004-15**

**Station ID: RF12**

**Matrix: Sediment**

**Date Collected: 7/21/09 7:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
621-64-7	n-Nitroso di-n-Propylamine	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
122-39-4	n-Nitrosodiphenylamine/Diphenylamine	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
87-86-5	Pentachlorophenol	520	U	ug/kg dry	520	7/22/09	7/23/09	CLP SOM01.2 B
85-01-8	Phenanthrene	120	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
108-95-2	Phenol	270	U	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
129-00-0	Pyrene	260	J, CLP01	ug/kg dry	270	7/22/09	7/23/09	CLP SOM01.2 B
<b>Tentatively Identified Compounds:</b>								
83-46-5	.beta.-Sitosterol	700	NJ, CLP15	ug/kg dry		7/22/09	7/23/09	CLP SOM01.2 B
95-93-2	Benzene, 1,2,4,5-tetramethyl-	300	NJ, CLP15	ug/kg dry		7/22/09	7/23/09	CLP SOM01.2 B
933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	300	NJ, CLP15	ug/kg dry		7/22/09	7/23/09	CLP SOM01.2 B
470-82-6	Eucalyptol	400	NJ, CLP15	ug/kg dry		7/22/09	7/23/09	CLP SOM01.2 B
R4-6500	Petroleum Product:		N, CLP15			7/22/09	7/23/09	CLP SOM01.2 B
R4-6501	Unidentified Compound(s)	10000	J, CLP15	ug/kg dry		7/22/09	7/23/09	CLP SOM01.2 B



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**August 12, 2009**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 09-0604, Robinson Foundry  
Superfund Remedial

**FROM:** Denise Goddard  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Stephen Ball

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

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**PCB Aroclors (PCBA)**

PCB aroclors

CLP Aroclors



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**Report Narrative** for Work Order C093004, Project: 09-0604

Organic Data Review and Validation

Project No. 09-0604

Case No. 38815

Element Work Order No.: C093004

Element Sample Ids.: C093004-01-02, -09-10, -15,-17

Sampling date(s): 07/20/09-07/21/09

Laboratory Performing Organic CLP Analyses: A4 Scientific, Inc., The Woodlands, TX

Site Name: Robinson Foundry, Alexander City, AL

Analyses Conducted: Volatiles, Semivolatile Extractables, Aroclors

The ESAT Work Team reviewed data for one rinsate blank and four soil samples analyzed for volatiles, semivolatile extractables and aroclors, in two sample delivery groups (SDGs). The laboratory was submitted one PES.

The samples were collected between 07/20/09 and 07/21/09, were received by the laboratory on 07/22/09, and the original data package was received on 07/29/09 by the USEPA Quality Assurance Section, Region 4 SESD/MTSB.

A supplemental submission was received on 08/06/09 in response to an USEPA request. This included corrections for aroclor-1242 originally misidentified as aroclor-1248 in soil samples C093004-10 and -15, a missing aroclor GC/MS confirmation analysis required by the SOW for soil sample C093004-10, and reanalysis of aroclor sample C093004-09 and associated QC after the sulfur cleanup was performed.

The peaks identified using manual peak selection and manual integration for the aroclor surrogate TCMX on both columns for soil sample C093004-09 for analyses performed before and after sulfur cleanup were outside the retention time window established during initial calibration. The SOW requires in Exhibit D, Section 11.1.1.1 that peaks must have retention times contained within the established RT windows in order to be identified. Results were qualified as detailed below.

The laboratory satisfied all technical and contractual analysis and extraction holding time limits.

All results associated with either erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier.

Pertinent data quality factors are discussed below.

#### Performance Evaluation Samples

1. The laboratory scored within warning limits for all spiked analytes in the soil semivolatile extractable PES. The laboratory misidentified the spiked TIC 1-methylnaphthalene as the target analyte 2-methylnaphthalene. The



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reviewer verified all methylnaphthalene hits reported by the laboratory. Acenaphthene was scored as a PES contaminant at less than the CRQL and was treated as a method blank contaminant during data qualification.

2. The soil aroclor PES had been removed from the active scoring data base by QATS. However, the laboratory reported value of 1000 ug/kg of aroclor-1248 compared favorably with the last available statistics (laboratory reported mean = 1200 with 95% confidence level limits ranging from 200-2300 ug/kg).

#### Volatiles

3. Volatile analytes associated with low DMC recoveries were "J" qualified in water rinsate blank sample C093004-02.

4. All 1,4-dioxane results (all nondetects) in both the water rinsate blank and in all soil samples were "R" qualified due to low responses (RRF < 0.05) reported in initial and continuing calibrations.

#### Semivolatile Extractables

5. Semivolatile extractable analytes associated with low DMC recoveries were "J" qualified in soil sample C093004-09.

6. The N-nitroso-di-n-propylamine and pyrene results were "J" qualified in soil sample C093004-09 due to low recoveries reported for the MS/MSD performed on this sample.

#### Aroclors

7. All aroclor results were "R" qualified for soil sample C093004-09 due to 0% surrogate recovery and matrix interferences present making it impossible to either reliably identify aroclors, if present, or to accurately quantify those present in the MS/MSD performed on this sample. The laboratory reanalyzed this sample after sulfur cleanup but improvement was not seen. Therefore, either sufficient sulfur still remained or interferences were due to another species.

8. The positive aroclor-1242 result for soil sample C093004-10 was confirmed by GC/MS and was qualified "D-1" in Element.

#### Inorganic Data Review

Site Name: Robinson Foundry, Alexander City, AL

Case No. 38815, Project No. 09-0604, Work Order No. C093004

ELEMENT Sample IDs: C093004-02 - C093004-18

Sampling Dates: 07/20-21/09



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Laboratory Performing Inorganic Analysis: A4 Scientific, Inc., The Woodlands, TX

Date Received from Lab: 07/29/09

Analyses conducted: Total Metals and Mercury

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of one water and sixteen soil samples for Total Metals analysis by ICP-AES and mercury by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as five times blank levels to discount possible false positives due to contamination.

#### ICP-AES Analysis

#### PE Sample Results

The soil performance evaluation sample result for cobalt in SDG MD5BL9 was scored as warning high by the web-based SPS Web software. All positive soil sample results for cobalt were considered estimated and flagged "J". A water performance evaluation sample was not submitted to the laboratory.

#### Other QA/QC Results

Soil matrix spiked sample recovery for lead and zinc in SDG MD5BL9 were -2 and 33%, respectively. All soil sample results for lead in the above SDG were positive and were considered estimated and flagged "J". All soil sample results for zinc in the above SDG were considered estimated and flagged "J".

Serial dilution percent difference for iron in SDG MD5BL8 was 11%. All sample results for iron in the above SDG were considered estimated and flagged "J".

The percent relative standard deviation was greater than 20% for plasma multiple exposures and the reported result was greater than the method detection limit and greater than the contract required quantitation limit for arsenic in sample C093004-16. The above sample result was considered estimated and flagged "J".

#### Mercury Analysis

#### PE Sample Results

Soil performance evaluation samples for mercury were all scored as within limits by the web-based SPS Web



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software. Therefore, no data qualifiers were applied for these criteria.

#### Other QA/QC Results

There were no other QA/QC problems for mercury analysis. Therefore, no data qualifiers were applied for these criteria.

cc: Nardina Turner



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**SAMPLES INCLUDED IN THIS REPORT**

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
RF-RB-01	C093004-02	5BN4	5BN4	Equipment Rinse Blank	7/20/09 12:30	7/22/09 00:00
RF-06-SF	C093004-09	5BM5	5BM5	Surface Soil	7/21/09 08:55	7/22/09 00:00
RF-07-SF	C093004-10	5BM6	5BM6	Surface Soil	7/21/09 09:20	7/22/09 00:00
RF-12-SD	C093004-15	5BN1	5BN1	Sediment	7/21/09 07:35	7/22/09 00:00



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## DATA QUALIFIER DEFINITIONS

- U The analyte was not detected at or above the reporting limit.
- CLP14 The analysis did not indicate the presence of the analyte. The data is rejected and the reported value is the Reporting Limit. Resampling and reanalysis are necessary to confirm or deny the presence of the analyte.
- D-1 The analyte is determined to be present. The presence of the analyte was confirmed by GC/MS.
- D-2 Due to Matrix Interference, the sample cannot be accurately quantified. The reported result is qualitative.
- QS-4 Surrogate recovery less than 10%
- R The presence or absence of the analyte can not be determined from the data due to severe quality control problems.  
The data are rejected and considered unusable.

## ACRONYMS AND ABBREVIATIONS

- CAS Chemical Abstracts Service  

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ([www.epa.gov/srs](http://www.epa.gov/srs)), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
- MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN4 A4**

**D No: 5BN4 A4**

**Sample ID: RF-RB-01**

**Lab ID: C093004-02**

**Station ID:**

**Matrix: Equipment Rinse Blank**

**Date Collected: 7/20/09 12:30**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
12674-11-2	PCB-1016 (Aroclor 1016)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A



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## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM5 A4**

**D No: 5BM5 A4**

**Sample ID: RF-06-SF**

**Lab ID: C093004-09**

**Station ID: RF06**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 8:55**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	10		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	36	U, R, QS-4, D-2, CLP14	ug/kg dry	36	7/22/09	8/04/09	CLP SOM01.2 A



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM6 A4**

**D No: 5BM6 A4**

**Sample ID: RF-07-SF**

**Lab ID: C093004-10**

**Station ID: RF07**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 9:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	12		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	160000	D-1	ug/kg dry	19000	7/22/09	8/04/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A



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## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN1 A4**

**D No: 5BN1 A4**

**Sample ID: RF-12-SD**

**Lab ID: C093004-15**

**Station ID: RF12**

**Matrix: Sediment**

**Date Collected: 7/21/09 7:35**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	37		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	410		ug/kg dry	52	7/22/09	8/04/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**September 18, 2009**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 09-0604, Robinson Foundry  
Superfund Remedial

**FROM:** Denise Goddard  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Stephen Ball

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

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**PCB Aroclors (PCBA)**

PCB aroclors

CLP Aroclors



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**Report Narrative** for Work Order C093004, Project: 09-0604

Organic Data Review and Validation

Project No. 09-0604

Case No. 38815

Element Work Order No.: C093004

Element Sample Ids.: C093004-01-02, -09-10, -15,-17

Sampling date(s): 07/20/09-07/21/09

Laboratory Performing Organic CLP Analyses: A4 Scientific, Inc., The Woodlands, TX

Site Name: Robinson Foundry, Alexander City, AL

Analyses Conducted: Volatiles, Semivolatile Extractables, Aroclors

This report is being re-issued to provide the results of the re-extraction and reanalysis of aroclors in sample C093004-09.

The ESAT Work Team reviewed data for one rinsate blank and four soil samples analyzed for volatiles, semivolatile extractables and aroclors, in two sample delivery groups (SDGs). The laboratory was submitted one PES.

The samples were collected between 07/20/09 and 07/21/09, were received by the laboratory on 07/22/09, and the original data package was received on 07/29/09 by the USEPA Quality Assurance Section, Region 4 SESD/MTSB.

A supplemental submission was received on 08/06/09 in response to an USEPA request. This included corrections for aroclor-1242 originally misidentified as aroclor-1248 in soil samples C093004-10 and -15, a missing aroclor GC/MS confirmation analysis required by the SOW for soil sample C093004-10, and reanalysis of aroclor sample C093004-09 and associated QC after the sulfur cleanup was performed.

A second supplemental submission was received on 09/16/09 as part of MA 1801.0 Sol 926. This consisted of reextraction and reanalysis of aroclor sample C093004-09 using only 1.0 gram with additional sample clean-up along with associated QC. This additional work was necessary due to quality assurance issues caused by the sample matrix making the original aroclor results unusable. These aroclor results were "J" qualified because the technical extraction holding time limit was exceeded.

The peaks identified using manual peak selection and manual integration for the aroclor surrogate TCMX on both columns for soil sample C093004-09 for analyses performed before and after sulfur cleanup (original extractions) were outside the retention time window established during initial calibration. The SOW requires in Exhibit D, Section 11.1.1.1 that peaks must have retention times contained within the established RT windows in order to be identified. Aroclor results for this sample were reported from the re-extraction performed under MA 1801.0 Sol 926 where retention times satisfied the SOW requirements.

The laboratory satisfied all technical and contractual analysis and extraction holding time limits.



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All results associated with either erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier.

Pertinent data quality factors are discussed below.

#### Performance Evaluation Samples

1. The laboratory scored within warning limits for all spiked analytes in the soil semivolatile extractable PES. The laboratory misidentified the spiked TIC 1-methylnaphthalene as the target analyte 2-methylnaphthalene. The reviewer verified all methylnaphthalene hits reported by the laboratory. Acenaphthene was scored as a PES contaminant at less than the CRQL and was treated as a method blank contaminant during data qualification.
2. The soil aroclor PES had been removed from the active scoring data base by QATS. However, the laboratory reported value of 1000 ug/kg of aroclor-1248 compared favorably with the last available statistics (laboratory reported mean = 1200 with 95% confidence level limits ranging from 200-2300 ug/kg).

#### Volatiles

3. Volatile analytes associated with low DMC recoveries were "J" qualified in water rinsate blank sample C093004-02.
4. All 1,4-dioxane results (all nondetects) in both the water rinsate blank and in all soil samples were "R" qualified due to low responses (RRF < 0.05) reported in initial and continuing calibrations.

#### Semivolatile Extractables

5. Semivolatile extractable analytes associated with low DMC recoveries were "J" qualified in soil sample C093004-09.
6. The N-nitroso-di-n-propylamine and pyrene results were "J" qualified in soil sample C093004-09 due to low recoveries reported for the MS/MSD performed on this sample.

#### Aroclors

7. All aroclor results were "R" qualified for soil sample C093004-09 due to 0% surrogate recovery and matrix interferences present making it impossible to either reliably identify aroclors, if present, or to accurately quantify those present in the MS/MSD performed on this sample. The laboratory reanalyzed this sample after sulfur cleanup but improvement was not seen. Therefore, either sufficient sulfur still remained or interferences were due to another species.



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8. The positive aroclor-1242 result for soil sample C093004-10 was confirmed by GC/MS and was qualified "D-1" in Element.

#### Inorganic Data Review

Site Name: Robinson Foundry, Alexander City, AL  
Case No. 38815, Project No. 09-0604, Work Order No. C093004

ELEMENT Sample IDs: C093004-02 - C093004-18

Sampling Dates: 07/20-21/09

Laboratory Performing Inorganic Analysis: A4 Scientific, Inc., The Woodlands, TX

Date Received from Lab: 07/29/09

Analyses conducted: Total Metals and Mercury

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of one water and sixteen soil samples for Total Metals analysis by ICP-AES and mercury by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Additional details are provided below.

Examination of blank samples revealed apparent low-level contamination with several elements. Reported detection limits were adjusted as high as five times blank levels to discount possible false positives due to contamination.

#### ICP-AES Analysis

#### PE Sample Results

The soil performance evaluation sample result for cobalt in SDG MD5BL9 was scored as warning high by the web-based SPS Web software. All positive soil sample results for cobalt were considered estimated and flagged "J". A water performance evaluation sample was not submitted to the laboratory.

#### Other QA/QC Results

Soil matrix spiked sample recovery for lead and zinc in SDG MD5BL9 were -2 and 33%, respectively. All soil sample results for lead in the above SDG were positive and were considered estimated and flagged "J". All soil sample results for zinc in the above SDG were considered estimated and flagged "J".

Serial dilution percent difference for iron in SDG MD5BL8 was 11%. All sample results for iron in the above SDG were considered estimated and flagged "J".



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The percent relative standard deviation was greater than 20% for plasma multiple exposures and the reported result was greater than the method detection limit and greater than the contract required quantitation limit for arsenic in sample C093004-16. The above sample result was considered estimated and flagged "J".

#### Mercury Analysis

#### PE Sample Results

Soil performance evaluation samples for mercury were all scored as within limits by the web-based SPS Web software. Therefore, no data qualifiers were applied for these criteria.

#### Other QA/QC Results

There were no other QA/QC problems for mercury analysis. Therefore, no data qualifiers were applied for these criteria.

cc: Nardina Turner



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Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**SAMPLES INCLUDED IN THIS REPORT**

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
RF-RB-01	C093004-02	5BN4	5BN4	Equipment Rinse Blank	7/20/09 12:30	7/22/09 00:00
RF-06-SF	C093004-09	5BM5	5BM5	Surface Soil	7/21/09 08:55	7/22/09 00:00
RF-07-SF	C093004-10	5BM6	5BM6	Surface Soil	7/21/09 09:20	7/22/09 00:00
RF-12-SD	C093004-15	5BN1	5BN1	Sediment	7/21/09 07:35	7/22/09 00:00



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## DATA QUALIFIER DEFINITIONS

- U The analyte was not detected at or above the reporting limit.
- D-1 The analyte is determined to be present. The presence of the analyte was confirmed by GC/MS.
- H-1 Recommended holding time exceeded
- J The identification of the analyte is acceptable; the reported value is an estimate.
- QC-1 Analyte concentration low in continuing calibration verification standard
- QC-2 Analyte concentration high in continuing calibration verification standard
- QM-1 Matrix Spike Recovery less than method control limits
- QS-3 Surrogate recovery is lower than established control limits.

## ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service
	Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ( <a href="http://www.epa.gov/srs">www.epa.gov/srs</a> ), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

**PCB Aroclors****Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****Sample ID: RF-RB-01****Lab ID: C093004-02****MD No: 5BN4 A4****Station ID:****Matrix: Equipment Rinse Blank****Date Collected: 7/20/09 12:30**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
12674-11-2	PCB-1016 (Aroclor 1016)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	1.0	U	ug/L	1.0	7/22/09	7/22/09	CLP SOM01.2 A



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## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BM5 A4**

**D No: 5BM5 A4**

**Sample ID: RF-06-SF**

**Lab ID: C093004-09**

**Station ID: RF06**

**Matrix: Surface Soil**

**Date Collected: 7/21/09 8:55**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	10		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	1100	U, J, H-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	1100	U, J, H-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	1100	U, J, H-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	1500	J, H-1, QC-2, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	1100	U, J, H-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	1100	U, J, H-1, QC-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	1100	U, J, H-1, QC-1, QM-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	1100	U, J, H-1, QC-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	1100	U, J, H-1, QC-1, QS-3	ug/kg dry	1100	9/04/09	9/15/09	CLP SOM01.2 A



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 09-0604

Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## PCB Aroclors

**Project: 09-0604, Robinson Foundry****Contract Lab Case: 38815****MD No: 5BM6 A4****D No: 5BM6 A4****Sample ID: RF-07-SF****Lab ID: C093004-10****Station ID: RF07****Matrix: Surface Soil****Date Collected: 7/21/09 9:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	12		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	160000	D-1	ug/kg dry	19000	7/22/09	8/04/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	1900	U	ug/kg dry	1900	7/22/09	7/23/09	CLP SOM01.2 A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 09-0604  
Project: 09-0604, Robinson Foundry - Reported by Denise Goddard

## PCB Aroclors

**Project: 09-0604, Robinson Foundry**

**Contract Lab Case: 38815**

**MD No: 5BN1 A4**

**D No: 5BN1 A4**

**Sample ID: RF-12-SD**

**Lab ID: C093004-15**

**Station ID: RF12**

**Matrix: Sediment**

**Date Collected: 7/21/09 7:35**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	37		%		7/22/09	7/23/09	CLP Aroclors
12674-11-2	PCB-1016 (Aroclor 1016)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11104-28-2	PCB-1221 (Aroclor 1221)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11141-16-5	PCB-1232 (Aroclor 1232)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
53469-21-9	PCB-1242 (Aroclor 1242)	410		ug/kg dry	52	7/22/09	8/04/09	CLP SOM01.2 A
12672-29-6	PCB-1248 (Aroclor 1248)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11097-69-1	PCB-1254 (Aroclor 1254)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11096-82-5	PCB-1260 (Aroclor 1260)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
37324-23-5	PCB-1262 (Aroclor 1262)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A
11100-14-4	PCB-1268 (Aroclor 1268)	52	U	ug/kg dry	52	7/22/09	7/23/09	CLP SOM01.2 A



**Site Name:** Robinson Foundry  
**Technical Direction Document Number (No.):** TTEMI-05-003-0063  
**Contract No.:** EP-W-05-054 (START III Region 4)  
**Data Reviewer:** Harry Ellis

**Quality Assurance (QA) Manager:** Jessica A. Vickers  
**Analyses:** Polychlorinated Biphenyls  
**Report Date:** December 7, 2009

Laboratory Report No.	Samples	Field Duplicate Pairs	Field Blanks
0908J13	RF-06A-SS, RF-06B-SS, and RF-06C-SS	None	None

The Tetra Tech EM Inc. Superfund Technical Assessment and Response Team (START) conducted data validation of the analytical results for three soil samples that were collected at the Robinson Foundry Site in Alexander City, Alabama, on August 26, 2009. The soil samples were analyzed under laboratory report No. 0908J13 by Analytical Environmental Services, Inc. (AES), of Atlanta, Georgia. The samples were analyzed for polychlorinated biphenyls (PCB) by SW-846 Method 8082A. A Level IV analytical data package (including raw data) was requested from the laboratory, and a Stage 4 validation was performed on the data set.

Analytical data were evaluated in general accordance with applicable data validation guidance documents, including the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (June 2008). The analytical methods used by AES during this project provide guidance on procedures and method acceptance criteria that, in some areas, differ from the NFGs. Where the methods and the NFGs differ, the data validators followed the acceptance criteria in the methods. In addition, if laboratory-derived acceptance criteria were presented in the AES data package, these criteria were used to evaluate the data unless the criteria were considered inadequate. The following is a list of qualifiers used for the validation of this data package:

- J The analyte was positively identified; the associated value is an approximate concentration of the analyte in the sample.
- U The analyte was analyzed for, but was not detected above the associated value.

The following items were listed in the laboratory specifications submitted to the laboratory prior to receipt of samples to be included in the laboratory data package:

- Cover page
- Table of contents
- Case narrative, including brief descriptions of the analytical methods used and a summary of laboratory or analytical non-conformances, if any
- Field/laboratory sample designation cross-reference table
- Data qualifier, abbreviation, and acronym definition page
- Quality control (QC) sample summary forms, for all associated preparation and analytical batches, which present all of the results and QC summary data that are provided on CLP forms for organic analyses. These forms should include results for the following:

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- Initial and continuing calibrations
- GC calibration verifications
- Laboratory control samples (LCS) and LCS duplicates (LCSD)
- Blanks (method, initial, continuing, and preparation)
- Matrix spike/matrix spike duplicates (MS/MSD)
- Instrument performance check results
- System monitoring compound & surrogate results
- Signed original chain-of-custody (COC) forms
- Laboratory sample receipt forms
- Sample preparation (extraction, digestion, etc.) logs
- Instrument and analysis run logs
- Percent moisture/percent solids determination logs
- Raw data (for example, chromatograms and quantitation reports) for all samples, QC samples, and calibrations.

Data were evaluated based on the following criteria:

- Data completeness
- Sample preservation, receipt, and holding times
- Gas chromatograph with electron capture detector (GC/ECD) instrument performance check
- Initial calibration
- Continuing calibration
- Calibration verification
- Field and laboratory blanks
- System monitoring compounds (surrogates)
- MS/MSD
- Field duplicates
- LCS and LCSD
- Sample dilution
- Re-extraction and reanalysis
- Second column confirmation
- Target analyte identification
- Analyte quantitation and reported detection limits
- System performance and instrument stability

The data validation approach that was followed should meet the needs of most data uses and requirements for limits on uncertainty for decision-making using the data. This approach consisted of a review of all of the data, including the raw data. This data validation effort constituted a full validation of the data and involved a 100 percent check against applicable acceptance criteria of all QC parameter data, including the parameters listed above. In addition, all data that pertain to analyte identification (qualitative), such as chromatograms and mass spectra, were checked completely (100 percent) to evaluate the accuracy of analyte identification.

The data validation effort also involved an in-depth quantitative check of a fraction of the data; this check involved recalculation of QC results (such as percent recoveries [%R] and relative percent difference [RPD] values) and target analyte results from the raw data. Results were recalculated at a frequency of 10 percent for the data that had been transcribed and generated by hand. Results for data calculated by software were recalculated at varying frequencies and to the extent necessary to confirm the adequacy of

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the software. If errors or discrepancies were encountered when any data were recalculated and checked, the extent of the data check was expanded, as necessary, to identify the full extent of the problem.

Enclosure 1 presents copies of the sample results sheets from the laboratory data package, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format. Enclosure 3 presents a copy of the chain-of-custody documentation for the data package. The following sections discuss the data package and provide an overall assessment of the data. This discussion concentrates on the irregularities associated with the various parameters.

## **DATA COMPLETENESS**

The data package for laboratory report No. 0908J13 was complete as submitted, with one exception. The analytical results were initially reported at or above the sample reporting limits (RLs). After the laboratory was notified, a revised summary report was submitted reporting sample results down to the method detection limits (MDLs).

## **SAMPLE PRESERVATION, RECEIPT, AND HOLDING TIMES**

The holding times were met for all sample analyses. The temperatures of the samples were within the QC limit of  $4 \pm 2$  degrees Celsius when they arrived at the laboratory.

## **GC/ECD INSTRUMENT PERFORMANCE CHECK**

All GC/ECD instrument performance checks for the analysis of PCBs met the acceptance criteria.

## **INITIAL CALIBRATION**

The initial calibrations were analyzed at the proper frequencies and concentrations and met all method requirements, including a single-point calibration for Aroclor 1242.

## **CONTINUING CALIBRATION**

The continuing calibrations were analyzed at the proper frequencies and concentrations and met all requirements.

## **CALIBRATION VERIFICATION**

The second source calibration verifications for the PCB analyses were analyzed at the proper frequencies and concentrations and met all requirements.

## **FIELD AND LABORATORY BLANKS**

The method blanks were free of target analytes. No field blanks were included.

## **SYSTEM MONITORING COMPOUNDS (SURROGATES)**

All surrogate recoveries were within the laboratory-specified control limits.

## **MATRIX SPIKE/MATRIX SPIKE DUPLICATES**

MS/MSD analyses were performed on sample RF-06B-SS. All recoveries for Aroclor 1260 and the RPD values for both Aroclor 1016 and Aroclor 1260 were within the laboratory-specified QC limits.

Recoveries for Aroclor 1016 were more than 1,000 percent, far above the QC limits of 27 to 160 percent. The exceedance of this QC limit was apparently due to interference from Aroclor 1242 in the unspiked sample, which had a concentration much higher than the spike concentration. The Aroclor 1242

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interference was obvious from the quantitative results for two of the five peaks that were used to determine each Aroclor. Therefore, the recoveries of Aroclor 1016 could not be reliably measured. No qualifications are warranted for this data gap.

## **FIELD DUPLICATES**

Field duplicates were not included in this data package.

## **LABORATORY CONTROL SAMPLES AND LABORATORY CONTROL SAMPLE DUPLICATES**

The LCS results were within the QC limits. No LCSD analyses were performed; however, precision was monitored by evaluating RPD results for the MS/MSD analyses.

## **SAMPLE DILUTION**

Samples RF-06B-SS and RF-06C-SS were re-analyzed at a 10-fold dilution to bring their Aroclor 1242 concentrations within the calibration range. Due to matrix interference that made it impossible to separate the peaks and determine the Aroclor pattern for quantitation, the analysis for sample RF-06A-SS was performed at a 10-fold dilution. The 10-fold dilution resulted in elevated reporting limits for non-detect Aroclor results for sample RF-06A-SS.

## **RE-EXTRACTION AND RE-ANALYSIS**

No re-extraction was required for the samples analyzed within this data package. The re-analyses performed for this data package were for sample dilutions and are discussed above in the “Sample Dilution” section.

## **SECOND COLUMN CONFIRMATION**

The retention time confirmation between the primary (“first”) and secondary (“second”) columns for detected results was within QC limits.

## **TARGET ANALYTE IDENTIFICATION**

The relative retention times (RRT) of the peaks for the reported PCB-mixtures were within  $\pm 0.06$  RRT units of the standard RRTs.

## **ANALYTE QUANTITATION AND REPORTED DETECTION LIMITS**

Sample results were checked for proper dilution factors, volumes, masses, and adjustments for moisture content. Sample results and reporting limits were correctly calculated. There were no sample results detected below the calibration range, or less than the laboratory RLs but greater than the MDLs. However, all of the positive results for Aroclor 1242 showed major variations in the quantitative results calculated for the peaks. On both columns in all samples, the first of five peaks had the lowest apparent concentration and the fourth peak had the highest, indicating that the same mixture was present in all samples. Because the environmental PCB mixture is a poor match to the unweathered Aroclor mixture used for calibration, the positive results for Aroclor 1242 were qualified (flagged “J”) as estimated. Another analyst might identify the environmental mixture as Aroclor 1248 or as a mixture of Aroclors 1242 and 1248. Such differing identifications would lead to differing concentration results.

## **SYSTEM PERFORMANCE AND INSTRUMENT STABILITY**

No signs of degraded instrument performance were observed. Analytical systems were judged to have been within control and stable during the analyses.

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## **OVERALL ASSESSMENT OF DATA**

The overall quality of this data package was acceptable. Results for Aroclor 1242 in all samples were qualified because they were not good matches to the standard mixture used for calibration due to weathering of the environmental samples. All data can be used as qualified.



**TETRA TECH**

**ENCLOSURE 1**

**LABORATORY ANALYTICAL RESULTS SHEETS WITH HAND-ENTERED DATA  
VALIDATION QUALIFIERS FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC.  
REPORT NO. 0908J13**

(Three Pages)

# Analytical Environmental Services, Inc.

Date: 23-Sep-09

CLIENT:	Tetra Tech EM Inc.	Client Sample ID:	RF-06A-SS
Lab Order:	0908J13	Collection Date:	8/26/2009 1:30:00 PM
Project:	Robinson Foundry		
Lab ID:	0908J13-001	Matrix:	SOIL

Analyses		Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS	SW8082A				(SW3550C)				
Aroclor 1016	BRL	29		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1221	BRL	100		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1232	BRL	68		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1242	920 <i>J</i>	50		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1248	BRL	60		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1254	BRL	44		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Aroclor 1260	BRL	50		370	ug/Kg-dry		117867	10	9/4/2009 1:25:00 PM
Sur: Decachlorobiphenyl	129	0		27.8-158	%REC		117867	10	9/4/2009 1:25:00 PM
Sur: Tetrachloro-m-xylene	89.7	0		19.4-142	%REC		117867	10	9/4/2009 1:25:00 PM
PERCENT MOISTURE D2216									Analyst: MAS
Percent Moisture		10.1		0		0 wt%		1	9/1/2009 5:00:00 PM

HUE  
24 Sept 09

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 23-Sep-09

CLIENT: Tetra Tech EM Inc. Client Sample ID: RF-06B-SS  
 Lab Order: 0908J13 Collection Date: 8/26/2009 1:40:00 PM  
 Project: Robinson Foundry  
 Lab ID: 0908J13-002 Matrix: SOIL

Analyses		Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS	SW8082A				(SW3550C)				Analyst: KDD
Aroclor 1016		BRL		2.7	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Aroclor 1221		BRL		9.5	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Aroclor 1232		BRL		6.5	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Aroclor 1242	1900	J		48	350	ug/Kg-dry	117867	10	9/4/2009 9:47:00 AM
Aroclor 1248		BRL		5.7	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Aroclor 1254		BRL		4.2	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Aroclor 1260		BRL		4.7	35	ug/Kg-dry	117867	1	9/4/2009 2:33:00 PM
Sur: Decachlorobiphenyl	116			0	27.8-158	%REC	117867	1	9/4/2009 2:33:00 PM
Sur: Tetrachloro-m-xylene	103			0	19.4-142	%REC	117867	1	9/4/2009 2:33:00 PM
PERCENT MOISTURE D2216									Analyst: MAS
Percent Moisture		5.14		0	0	wt%		1	9/1/2009 5:00:00 PM

HJE  
24 Sept 09

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 23-Sep-09

CLIENT: Tetra Tech EM Inc. Client Sample ID: RF-06C-SS  
 Lab Order: 0908J13 Collection Date: 8/26/2009 1:50:00 PM  
 Project: Robinson Foundry  
 Lab ID: 0908J13-003 Matrix: SOIL

Analyses		Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS	SW8082A				(SW3550C)				Analyst: KDD
Aroclor 1016		BRL		2.6	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Aroclor 1221		BRL		9.1	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Aroclor 1232		BRL		6.2	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Aroclor 1242	3100	J		46	340	ug/Kg-dry	117867	10	9/4/2009 12:56:00 PM
Aroclor 1248		BRL		5.5	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Aroclor 1254		BRL		4.0	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Aroclor 1260		BRL		4.6	34	ug/Kg-dry	117867	1	9/4/2009 11:16:00 AM
Surr: Decachlorobiphenyl	102			0	27.8-158	%REC	117867	1	9/4/2009 11:16:00 AM
Surr: Tetrachloro-m-xylene	101			0	19.4-142	%REC	117867	1	9/4/2009 11:16:00 AM
PERCENT MOISTURE	D2216								Analyst: MAS
Percent Moisture		1.70			0	wt%			1 9/1/2009 5:00:00 PM

H JE  
24 Sept 09

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

**ENCLOSURE 2**

**DATA VALIDATION-QUALIFIED LABORATORY ANALYTICAL RESULTS FOR  
ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NO. 0908J13**

(One Page)

**DATA VALIDATION-QUALIFIED LABORATORY ANALYTICAL RESULTS  
FOR ANALYTICAL ENVIRONMENTAL SERVICES, INC. REPORT NO. 0908J13**

Sample Designation:	RF-06A-SS	RF-06B-SS	RF-06C-SS
Sample Collection Date:	26-Aug-09	26-Aug-09	26-Aug-09
<b>Percent Moisture (%)</b>			
Percent Moisture	<b>10.1</b>	<b>5.14</b>	<b>1.70</b>
<b>Metals (µg/kg, dry weight)</b>			
Aroclor 1016	370 U	35 U	34 U
Aroclor 1221	370 U	35 U	34 U
Aroclor 1232	370 U	35 U	34 U
Aroclor 1242	<b>920 J</b>	<b>1900 J</b>	<b>3100 J</b>
Aroclor 1248	370 U	35 U	34 U
Aroclor 1254	370 U	35 U	34 U
Aroclor 1260	370 U	35 U	34 U

Notes:

% Percent

µg/kg Micrograms per kilogram

06A, 06B, 06C Individual grab locations from with the "06" location established during the first sampling event.

Aug August

J The analyte was positively identified; the associated value is an estimated concentration of the analyte in the sample.

RF Robinson Foundry

U The analyte was analyzed for, but was not detected at or above the reporting limit.

**BOLD** Analyte was positively detected.

**ENCLOSURE 3**

**CHAIN-OF-CUSTODY DOCUMENTATION FOR ANALYTICAL ENVIRONMENTAL  
SERVICES, INC. REPORT NO. 0908J13**

(One Page)



ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 0908J13

Date:

Page \_\_\_\_\_ of \_\_\_\_\_

COMPANY: <i>Tetra Tech EMI</i>		ADDRESS: 1955 Evergreen Blvd		ANALYSIS REQUESTED										Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	No # of Containers				
PHONE: 678 775 3104		FAX:																	
SAMPLED BY: <i>CLB</i>		SIGNATURE: <i>CLB</i>																	
#	SAMPLE ID	SAMPLING		Grab	Composite	Matrix (See codes)	PRESERVATION (See codes)										REMARKS		
		DATE	TIME																
1	RF-06A-55	8/26	1330	X	SO	X													
2	RF-06B-55	8/26	1340	X	SO	X													
3	RF-06C-55	8/26	1350	X	SO	X													
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
RELINQUISHED BY: <i>CLB</i>		DATE/TIME: 8/27/00	RECEIVED BY: <i>CLB</i>	DATE/TIME: 8/27/00	PROJECT INFORMATION										RECEIPT				
1:		1:	1:	1:	PROJECT NAME: Roberson Foundry										Total # of Containers				
2:		2:	2:	2:	PROJECT #: 103.DX 9017 0003 0063 3002										Turnaround Time Request				
3:		3:	3:	3:	SITE ADDRESS:										Standard 5 Business Days				
SPECIAL INSTRUCTIONS/COMMENTS:		SEND REPORT TO: <i>J. Vickers</i>										2 Business Day Rush							
		INVOICE TO: (IF DIFFERENT FROM ABOVE)										Next Business Day Rush							
												Same Day Rush (auth req.)							
												Other _____							
		QUOTE #: _____ PO #: _____										STATE PROGRAM (if any): _____							
												E-mail? Y/N; Fax? Y/N							
												DATA PACKAGE: I II III IV							
SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.																			
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.																			

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700  
D.A.R.T. Id: 10-0444  
Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**October 28, 2010**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 10-0444, Robinson Foundry  
Superfund Emergency Response and Removal

**FROM:** Charlie Appleby  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Jason Booth

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

**PCB Aroclors (PCBA)**

PCB Aroclors + Homologues	Contract SOW
PCB Congeners	Contract SOW



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**Report Narrative** for Work Order C103202, Project: 10-0444

Site Name: Robinson Foundry, Alexander City, AL

ELEMENT Sample Nos. C103202-01 through 10

PCB Congener Analysis: SGS Analytical, Wilmington, NC

The ESAT Work Team reviewed data for the project cited above consisting of ten soil samples analyzed according to Statement of Work (SOW) CBC01.2 for PCB congeners. The samples were collected on 07/27/10, and received by the laboratory on 07/29/10. The final data package was received by the USEPA Quality Assurance Section, Region 4 SESD/MTSB on 09/27/10. A Stage 4 validation consisting of a manual review (S4VM) was performed on the samples submitted for this case. The data package presents acceptable technical performance with qualifications.

Certain results among these data are reported as not detected at an elevated detection limit. In general, this may occur when method blank contamination is evident, or when one or more of the qualitative identification criteria have not been met. In the event of method blank contamination, reporting limits may be raised as much as five times the level of contamination in order to discount false positive results. If qualitative identification criteria are not met for an analyte, those analytes affected may be reported at an elevated reporting limit with a "D-4, U" qualifier.

The method reporting limit (MRL), as defined elsewhere in this document, is used in PCB congener analyses to report the analyte concentration which corresponds to the lowest quantitative point on the calibration curve. Any positive results less than this value are qualified as estimates ("J" flag). The value reported for a congener that is not detected is an estimate of the detection limit (EDL), which is calculated from the instrument signal vs. system noise, and is qualified with a "U" flag.

This method does not completely resolve all 209 PCB congeners. For those congeners that are not chromatographically resolved, the total of each co-eluting group has been reported under a unique Region 4 name.

Toxic equivalents (TEQ) have been reported for these data which have been derived from the most recently available set of toxic equivalent factors (TEF) for 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD). The most recent mammalian TEFs were published in 2005 by the World Health Organization (WHO).

Toxic equivalents for non-detect results are determined using the EDL as a proxy value. Thus a sample with non-detect results for all PCB congeners will still have a positive TEQ value. The TEQ is qualified as estimated ("J") when the sum of the contributions from the various contributing PCB congener analytes that are themselves reported as either estimated ("J") or non-detect ("U") exceeds 10% of the TEQ total. If no positive results are present for any of the PCB congeners with TEFs, the TEQ is reported as not detected with an estimated detection limit ("UJ").



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**Data quality issues associated with this project are discussed below.**

1. The laboratory stated in the SDG narrative that sample C103202-06 (RF-24-SS) required a 10X dilution in order to improve the quality of the data for many of the target analytes due to interferences. The MRLs for any non-detected congeners have been adjusted to account for this dilution.
2. The laboratory stated in the SDG narrative that the laboratory method blank (LMB) WG18391 contained several congeners with reported concentrations greater than the reporting limit. Affected analyte results have been flagged as “U, B-4”, indicating that these compounds were present in the associated samples at less than 10 times the LMB concentration. The reported results were raised to the MRL and reported as not detected for these congeners if the sample concentrations were less than the MRL and less than ten times the blank concentration.
3. The laboratory also stated in the SDG narrative that LMB WG18391 was misspiked with injection standard. The actual spiking concentration was approximately 1 ng, but could not be accurately verified. The blank was reported with 2 ng spike concentration which resulted in reported recoveries that are flagged high.
4. Samples 103202-05 (RF-23-SS), 07 (RF-25-SS), 08 (RF-26-SS), and 09 (RF-27-SS) required waste dilutions per client approval.
5. The laboratory did not perform a matrix spike or duplicate spike with the SDG.
6. The laboratory reported PCB congeners above the calibration curve in samples C103202-03, 04, and 06 and did not run a dilution. In those samples the congeners above the calibratlon curve were reported with a “J, CLP02” qualifier.

All data qualification factors are explained by the Region 4 - specific qualifier definitions which are included elsewhere in this report. Further details are provided in the complete data review report, which is on file in the Region 4 SESH Records Center.

cc: Nardina Turner



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**SAMPLES INCLUDED IN THIS REPORT**

**Project: 10-0444, Robinson Foundry**

**Contract Lab Case: 40176**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected
RF-20-SED	C103202-01			Sediment	7/27/10 10:40
RF-20-SED-DUP	C103202-02			Sediment	7/27/10 10:45
RF-21-SED	C103202-03			Sediment	7/27/10 11:20
RF-22-SED	C103202-04			Sediment	7/27/10 11:33
RF-23-SS	C103202-05			Surface Soil	7/27/10 12:15
RF-24-SS	C103202-06			Surface Soil	7/27/10 12:22
RF-25-SS	C103202-07			Surface Soil	7/27/10 12:25
RF-26-SS	C103202-08			Surface Soil	7/27/10 12:38
RF-27-SS	C103202-09			Surface Soil	7/27/10 12:30
RF-28-SED	C103202-10			Sediment	7/27/10 13:35



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## DATA QUALIFIER DEFINITIONS

- U The analyte was not detected at or above the reporting limit.
- B-4 Level in blank impacts MRLs.
- CLP01 Concentration reported is less than the lowest standard on calibration curve
- CLP02 Concentration reported is greater than the highest standard on calibration curve
- D-4 MRL elevated due to interferences.
- D-5 Estimated quantitation for one or more individual constituents comprising >10% of the total.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- Q-3 Instrument not calibrated for all constituents of the total concentration result.

## ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service  Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ( <a href="http://www.epa.gov/srs">www.epa.gov/srs</a> ), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1644012	% Moisture	32		%		9/15/10	9/19/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	130	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	550	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	1700	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	4.7	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	43	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	180	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	1900	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	0.69	J, D-5	ng/kg dry	0.69	9/15/10	9/19/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	590	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
1336-36-3	Total PCBs	5700	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	540	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-60-7	PCB Congener # 1	6.1	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-61-8	PCB Congener # 2	2.8	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-62-9	PCB Congener # 3	4.7		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
13029-08-8	PCB Congener # 4	42		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
16605-91-7	PCB Congener # 5	5.3	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25569-80-6	PCB Congener # 6	16	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33284-50-3	PCB Congener # 7	2.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-43-7	PCB Congener # 8	44	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-39-1	PCB Congener # 9	4.9	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33146-45-1	PCB Congener # 10	2.9		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2050-67-1	PCB Congener # 11	61	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	14		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-41-5	PCB Congener # 14	0.21	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2050-68-2	PCB Congener # 15	130		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-78-9	PCB Congener # 16	59	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-66-3	PCB Congener # 17	78		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	140		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
38444-73-4	PCB Congener # 19	25		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	380	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	140	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-85-8	PCB Congener # 22	63	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55720-44-0	PCB Congener # 23	0.73	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55702-45-9	PCB Congener # 24	4.0		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55712-37-3	PCB Congener # 25	16	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	40		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-76-7	PCB Congener # 27	18		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
16606-02-3	PCB Congener # 31	290		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-77-8	PCB Congener # 32	38	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-68-5	PCB Congener # 34	1.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-69-6	PCB Congener # 35	9.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-87-0	PCB Congener # 36	1.8	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-90-5	PCB Congener # 37	120	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
53555-66-1	PCB Congener # 38	2.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-88-1	PCB Congener # 39	2.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	230		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
36559-22-5	PCB Congener # 42	89	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-46-8	PCB Congener # 43	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	370		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	80		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-47-5	PCB Congener # 46	21		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-47-9	PCB Congener # 48	66	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	51		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35693-99-3	PCB Congener # 52	430	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
15968-05-5	PCB Congener # 54	1.0		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74338-24-2	PCB Congener # 55	3.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-43-1	PCB Congener # 56	35	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70424-67-8	PCB Congener # 57	1.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
41464-49-7	PCB Congener # 58	1.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	38		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33025-41-1	PCB Congener # 60	18	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	290	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-34-7	PCB Congener # 63	7.2	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-58-8	PCB Congener # 64	120	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-10-0	PCB Congener # 66	120	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-53-8	PCB Congener # 67	8.4		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-52-7	PCB Congener # 68	3.1	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-42-0	PCB Congener # 72	2.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74338-23-1	PCB Congener # 73	4.3		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-13-3	PCB Congener # 77	5.9	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-49-1	PCB Congener # 78	1.1	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-48-6	PCB Congener # 79	3.4		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33284-52-5	PCB Congener # 80	2.2		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-50-4	PCB Congener # 81	1.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-62-4	PCB Congener # 82	32		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-20-2	PCB Congener # 83	13		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-60-2	PCB Congener # 84	96		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	56		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	220		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	62		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-57-2	PCB Congener # 89	3.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	320		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-61-3	PCB Congener # 92	59		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	340		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-55-0	PCB Congener # 94	2.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-54-9	PCB Congener # 96	4.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38380-01-7	PCB Congener # 99	130		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-21-3	PCB Congener #103	2.5		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
56558-16-8	PCB Congener #104	0.49	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-14-4	PCB Congener #105	100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70424-69-0	PCB Congener #106	1.5	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	10		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-35-8	PCB Congener #109	18		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	340		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-32-0	PCB Congener #111	0.87	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-36-9	PCB Congener #112	0.84	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-37-0	PCB Congener #114	6.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
31508-00-6	PCB Congener #118	280		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-12-7	PCB Congener #120	0.80	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
56558-18-0	PCB Congener #121	0.87	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
76842-07-4	PCB Congener #122	3.6		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
65510-44-3	PCB Congener #123	4.4		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
57465-28-8	PCB Congener #126	1.9	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-33-1	PCB Congener #127	1.5	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	62		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	420		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-66-8	PCB Congener #130	27		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
61798-70-7	PCB Congener #131	5.0		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38380-05-1	PCB Congener #132	130		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-04-3	PCB Congener #133	5.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52704-70-8	PCB Congener #134	21		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	120		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38411-22-2	PCB Congener #136	41		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-06-5	PCB Congener #137	24		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	7.2		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52712-04-6	PCB Congener #141	60		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-61-4	PCB Congener #142	2.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-15-0	PCB Congener #143	1.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-14-9	PCB Congener #144	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
74472-40-5	PCB Congener #145	0.70	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
51908-16-8	PCB Congener #146	51		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	280		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-41-6	PCB Congener #148	0.87	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-08-1	PCB Congener #150	0.64	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-09-2	PCB Congener #152	0.66	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	300		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33979-03-2	PCB Congener #155	0.65	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	42		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-42-7	PCB Congener #158	39		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-35-3	PCB Congener #159	0.92	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-62-5	PCB Congener #160	1.3	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-43-8	PCB Congener #161	1.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-34-2	PCB Congener #162	1.4	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-45-0	PCB Congener #164	26		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-46-1	PCB Congener #165	1.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-72-6	PCB Congener #167	15		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32774-16-6	PCB Congener #169	0.81	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35065-30-6	PCB Congener #170	72		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	22		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-74-8	PCB Congener #172	12		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38411-25-5	PCB Congener #174	71		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-70-7	PCB Congener #175	2.7		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-65-7	PCB Congener #176	9.1		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-70-4	PCB Congener #177	43		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-67-9	PCB Congener #178	19		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-64-6	PCB Congener #179	36		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	140		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-47-2	PCB Congener #181	1.7	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-23-5	PCB Congener #182	0.68	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	44		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED****Lab ID: C103202-01****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:40**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	0.52	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-49-4	PCB Congener #186	0.56	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-68-0	PCB Congener #187	93		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74487-85-7	PCB Congener #188	0.56	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-31-9	PCB Congener #189	2.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-64-7	PCB Congener #190	14		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-50-7	PCB Congener #191	2.3		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-51-8	PCB Congener #192	1.3	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-08-7	PCB Congener #194	36		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-78-2	PCB Congener #195	13		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
42740-50-1	PCB Congener #196	18		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	6.9		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	61		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-71-8	PCB Congener #201	5.3		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2136-99-4	PCB Congener #202	13		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-76-0	PCB Congener #203	33		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-52-9	PCB Congener #204	0.49	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-53-0	PCB Congener #205	2.4		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-72-9	PCB Congener #206	30		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-79-3	PCB Congener #207	2.8		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-77-1	PCB Congener #208	10		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-24-3	PCB Congener #209	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-20-SED-DUP**Lab ID:** C103202-02**MD No:****Station ID:** RF20SED**Matrix:** Sediment**D No:****Date Collected:** 7/27/10 10:45

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	34		%		9/15/10	9/19/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	270	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	400	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	1500	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	4.7	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	33	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	140	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	2100	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	0.74	J, D-5	ng/kg dry	0.74	9/15/10	9/19/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	1200	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
1336-36-3	Total PCBs	6100	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	500	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-60-7	PCB Congener # 1	3.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-61-8	PCB Congener # 2	2.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-62-9	PCB Congener # 3	4.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
13029-08-8	PCB Congener # 4	24		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16605-91-7	PCB Congener # 5	4.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25569-80-6	PCB Congener # 6	17		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-50-3	PCB Congener # 7	2.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-43-7	PCB Congener # 8	51		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-39-1	PCB Congener # 9	4.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33146-45-1	PCB Congener # 10	1.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-67-1	PCB Congener # 11	63	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-41-5	PCB Congener # 14	0.19	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-68-2	PCB Congener # 15	150		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-78-9	PCB Congener # 16	51	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-66-3	PCB Congener # 17	65	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	120		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED-DUP****Lab ID: C103202-02****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:45**

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
38444-73-4	PCB Congener # 19	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	410	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	140	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-85-8	PCB Congener # 22	67	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55720-44-0	PCB Congener # 23	0.64	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55702-45-9	PCB Congener # 24	4.2		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55712-37-3	PCB Congener # 25	18	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	40		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-76-7	PCB Congener # 27	17		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16606-02-3	PCB Congener # 31	300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-77-8	PCB Congener # 32	38	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-68-5	PCB Congener # 34	1.0		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-69-6	PCB Congener # 35	9.9		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-87-0	PCB Congener # 36	1.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-90-5	PCB Congener # 37	130	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53555-66-1	PCB Congener # 38	1.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-88-1	PCB Congener # 39	3.0		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	250		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
36559-22-5	PCB Congener # 42	97		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-46-8	PCB Congener # 43	17		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	380		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	78		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-47-5	PCB Congener # 46	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-47-9	PCB Congener # 48	66	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	210		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	56		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35693-99-3	PCB Congener # 52	440	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
15968-05-5	PCB Congener # 54	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-24-2	PCB Congener # 55	2.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-43-1	PCB Congener # 56	30	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-67-8	PCB Congener # 57	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-20-SED-DUP**Lab ID:** C103202-02**MD No:****Station ID:** RF20SED**Matrix:** Sediment**D No:****Date Collected:** 7/27/10 10:45

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	1.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	41		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33025-41-1	PCB Congener # 60	16	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	280	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-34-7	PCB Congener # 63	6.5	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-58-8	PCB Congener # 64	130	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-10-0	PCB Congener # 66	120	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-53-8	PCB Congener # 67	8.0		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-52-7	PCB Congener # 68	2.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-42-0	PCB Congener # 72	2.4		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-23-1	PCB Congener # 73	5.0		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-13-3	PCB Congener # 77	4.8	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-49-1	PCB Congener # 78	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-48-6	PCB Congener # 79	2.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-52-5	PCB Congener # 80	2.1		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-50-4	PCB Congener # 81	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-62-4	PCB Congener # 82	33		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-20-2	PCB Congener # 83	15		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-60-2	PCB Congener # 84	100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	53		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	210		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	63		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-57-2	PCB Congener # 89	3.9		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	310		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-61-3	PCB Congener # 92	57		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	370		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-55-0	PCB Congener # 94	3.2		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-54-9	PCB Congener # 96	5.4		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-01-7	PCB Congener # 99	130		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-21-3	PCB Congener #103	2.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED-DUP****Lab ID: C103202-02****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:45**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
56558-16-8	PCB Congener #104	0.43	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-14-4	PCB Congener #105	93		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-69-0	PCB Congener #106	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-35-8	PCB Congener #109	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	360		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-32-0	PCB Congener #111	1.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-36-9	PCB Congener #112	1.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-37-0	PCB Congener #114	5.1	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
31508-00-6	PCB Congener #118	250		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-12-7	PCB Congener #120	1.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
56558-18-0	PCB Congener #121	1.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
76842-07-4	PCB Congener #122	3.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
65510-44-3	PCB Congener #123	3.9		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
57465-28-8	PCB Congener #126	1.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-33-1	PCB Congener #127	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	59		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	360		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-66-8	PCB Congener #130	23		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
61798-70-7	PCB Congener #131	4.9		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-05-1	PCB Congener #132	130		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-04-3	PCB Congener #133	4.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52704-70-8	PCB Congener #134	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	110		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-22-2	PCB Congener #136	46		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-06-5	PCB Congener #137	20		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	6.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52712-04-6	PCB Congener #141	53		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-61-4	PCB Congener #142	1.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-15-0	PCB Congener #143	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-14-9	PCB Congener #144	15		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-20-SED-DUP****Lab ID: C103202-02****MD No:****Station ID: RF20SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 10:45**

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
74472-40-5	PCB Congener #145	0.36	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
51908-16-8	PCB Congener #146	42		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	260		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-41-6	PCB Congener #148	0.45	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-08-1	PCB Congener #150	0.52	J, CLP01	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-09-2	PCB Congener #152	0.47	J, CLP01	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	240		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33979-03-2	PCB Congener #155	0.30	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	39		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-42-7	PCB Congener #158	35		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-35-3	PCB Congener #159	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-62-5	PCB Congener #160	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-43-8	PCB Congener #161	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-34-2	PCB Congener #162	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-45-0	PCB Congener #164	22		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-46-1	PCB Congener #165	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-72-6	PCB Congener #167	13		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32774-16-6	PCB Congener #169	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35065-30-6	PCB Congener #170	47		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-74-8	PCB Congener #172	8.3		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-25-5	PCB Congener #174	52		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-70-7	PCB Congener #175	1.9	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-65-7	PCB Congener #176	6.3		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-70-4	PCB Congener #177	29		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-67-9	PCB Congener #178	13		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-64-6	PCB Congener #179	28		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	94		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-47-2	PCB Congener #181	0.95	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-23-5	PCB Congener #182	1.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	33		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-20-SED-DUP**Lab ID:** C103202-02**MD No:****Station ID:** RF20SED**Matrix:** Sediment**D No:****Date Collected:** 7/27/10 10:45

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	0.77	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-49-4	PCB Congener #186	0.84	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-68-0	PCB Congener #187	64		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74487-85-7	PCB Congener #188	0.75	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-31-9	PCB Congener #189	2.0		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-64-7	PCB Congener #190	8.6		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-50-7	PCB Congener #191	1.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-51-8	PCB Congener #192	0.73	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-08-7	PCB Congener #194	25		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-78-2	PCB Congener #195	9.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
42740-50-1	PCB Congener #196	14		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	5.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	41		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-71-8	PCB Congener #201	4.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2136-99-4	PCB Congener #202	9.6		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-76-0	PCB Congener #203	24		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-52-9	PCB Congener #204	0.93	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-53-0	PCB Congener #205	1.6		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-72-9	PCB Congener #206	22		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-79-3	PCB Congener #207	2.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-77-1	PCB Congener #208	7.4		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-24-3	PCB Congener #209	9.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
E1644012	% Moisture	31		%		9/15/10	9/19/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	3800	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	3600	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	13000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	62	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	190	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	1000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	16000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	9.2	J, D-5	ng/kg dry	9.2	9/15/10	9/19/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	33000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
1336-36-3	Total PCBs	98000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	27000	J, Q-3	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-60-7	PCB Congener # 1	24		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-61-8	PCB Congener # 2	12		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-62-9	PCB Congener # 3	27		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
13029-08-8	PCB Congener # 4	360		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
16605-91-7	PCB Congener # 5	45		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
25569-80-6	PCB Congener # 6	220		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33284-50-3	PCB Congener # 7	30		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-43-7	PCB Congener # 8	670		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-39-1	PCB Congener # 9	52		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33146-45-1	PCB Congener # 10	32		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2050-67-1	PCB Congener # 11	70	U, B-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	170		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
34883-41-5	PCB Congener # 14	0.46	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2050-68-2	PCB Congener # 15	2100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-78-9	PCB Congener # 16	1200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-66-3	PCB Congener # 17	1600		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	3000		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
38444-73-4	PCB Congener # 19	360		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	7400	J, CLP02	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	2500		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-85-8	PCB Congener # 22	1500		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55720-44-0	PCB Congener # 23	4.0		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55702-45-9	PCB Congener # 24	82		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
55712-37-3	PCB Congener # 25	280		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	810		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-76-7	PCB Congener # 27	380		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
16606-02-3	PCB Congener # 31	5500	J, CLP02	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-77-8	PCB Congener # 32	920		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-68-5	PCB Congener # 34	17		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
37680-69-6	PCB Congener # 35	78		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-87-0	PCB Congener # 36	9.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-90-5	PCB Congener # 37	1800		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
53555-66-1	PCB Congener # 38	9.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38444-88-1	PCB Congener # 39	37		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	3800		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
36559-22-5	PCB Congener # 42	1700		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-46-8	PCB Congener # 43	330		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	6000	J, CLP02	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	1400		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-47-5	PCB Congener # 46	420		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-47-9	PCB Congener # 48	1300		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	3500		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	930		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35693-99-3	PCB Congener # 52	6300	J, CLP02	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
15968-05-5	PCB Congener # 54	15		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74338-24-2	PCB Congener # 55	11	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-43-1	PCB Congener # 56	220		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70424-67-8	PCB Congener # 57	25		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	33		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	700		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33025-41-1	PCB Congener # 60	100	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	2700		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-34-7	PCB Congener # 63	81		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-58-8	PCB Congener # 64	2200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-10-0	PCB Congener # 66	1100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-53-8	PCB Congener # 67	100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-52-7	PCB Congener # 68	9.8	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-42-0	PCB Congener # 72	30		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74338-23-1	PCB Congener # 73	260		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-13-3	PCB Congener # 77	29		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-49-1	PCB Congener # 78	9.3	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41464-48-6	PCB Congener # 79	8.4	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33284-52-5	PCB Congener # 80	9.2	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70362-50-4	PCB Congener # 81	9.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-62-4	PCB Congener # 82	270		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-20-2	PCB Congener # 83	16	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-60-2	PCB Congener # 84	780		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	330		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	1600		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	310		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-57-2	PCB Congener # 89	14	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	2100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-61-3	PCB Congener # 92	410		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	2600		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-55-0	PCB Congener # 94	33	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
73575-54-9	PCB Congener # 96	50		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38380-01-7	PCB Congener # 99	1000		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-21-3	PCB Congener #103	21		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
56558-16-8	PCB Congener #104	1.5	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32598-14-4	PCB Congener #105	840		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
70424-69-0	PCB Congener #106	5.7	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	100		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-35-8	PCB Congener #109	160		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	2600		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-32-0	PCB Congener #111	8.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-36-9	PCB Congener #112	9.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-37-0	PCB Congener #114	52		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
31508-00-6	PCB Congener #118	2300		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-12-7	PCB Congener #120	7.8	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
56558-18-0	PCB Congener #121	9.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
76842-07-4	PCB Congener #122	36		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
65510-44-3	PCB Congener #123	33		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
57465-28-8	PCB Congener #126	6.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-33-1	PCB Congener #127	5.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	610		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	3200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-66-8	PCB Congener #130	220		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
61798-70-7	PCB Congener #131	50		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38380-05-1	PCB Congener #132	1200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-04-3	PCB Congener #133	37		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52704-70-8	PCB Congener #134	160		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	770		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38411-22-2	PCB Congener #136	300		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-06-5	PCB Congener #137	230		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	65		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52712-04-6	PCB Congener #141	500		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-61-4	PCB Congener #142	12	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-15-0	PCB Congener #143	11	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-14-9	PCB Congener #144	20		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
74472-40-5	PCB Congener #145	1.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
51908-16-8	PCB Congener #146	370		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	2200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-41-6	PCB Congener #148	1.5		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-08-1	PCB Congener #150	2.0		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
68194-09-2	PCB Congener #152	2.2		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	2200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
33979-03-2	PCB Congener #155	1.5	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	410		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-42-7	PCB Congener #158	340		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-35-3	PCB Congener #159	3.1	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-62-5	PCB Congener #160	8.4	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-43-8	PCB Congener #161	7.8	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-34-2	PCB Congener #162	7.2		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-45-0	PCB Congener #164	200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-46-1	PCB Congener #165	8.9	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-72-6	PCB Congener #167	140		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
32774-16-6	PCB Congener #169	2.6	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35065-30-6	PCB Congener #170	420		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	150		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-74-8	PCB Congener #172	75		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
38411-25-5	PCB Congener #174	510		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-70-7	PCB Congener #175	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-65-7	PCB Congener #176	52		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-70-4	PCB Congener #177	260		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-67-9	PCB Congener #178	83		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-64-6	PCB Congener #179	180		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	880		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-47-2	PCB Congener #181	3.7	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
60145-23-5	PCB Congener #182	1.7	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	360		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-21-SED****Lab ID: C103202-03****MD No:****Station ID: RF21SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:20**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	1.3	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-49-4	PCB Congener #186	1.4	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-68-0	PCB Congener #187	550		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74487-85-7	PCB Congener #188	1.4	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
39635-31-9	PCB Congener #189	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
41411-64-7	PCB Congener #190	75		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-50-7	PCB Congener #191	14		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-51-8	PCB Congener #192	3.0	U, D-4	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
35694-08-7	PCB Congener #194	180		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-78-2	PCB Congener #195	62		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
42740-50-1	PCB Congener #196	110		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	46		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	320		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-71-8	PCB Congener #201	42		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2136-99-4	PCB Congener #202	61		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-76-0	PCB Congener #203	200		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-52-9	PCB Congener #204	0.50	U	ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
74472-53-0	PCB Congener #205	10		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
40186-72-9	PCB Congener #206	140		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-79-3	PCB Congener #207	18		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
52663-77-1	PCB Congener #208	33		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW
2051-24-3	PCB Congener #209	16		ng/kg dry	0.90	9/15/10	9/19/10	Contract SOW



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Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry**

**Contract Lab Case: 40176**

**Sample ID:** RF-22-SED

**Lab ID:** C103202-04

**MD No:**

**Station ID:** RF22SED

**Matrix:** Sediment

**D No:**

**Date Collected:** 7/27/10 11:33

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	20		%		9/15/10	9/19/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	3200	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	4900	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	16000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	44	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	280	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	1400	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	13000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	9.9	J, D-5	ng/kg dry	9.9	9/15/10	9/19/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	32000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
1336-36-3	Total PCBs	92000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	21000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-60-7	PCB Congener # 1	20		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-61-8	PCB Congener # 2	12	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-62-9	PCB Congener # 3	23		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
13029-08-8	PCB Congener # 4	300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16605-91-7	PCB Congener # 5	23		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25569-80-6	PCB Congener # 6	160		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-50-3	PCB Congener # 7	22		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-43-7	PCB Congener # 8	460		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-39-1	PCB Congener # 9	41		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33146-45-1	PCB Congener # 10	24		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-67-1	PCB Congener # 11	79	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	150		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-41-5	PCB Congener # 14	0.46	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-68-2	PCB Congener # 15	2100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-78-9	PCB Congener # 16	790		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-66-3	PCB Congener # 17	1000		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	1900		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-22-SED****Lab ID: C103202-04****MD No:****Station ID: RF22SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:33**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
38444-73-4	PCB Congener # 19	320		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	6300	J, CLP02	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	1800		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-85-8	PCB Congener # 22	1100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55720-44-0	PCB Congener # 23	2.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55702-45-9	PCB Congener # 24	49		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55712-37-3	PCB Congener # 25	230	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	660		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-76-7	PCB Congener # 27	310		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16606-02-3	PCB Congener # 31	4400	J, CLP02	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-77-8	PCB Congener # 32	750		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-68-5	PCB Congener # 34	11		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-69-6	PCB Congener # 35	94		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-87-0	PCB Congener # 36	110		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-90-5	PCB Congener # 37	1600		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53555-66-1	PCB Congener # 38	1.9	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-88-1	PCB Congener # 39	28		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	3600		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
36559-22-5	PCB Congener # 42	1800		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-46-8	PCB Congener # 43	0.82	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	5600	J, CLP02	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	1400		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-47-5	PCB Congener # 46	410		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-47-9	PCB Congener # 48	1000		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	3300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	950		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35693-99-3	PCB Congener # 52	6100	J, CLP02	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
15968-05-5	PCB Congener # 54	14		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-24-2	PCB Congener # 55	5.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-43-1	PCB Congener # 56	230		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-67-8	PCB Congener # 57	140		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-22-SED****Lab ID: C103202-04****MD No:****Station ID: RF22SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:33**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
41464-49-7	PCB Congener # 58	130		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	720		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33025-41-1	PCB Congener # 60	94	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	2500		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-34-7	PCB Congener # 63	73		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-58-8	PCB Congener # 64	2000		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-10-0	PCB Congener # 66	1300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-53-8	PCB Congener # 67	4.9	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-52-7	PCB Congener # 68	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-42-0	PCB Congener # 72	37		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-23-1	PCB Congener # 73	220		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-13-3	PCB Congener # 77	30		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-49-1	PCB Congener # 78	5.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-48-6	PCB Congener # 79	4.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-52-5	PCB Congener # 80	5.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-50-4	PCB Congener # 81	5.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-62-4	PCB Congener # 82	200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-20-2	PCB Congener # 83	6.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-60-2	PCB Congener # 84	750		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	190		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	1100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	560		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-57-2	PCB Congener # 89	34		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	1700		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-61-3	PCB Congener # 92	410		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	2900		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-55-0	PCB Congener # 94	37		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-54-9	PCB Congener # 96	55		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-01-7	PCB Congener # 99	830		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-21-3	PCB Congener #103	28		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-22-SED****Lab ID: C103202-04****MD No:****Station ID: RF22SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:33**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
56558-16-8	PCB Congener #104	0.94	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-14-4	PCB Congener #105	540		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-69-0	PCB Congener #106	5.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	78		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-35-8	PCB Congener #109	100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	2100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-32-0	PCB Congener #111	3.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-36-9	PCB Congener #112	3.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-37-0	PCB Congener #114	26		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
31508-00-6	PCB Congener #118	1500		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-12-7	PCB Congener #120	3.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
56558-18-0	PCB Congener #121	3.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
76842-07-4	PCB Congener #122	24		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
65510-44-3	PCB Congener #123	28	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
57465-28-8	PCB Congener #126	30	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-33-1	PCB Congener #127	5.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	780		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	3800		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-66-8	PCB Congener #130	280		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
61798-70-7	PCB Congener #131	59		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-05-1	PCB Congener #132	1600		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-04-3	PCB Congener #133	47		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52704-70-8	PCB Congener #134	200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	990		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-22-2	PCB Congener #136	390		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-06-5	PCB Congener #137	300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	89		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52712-04-6	PCB Congener #141	580		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-61-4	PCB Congener #142	34	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-15-0	PCB Congener #143	31	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-14-9	PCB Congener #144	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-22-SED****Lab ID: C103202-04****MD No:****Station ID: RF22SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 11:33**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
74472-40-5	PCB Congener #145	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
51908-16-8	PCB Congener #146	480		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	2600		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-41-6	PCB Congener #148	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-08-1	PCB Congener #150	3.2		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-09-2	PCB Congener #152	3.4		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	2600		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33979-03-2	PCB Congener #155	0.76	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	320		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-42-7	PCB Congener #158	330		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-35-3	PCB Congener #159	5.8	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-62-5	PCB Congener #160	23	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-43-8	PCB Congener #161	21	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-34-2	PCB Congener #162	27	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-45-0	PCB Congener #164	240		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-46-1	PCB Congener #165	25	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-72-6	PCB Congener #167	160		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32774-16-6	PCB Congener #169	7.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35065-30-6	PCB Congener #170	550		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	210		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-74-8	PCB Congener #172	100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-25-5	PCB Congener #174	690		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-70-7	PCB Congener #175	22		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-65-7	PCB Congener #176	70		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-70-4	PCB Congener #177	350		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-67-9	PCB Congener #178	120		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-64-6	PCB Congener #179	270		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	1200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-47-2	PCB Congener #181	10	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-23-5	PCB Congener #182	2.1	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	460		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



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<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	1.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-49-4	PCB Congener #186	1.7	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-68-0	PCB Congener #187	760		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74487-85-7	PCB Congener #188	1.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-31-9	PCB Congener #189	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-64-7	PCB Congener #190	93		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-50-7	PCB Congener #191	18		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-51-8	PCB Congener #192	4.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-08-7	PCB Congener #194	220		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-78-2	PCB Congener #195	90		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
42740-50-1	PCB Congener #196	150		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	70		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	440		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-71-8	PCB Congener #201	59		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2136-99-4	PCB Congener #202	78		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-76-0	PCB Congener #203	260		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-52-9	PCB Congener #204	1.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-53-0	PCB Congener #205	13		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-72-9	PCB Congener #206	200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-79-3	PCB Congener #207	26		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-77-1	PCB Congener #208	50		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-24-3	PCB Congener #209	31		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-23-SS**Lab ID:** C103202-05**MD No:****Station ID:** RF23SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:15

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	0.60		%		9/02/10	9/04/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	2700000	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	760	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	2100	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	3600	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	1900	U, J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	1900	U, J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	2200000	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	5400	J, D-5	ng/kg dry	5400	9/02/10	9/04/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	3.8E7	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
1336-36-3	Total PCBs	7.6E7	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	3.2E7	J, Q-3	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2051-60-7	PCB Congener # 1	1400	J, CLP01	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2051-61-8	PCB Congener # 2	450	J, CLP01	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2051-62-9	PCB Congener # 3	1700	J, CLP01	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
13029-08-8	PCB Congener # 4	500000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
16605-91-7	PCB Congener # 5	51000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
25569-80-6	PCB Congener # 6	160000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
33284-50-3	PCB Congener # 7	2000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
34883-43-7	PCB Congener # 8	820000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
34883-39-1	PCB Congener # 9	4600		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
33146-45-1	PCB Congener # 10	18000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2050-67-1	PCB Congener # 11	10000	U, B-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	23000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
34883-41-5	PCB Congener # 14	180	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2050-68-2	PCB Congener # 15	1100000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-78-9	PCB Congener # 16	1700000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
37680-66-3	PCB Congener # 17	1700000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	3500000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-23-SS**Lab ID:** C103202-05**MD No:****Station ID:** RF23SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:15

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
38444-73-4	PCB Congener # 19	370000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	7100000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	4300000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-85-8	PCB Congener # 22	1500000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
55720-44-0	PCB Congener # 23	3800		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
55702-45-9	PCB Congener # 24	110000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
55712-37-3	PCB Congener # 25	180000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	1200000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-76-7	PCB Congener # 27	290000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
16606-02-3	PCB Congener # 31	6700000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-77-8	PCB Congener # 32	1400000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
37680-68-5	PCB Congener # 34	24000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
37680-69-6	PCB Congener # 35	99000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-87-0	PCB Congener # 36	18000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-90-5	PCB Congener # 37	1900000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
53555-66-1	PCB Congener # 38	8500 U, D-4		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38444-88-1	PCB Congener # 39	86000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	5600000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
36559-22-5	PCB Congener # 42	1900000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70362-46-8	PCB Congener # 43	310000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	6900000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	1400000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41464-47-5	PCB Congener # 46	450000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70362-47-9	PCB Congener # 48	2000000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	3600000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	740000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
35693-99-3	PCB Congener # 52	6300000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
15968-05-5	PCB Congener # 54	8500		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74338-24-2	PCB Congener # 55	35000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41464-43-1	PCB Congener # 56	160000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70424-67-8	PCB Congener # 57	39000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



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Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-23-SS**Lab ID:** C103202-05**MD No:****Station ID:** RF23SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:15

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	9500	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	820000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
33025-41-1	PCB Congener # 60	82000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	3600000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-34-7	PCB Congener # 63	150000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-58-8	PCB Congener # 64	3400000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
32598-10-0	PCB Congener # 66	1300000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
73575-53-8	PCB Congener # 67	180000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
73575-52-7	PCB Congener # 68	16000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41464-42-0	PCB Congener # 72	33000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74338-23-1	PCB Congener # 73	41000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
32598-13-3	PCB Congener # 77	2200	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70362-49-1	PCB Congener # 78	1600	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41464-48-6	PCB Congener # 79	1400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
33284-52-5	PCB Congener # 80	1700	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70362-50-4	PCB Congener # 81	1900	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-62-4	PCB Congener # 82	1800	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
60145-20-2	PCB Congener # 83	2400	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-60-2	PCB Congener # 84	200000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	1500	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	9200	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38380-02-8	PCB Congener # 87	1900	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	310000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
73575-57-2	PCB Congener # 89	23000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	110000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-61-3	PCB Congener # 92	40000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	1300000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
73575-55-0	PCB Congener # 94	30000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
73575-54-9	PCB Congener # 96	57000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38380-01-7	PCB Congener # 99	36000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



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Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-23-SS****Lab ID: C103202-05****MD No:****Station ID: RF23SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:15**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
60145-21-3	PCB Congener #103	18000		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
56558-16-8	PCB Congener #104	620	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
32598-14-4	PCB Congener #105	1700	J, CLP01	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
70424-69-0	PCB Congener #106	960	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	980	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-35-8	PCB Congener #109	940	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	4300		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
39635-32-0	PCB Congener #111	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-36-9	PCB Congener #112	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-37-0	PCB Congener #114	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
31508-00-6	PCB Congener #118	2600		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
68194-12-7	PCB Congener #120	1000	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
56558-18-0	PCB Congener #121	1200	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
76842-07-4	PCB Congener #122	1000	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
65510-44-3	PCB Congener #123	940	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
57465-28-8	PCB Congener #126	1200	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
39635-33-1	PCB Congener #127	920	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	2100		ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-66-8	PCB Congener #130	1400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
61798-70-7	PCB Congener #131	1300	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38380-05-1	PCB Congener #132	1400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
35694-04-3	PCB Congener #133	1300	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52704-70-8	PCB Congener #134	1400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	530	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38411-22-2	PCB Congener #136	700	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
35694-06-5	PCB Congener #137	1300	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	1200	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52712-04-6	PCB Congener #141	1200	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41411-61-4	PCB Congener #142	1400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
68194-15-0	PCB Congener #143	1200	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-23-SS**Lab ID:** C103202-05**MD No:****Station ID:** RF23SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:15

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
68194-14-9	PCB Congener #144	530	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-40-5	PCB Congener #145	420	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
51908-16-8	PCB Congener #146	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	1300	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-41-6	PCB Congener #148	530	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
68194-08-1	PCB Congener #150	400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
68194-09-2	PCB Congener #152	380	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	1100	U, D-4	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
33979-03-2	PCB Congener #155	280	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	770	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-42-7	PCB Congener #158	820	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
39635-35-3	PCB Congener #159	550	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41411-62-5	PCB Congener #160	960	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-43-8	PCB Congener #161	910	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
39635-34-2	PCB Congener #162	570	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-45-0	PCB Congener #164	900	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-46-1	PCB Congener #165	1000	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-72-6	PCB Congener #167	650	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
32774-16-6	PCB Congener #169	570	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
35065-30-6	PCB Congener #170	670	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	600	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-74-8	PCB Congener #172	620	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
38411-25-5	PCB Congener #174	560	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
40186-70-7	PCB Congener #175	420	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-65-7	PCB Congener #176	320	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-70-4	PCB Congener #177	580	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-67-9	PCB Congener #178	440	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-64-6	PCB Congener #179	310	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	760	J, CLP01	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-47-2	PCB Congener #181	580	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
60145-23-5	PCB Congener #182	400	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-23-SS**Lab ID:** C103202-05**MD No:****Station ID:** RF23SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:15

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
R4-8000893	PCB Congener #183 and/or 185	550	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-48-3	PCB Congener #184	310	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-49-4	PCB Congener #186	340	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-68-0	PCB Congener #187	430	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74487-85-7	PCB Congener #188	420	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
39635-31-9	PCB Congener #189	470	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
41411-64-7	PCB Congener #190	520	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-50-7	PCB Congener #191	450	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-51-8	PCB Congener #192	500	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
35694-08-7	PCB Congener #194	840	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-78-2	PCB Congener #195	830	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
42740-50-1	PCB Congener #196	730	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	470	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	750	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
40186-71-8	PCB Congener #201	440	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2136-99-4	PCB Congener #202	640	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-76-0	PCB Congener #203	700	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-52-9	PCB Congener #204	470	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
74472-53-0	PCB Congener #205	530	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
40186-72-9	PCB Congener #206	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-79-3	PCB Congener #207	790	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
52663-77-1	PCB Congener #208	720	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW
2051-24-3	PCB Congener #209	1100	U	ng/kg dry	1900	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	1.6		%		9/15/10	9/21/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	34000	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	1700	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	7600	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	270	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	190	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	470	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	32000	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	63	J, D-5	ng/kg dry	63	9/15/10	9/21/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	330000	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
1336-36-3	Total PCBs	640000	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	230000	J, Q-3	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
2051-60-7	PCB Congener # 1	58		ng/kg dry	1.0	9/15/10	9/20/10	Contract SOW
2051-61-8	PCB Congener # 2	48		ng/kg dry	1.0	9/15/10	9/20/10	Contract SOW
2051-62-9	PCB Congener # 3	160		ng/kg dry	1.0	9/15/10	9/20/10	Contract SOW
13029-08-8	PCB Congener # 4	850		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
16605-91-7	PCB Congener # 5	480		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
25569-80-6	PCB Congener # 6	960		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
33284-50-3	PCB Congener # 7	72		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
34883-43-7	PCB Congener # 8	4400		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
34883-39-1	PCB Congener # 9	120		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
33146-45-1	PCB Congener # 10	55		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
2050-67-1	PCB Congener # 11	300	U, B-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	1600		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
34883-41-5	PCB Congener # 14	5.7	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
2050-68-2	PCB Congener # 15	25000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-78-9	PCB Congener # 16	4500		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
37680-66-3	PCB Congener # 17	5300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	10000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
38444-73-4	PCB Congener # 19	560		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	59000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	30000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-85-8	PCB Congener # 22	15000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
55720-44-0	PCB Congener # 23	17	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
55702-45-9	PCB Congener # 24	390		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
55712-37-3	PCB Congener # 25	2000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	5700		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-76-7	PCB Congener # 27	1100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
16606-02-3	PCB Congener # 31	50000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-77-8	PCB Congener # 32	5100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
37680-68-5	PCB Congener # 34	160		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
37680-69-6	PCB Congener # 35	2100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-87-0	PCB Congener # 36	24	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-90-5	PCB Congener # 37	40000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
53555-66-1	PCB Congener # 38	25	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38444-88-1	PCB Congener # 39	530		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	41000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
36559-22-5	PCB Congener # 42	18000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70362-46-8	PCB Congener # 43	3900		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	56000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	5900		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41464-47-5	PCB Congener # 46	2700		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70362-47-9	PCB Congener # 48	15000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	30000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	3800		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
35693-99-3	PCB Congener # 52	46000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
15968-05-5	PCB Congener # 54	24		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74338-24-2	PCB Congener # 55	800		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41464-43-1	PCB Congener # 56	2700		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70424-67-8	PCB Congener # 57	220		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	200		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	7300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
33025-41-1	PCB Congener # 60	1100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	44000	J, CLP02	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-34-7	PCB Congener # 63	1500		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-58-8	PCB Congener # 64	28000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
32598-10-0	PCB Congener # 66	20000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
73575-53-8	PCB Congener # 67	1600		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
73575-52-7	PCB Congener # 68	220		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41464-42-0	PCB Congener # 72	450		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74338-23-1	PCB Congener # 73	1100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
32598-13-3	PCB Congener # 77	44		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70362-49-1	PCB Congener # 78	17	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41464-48-6	PCB Congener # 79	18		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
33284-52-5	PCB Congener # 80	15	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70362-50-4	PCB Congener # 81	19	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-62-4	PCB Congener # 82	160		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
60145-20-2	PCB Congener # 83	140		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-60-2	PCB Congener # 84	2300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	340		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	1200		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	3200		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
73575-57-2	PCB Congener # 89	230		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	3000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-61-3	PCB Congener # 92	800		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	13000		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
73575-55-0	PCB Congener # 94	300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
73575-54-9	PCB Congener # 96	320		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38380-01-7	PCB Congener # 99	1400		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
60145-21-3	PCB Congener #103	150		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
56558-16-8	PCB Congener #104	6.5	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
32598-14-4	PCB Congener #105	830		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
70424-69-0	PCB Congener #106	15	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	86		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-35-8	PCB Congener #109	120		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	2300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
39635-32-0	PCB Congener #111	18	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-36-9	PCB Congener #112	18	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-37-0	PCB Congener #114	48		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
31508-00-6	PCB Congener #118	1900		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
68194-12-7	PCB Congener #120	17	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
56558-18-0	PCB Congener #121	20	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
76842-07-4	PCB Congener #122	30		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
65510-44-3	PCB Congener #123	39		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
57465-28-8	PCB Congener #126	16	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
39635-33-1	PCB Congener #127	15	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	350		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	1900		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-66-8	PCB Congener #130	130		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
61798-70-7	PCB Congener #131	24		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38380-05-1	PCB Congener #132	600		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
35694-04-3	PCB Congener #133	20		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52704-70-8	PCB Congener #134	94		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	400		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38411-22-2	PCB Congener #136	120		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
35694-06-5	PCB Congener #137	150		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	46		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52712-04-6	PCB Congener #141	300		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41411-61-4	PCB Congener #142	21	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
68194-15-0	PCB Congener #143	18	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
68194-14-9	PCB Congener #144	63		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
74472-40-5	PCB Congener #145	6.3	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
51908-16-8	PCB Congener #146	230		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	1100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-41-6	PCB Congener #148	7.7	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
68194-08-1	PCB Congener #150	5.9	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
68194-09-2	PCB Congener #152	5.6	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	1400		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
33979-03-2	PCB Congener #155	4.3	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	270		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-42-7	PCB Congener #158	220		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
39635-35-3	PCB Congener #159	21	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41411-62-5	PCB Congener #160	16	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-43-8	PCB Congener #161	14	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
39635-34-2	PCB Congener #162	21	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-45-0	PCB Congener #164	130		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-46-1	PCB Congener #165	16	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-72-6	PCB Congener #167	94		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
32774-16-6	PCB Congener #169	23	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
35065-30-6	PCB Congener #170	250		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	79		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-74-8	PCB Congener #172	43		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
38411-25-5	PCB Congener #174	230		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
40186-70-7	PCB Congener #175	11	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-65-7	PCB Congener #176	25	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-70-4	PCB Congener #177	120		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-67-9	PCB Congener #178	39		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-64-6	PCB Congener #179	68		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	460		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-47-2	PCB Congener #181	9.2	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
60145-23-5	PCB Congener #182	6.8	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	160		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-24-SS**Lab ID:** C103202-06**MD No:****Station ID:** RF24SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:22

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	4.9	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-49-4	PCB Congener #186	5.3	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-68-0	PCB Congener #187	220		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74487-85-7	PCB Congener #188	5.5	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
39635-31-9	PCB Congener #189	18		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
41411-64-7	PCB Congener #190	51		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-50-7	PCB Congener #191	14	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-51-8	PCB Congener #192	8.0	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
35694-08-7	PCB Congener #194	100		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-78-2	PCB Congener #195	39	U, D-4	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
42740-50-1	PCB Congener #196	53		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	22		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	150		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
40186-71-8	PCB Congener #201	16		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
2136-99-4	PCB Congener #202	25		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-76-0	PCB Congener #203	94		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-52-9	PCB Congener #204	8.9	U	ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
74472-53-0	PCB Congener #205	13		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
40186-72-9	PCB Congener #206	120		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-79-3	PCB Congener #207	16		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
52663-77-1	PCB Congener #208	47		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW
2051-24-3	PCB Congener #209	77		ng/kg dry	9.9	9/15/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-25-SS**Lab ID:** C103202-07**MD No:****Station ID:** RF25SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:25

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	0.50		%		9/02/10	9/21/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	72000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	970	U, J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	1000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	970	U, J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	970	U, J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	970	U, J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	160000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	380	J, D-5	ng/kg dry	380	9/02/10	9/21/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	2300000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
1336-36-3	Total PCBs	3700000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	1200000	J, Q-3	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2051-60-7	PCB Congener # 1	370	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2051-61-8	PCB Congener # 2	190	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2051-62-9	PCB Congener # 3	400	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
13029-08-8	PCB Congener # 4	3600		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
16605-91-7	PCB Congener # 5	1300		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
25569-80-6	PCB Congener # 6	3900		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
33284-50-3	PCB Congener # 7	450	J, CLP01	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
34883-43-7	PCB Congener # 8	21000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
34883-39-1	PCB Congener # 9	650	J, CLP01	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
33146-45-1	PCB Congener # 10	130	J, CLP01	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2050-67-1	PCB Congener # 11	1300	U, B-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	3000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
34883-41-5	PCB Congener # 14	85	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2050-68-2	PCB Congener # 15	39000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-78-9	PCB Congener # 16	34000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
37680-66-3	PCB Congener # 17	34000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	60000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-25-SS****Lab ID: C103202-07****MD No:****Station ID: RF25SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:25**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
38444-73-4	PCB Congener # 19	4200		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	300000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	200000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-85-8	PCB Congener # 22	91000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
55720-44-0	PCB Congener # 23	290 U		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
55702-45-9	PCB Congener # 24	1600		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
55712-37-3	PCB Congener # 25	9600		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	40000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-76-7	PCB Congener # 27	8200		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
16606-02-3	PCB Congener # 31	280000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-77-8	PCB Congener # 32	35000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
37680-68-5	PCB Congener # 34	1100		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
37680-69-6	PCB Congener # 35	8100		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-87-0	PCB Congener # 36	1000 U, D-4		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-90-5	PCB Congener # 37	120000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
53555-66-1	PCB Congener # 38	570 U		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38444-88-1	PCB Congener # 39	3800		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	330000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
36559-22-5	PCB Congener # 42	120000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70362-46-8	PCB Congener # 43	22000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	360000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	51000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41464-47-5	PCB Congener # 46	17000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70362-47-9	PCB Congener # 48	84000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	220000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	23000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
35693-99-3	PCB Congener # 52	370000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
15968-05-5	PCB Congener # 54	300 U, D-4		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74338-24-2	PCB Congener # 55	2400 U, D-4		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41464-43-1	PCB Congener # 56	13000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70424-67-8	PCB Congener # 57	2600		ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-25-SS**Lab ID:** C103202-07**MD No:****Station ID:** RF25SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:25

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	1500	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	46000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
33025-41-1	PCB Congener # 60	6800		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	260000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-34-7	PCB Congener # 63	10000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-58-8	PCB Congener # 64	200000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
32598-10-0	PCB Congener # 66	120000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
73575-53-8	PCB Congener # 67	13000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
73575-52-7	PCB Congener # 68	1200	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41464-42-0	PCB Congener # 72	2900		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74338-23-1	PCB Congener # 73	2500		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
32598-13-3	PCB Congener # 77	1700	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70362-49-1	PCB Congener # 78	1200	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41464-48-6	PCB Congener # 79	1100	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
33284-52-5	PCB Congener # 80	1100	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70362-50-4	PCB Congener # 81	1500	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-62-4	PCB Congener # 82	2000	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
60145-20-2	PCB Congener # 83	2100	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-60-2	PCB Congener # 84	15000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	1500	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	1700		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	22000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
73575-57-2	PCB Congener # 89	2100	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	12000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-61-3	PCB Congener # 92	3200	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	100000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
73575-55-0	PCB Congener # 94	2800		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
73575-54-9	PCB Congener # 96	2600		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38380-01-7	PCB Congener # 99	4200		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
60145-21-3	PCB Congener #103	1600	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-25-SS**Lab ID:** C103202-07**MD No:****Station ID:** RF25SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:25

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
56558-16-8	PCB Congener #104	210	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
32598-14-4	PCB Congener #105	900	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
70424-69-0	PCB Congener #106	770	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	790	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-35-8	PCB Congener #109	750	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	1200	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
39635-32-0	PCB Congener #111	1300	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-36-9	PCB Congener #112	1300	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-37-0	PCB Congener #114	960	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
31508-00-6	PCB Congener #118	970	J, CLP01	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-12-7	PCB Congener #120	1200	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
56558-18-0	PCB Congener #121	1400	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
76842-07-4	PCB Congener #122	840	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
65510-44-3	PCB Congener #123	850	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
57465-28-8	PCB Congener #126	910	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
39635-33-1	PCB Congener #127	780	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	680	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	1000		ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-66-8	PCB Congener #130	850	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
61798-70-7	PCB Congener #131	760	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38380-05-1	PCB Congener #132	840	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
35694-04-3	PCB Congener #133	770	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52704-70-8	PCB Congener #134	840	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	410	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38411-22-2	PCB Congener #136	290	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
35694-06-5	PCB Congener #137	780	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	720	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52712-04-6	PCB Congener #141	720	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41411-61-4	PCB Congener #142	810	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-15-0	PCB Congener #143	720	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-14-9	PCB Congener #144	380	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-25-SS****Lab ID: C103202-07****MD No:****Station ID: RF25SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:25**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
74472-40-5	PCB Congener #145	320	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
51908-16-8	PCB Congener #146	690	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	740	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-41-6	PCB Congener #148	390	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-08-1	PCB Congener #150	300	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-09-2	PCB Congener #152	290	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	600	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
33979-03-2	PCB Congener #155	210	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	640	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-42-7	PCB Congener #158	520	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
39635-35-3	PCB Congener #159	460	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41411-62-5	PCB Congener #160	620	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-43-8	PCB Congener #161	540	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
39635-34-2	PCB Congener #162	460	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-45-0	PCB Congener #164	570	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-46-1	PCB Congener #165	620	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-72-6	PCB Congener #167	530	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
32774-16-6	PCB Congener #169	430	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
35065-30-6	PCB Congener #170	750	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	720	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-74-8	PCB Congener #172	740	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
68194-16-1	PCB Congener #173	970	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
38411-25-5	PCB Congener #174	690	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
40186-70-7	PCB Congener #175	360	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-65-7	PCB Congener #176	270	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-70-4	PCB Congener #177	700	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-67-9	PCB Congener #178	380	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-64-6	PCB Congener #179	260	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	530	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-47-2	PCB Congener #181	690	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
60145-23-5	PCB Congener #182	370	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-25-SS**Lab ID:** C103202-07**MD No:****Station ID:** RF25SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:25

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
R4-8000893	PCB Congener #183 and/or 185	700	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-48-3	PCB Congener #184	260	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-49-4	PCB Congener #186	290	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-68-0	PCB Congener #187	360	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74487-85-7	PCB Congener #188	350	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
39635-31-9	PCB Congener #189	250	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
41411-64-7	PCB Congener #190	560	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-50-7	PCB Congener #191	520	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-51-8	PCB Congener #192	600	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
35694-08-7	PCB Congener #194	470	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-78-2	PCB Congener #195	520	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
42740-50-1	PCB Congener #196	400	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	280	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	410	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
40186-71-8	PCB Congener #201	290	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2136-99-4	PCB Congener #202	360	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-76-0	PCB Congener #203	380	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-52-9	PCB Congener #204	280	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
74472-53-0	PCB Congener #205	280	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
40186-72-9	PCB Congener #206	280	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-79-3	PCB Congener #207	230	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
52663-77-1	PCB Congener #208	240	U	ng/kg dry	970	9/02/10	9/21/10	Contract SOW
2051-24-3	PCB Congener #209	220	U, D-4	ng/kg dry	970	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-26-SS**Lab ID:** C103202-08**MD No:****Station ID:** RF26SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:38

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	0.40		%		9/02/10	9/04/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	35000	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	980	U, J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	980	U, J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	150	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	980	U, J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	980	U, J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	140000	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	150	J, D-5	ng/kg dry	150	9/02/10	9/04/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	1900000	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
1336-36-3	Total PCBs	2800000	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	730000	J, Q-3	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2051-60-7	PCB Congener # 1	120	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2051-61-8	PCB Congener # 2	130	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2051-62-9	PCB Congener # 3	150	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
13029-08-8	PCB Congener # 4	920	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
16605-91-7	PCB Congener # 5	360	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
25569-80-6	PCB Congener # 6	570	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
33284-50-3	PCB Congener # 7	110	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
34883-43-7	PCB Congener # 8	3000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
34883-39-1	PCB Congener # 9	120	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
33146-45-1	PCB Congener # 10	29	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2050-67-1	PCB Congener # 11	760	U, B-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	830	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
34883-41-5	PCB Congener # 14	50	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2050-68-2	PCB Congener # 15	28000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-78-9	PCB Congener # 16	16000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
37680-66-3	PCB Congener # 17	23000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	32000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-26-SS****Lab ID: C103202-08****MD No:****Station ID: RF26SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:38**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
38444-73-4	PCB Congener # 19	1800		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	190000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	92000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-85-8	PCB Congener # 22	34000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
55720-44-0	PCB Congener # 23	160 <b>U</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
55702-45-9	PCB Congener # 24	960 <b>J, CLP01</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
55712-37-3	PCB Congener # 25	2900		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	16000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-76-7	PCB Congener # 27	5300		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
16606-02-3	PCB Congener # 31	200000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-77-8	PCB Congener # 32	31000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
37680-68-5	PCB Congener # 34	720 <b>U, D-4</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
37680-69-6	PCB Congener # 35	4100		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-87-0	PCB Congener # 36	960 <b>J, CLP01</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-90-5	PCB Congener # 37	77000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
53555-66-1	PCB Congener # 38	380 <b>U</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38444-88-1	PCB Congener # 39	3600		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	280000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
36559-22-5	PCB Congener # 42	97000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70362-46-8	PCB Congener # 43	17000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	350000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	43000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41464-47-5	PCB Congener # 46	12000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70362-47-9	PCB Congener # 48	96000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	200000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	26000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
35693-99-3	PCB Congener # 52	330000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
15968-05-5	PCB Congener # 54	230 <b>U</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74338-24-2	PCB Congener # 55	1800		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41464-43-1	PCB Congener # 56	9500		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70424-67-8	PCB Congener # 57	950 <b>U, D-4</b>		ng/kg dry	980	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-26-SS****Lab ID: C103202-08****MD No:****Station ID: RF26SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:38**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
41464-49-7	PCB Congener # 58	870	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	42000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
33025-41-1	PCB Congener # 60	4000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	180000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-34-7	PCB Congener # 63	6700		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-58-8	PCB Congener # 64	170000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
32598-10-0	PCB Congener # 66	68000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
73575-53-8	PCB Congener # 67	6200		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
73575-52-7	PCB Congener # 68	1000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41464-42-0	PCB Congener # 72	2100		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74338-23-1	PCB Congener # 73	1500		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
32598-13-3	PCB Congener # 77	910	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70362-49-1	PCB Congener # 78	710	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41464-48-6	PCB Congener # 79	600	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
33284-52-5	PCB Congener # 80	680	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70362-50-4	PCB Congener # 81	890	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-62-4	PCB Congener # 82	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
60145-20-2	PCB Congener # 83	1400	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-60-2	PCB Congener # 84	13000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	920	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	1100		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	19000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
73575-57-2	PCB Congener # 89	1300		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	7600		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-61-3	PCB Congener # 92	2800		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	86000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
73575-55-0	PCB Congener # 94	2300		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
73575-54-9	PCB Congener # 96	3000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38380-01-7	PCB Congener # 99	3000		ng/kg dry	980	9/02/10	9/04/10	Contract SOW
60145-21-3	PCB Congener #103	1200		ng/kg dry	980	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-26-SS****Lab ID: C103202-08****MD No:****Station ID: RF26SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:38**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
56558-16-8	PCB Congener #104	160	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
32598-14-4	PCB Congener #105	490	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
70424-69-0	PCB Congener #106	410	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	410	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-35-8	PCB Congener #109	400	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	850	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
39635-32-0	PCB Congener #111	810	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-36-9	PCB Congener #112	760	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-37-0	PCB Congener #114	470	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
31508-00-6	PCB Congener #118	560	J, CLP01	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
68194-12-7	PCB Congener #120	740	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
56558-18-0	PCB Congener #121	840	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
76842-07-4	PCB Congener #122	420	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
65510-44-3	PCB Congener #123	380	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
57465-28-8	PCB Congener #126	590	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
39635-33-1	PCB Congener #127	390	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	950	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	880	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-66-8	PCB Congener #130	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
61798-70-7	PCB Congener #131	1100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38380-05-1	PCB Congener #132	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
35694-04-3	PCB Congener #133	1100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52704-70-8	PCB Congener #134	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	750	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38411-22-2	PCB Congener #136	560	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
35694-06-5	PCB Congener #137	1100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	1000	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52712-04-6	PCB Congener #141	1000	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41411-61-4	PCB Congener #142	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
68194-15-0	PCB Congener #143	1000	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
68194-14-9	PCB Congener #144	750	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-26-SS****Lab ID: C103202-08****MD No:****Station ID: RF26SS****Matrix: Surface Soil****D No:****Date Collected: 7/27/10 12:38**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
74472-40-5	PCB Congener #145	600	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
51908-16-8	PCB Congener #146	970	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	1100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-41-6	PCB Congener #148	740	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
68194-08-1	PCB Congener #150	560	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
68194-09-2	PCB Congener #152	530	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	850	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
33979-03-2	PCB Congener #155	240	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	920	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-42-7	PCB Congener #158	700	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
39635-35-3	PCB Congener #159	630	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41411-62-5	PCB Congener #160	830	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-43-8	PCB Congener #161	780	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
39635-34-2	PCB Congener #162	650	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-45-0	PCB Congener #164	770	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-46-1	PCB Congener #165	880	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-72-6	PCB Congener #167	780	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
32774-16-6	PCB Congener #169	880	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
35065-30-6	PCB Congener #170	830	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	740	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-74-8	PCB Congener #172	770	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
38411-25-5	PCB Congener #174	690	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
40186-70-7	PCB Congener #175	620	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-65-7	PCB Congener #176	470	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-70-4	PCB Congener #177	720	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-67-9	PCB Congener #178	650	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-64-6	PCB Congener #179	450	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	580	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-47-2	PCB Congener #181	720	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
60145-23-5	PCB Congener #182	590	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	690	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-26-SS**Lab ID:** C103202-08**MD No:****Station ID:** RF26SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:38

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-48-3	PCB Congener #184	450	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-49-4	PCB Congener #186	500	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-68-0	PCB Congener #187	630	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74487-85-7	PCB Congener #188	450	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
39635-31-9	PCB Congener #189	830	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
41411-64-7	PCB Congener #190	640	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-50-7	PCB Congener #191	560	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-51-8	PCB Congener #192	630	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
35694-08-7	PCB Congener #194	2100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-78-2	PCB Congener #195	2100	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
42740-50-1	PCB Congener #196	1500	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	970	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	1500	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
40186-71-8	PCB Congener #201	920	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2136-99-4	PCB Congener #202	1200	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-76-0	PCB Congener #203	1500	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-52-9	PCB Congener #204	960	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
74472-53-0	PCB Congener #205	1400	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
40186-72-9	PCB Congener #206	1500	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-79-3	PCB Congener #207	1300	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
52663-77-1	PCB Congener #208	1400	U, D-4	ng/kg dry	980	9/02/10	9/04/10	Contract SOW
2051-24-3	PCB Congener #209	930	U	ng/kg dry	980	9/02/10	9/04/10	Contract SOW



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D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	7.5		%		9/02/10	9/21/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	12000	J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	1000	U, J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	1000	U, J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	1000	U, J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	1000	U, J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	1000	U, J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	22000	J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	66	J, D-5	ng/kg dry	66	9/02/10	9/21/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	420000	J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
1336-36-3	Total PCBs	600000	J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	150000	J, Q-3	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2051-60-7	PCB Congener # 1	120	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2051-61-8	PCB Congener # 2	110	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2051-62-9	PCB Congener # 3	130	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
13029-08-8	PCB Congener # 4	570	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
16605-91-7	PCB Congener # 5	150	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
25569-80-6	PCB Congener # 6	440	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
33284-50-3	PCB Congener # 7	130	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
34883-43-7	PCB Congener # 8	1500		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
34883-39-1	PCB Congener # 9	160	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
33146-45-1	PCB Congener # 10	52	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2050-67-1	PCB Congener # 11	640	U, B-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	330	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
34883-41-5	PCB Congener # 14	63	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2050-68-2	PCB Congener # 15	8600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-78-9	PCB Congener # 16	2400		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
37680-66-3	PCB Congener # 17	4300		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	8600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
38444-73-4	PCB Congener # 19	1200		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	50000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	6300		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-85-8	PCB Congener # 22	5500		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
55720-44-0	PCB Congener # 23	150 <b>U</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
55702-45-9	PCB Congener # 24	190 <b>J, CLP01</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
55712-37-3	PCB Congener # 25	750 <b>J, CLP01</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	7000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-76-7	PCB Congener # 27	2400		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
16606-02-3	PCB Congener # 31	39000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-77-8	PCB Congener # 32	6600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
37680-68-5	PCB Congener # 34	210 <b>U, D-4</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
37680-69-6	PCB Congener # 35	710 <b>J, CLP01</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-87-0	PCB Congener # 36	280 <b>J, CLP01</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-90-5	PCB Congener # 37	14000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
53555-66-1	PCB Congener # 38	260 <b>U</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38444-88-1	PCB Congener # 39	710 <b>J, CLP01</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	54000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
36559-22-5	PCB Congener # 42	23000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70362-46-8	PCB Congener # 43	4200		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	83000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	9700		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41464-47-5	PCB Congener # 46	2900		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70362-47-9	PCB Congener # 48	16000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	53000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	6100		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
35693-99-3	PCB Congener # 52	88000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
15968-05-5	PCB Congener # 54	240 <b>U, D-4</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74338-24-2	PCB Congener # 55	530 <b>U</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41464-43-1	PCB Congener # 56	1600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70424-67-8	PCB Congener # 57	520 <b>U</b>		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
41464-49-7	PCB Congener # 58	520	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	9500		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
33025-41-1	PCB Congener # 60	700	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	28000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-34-7	PCB Congener # 63	1000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-58-8	PCB Congener # 64	21000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
32598-10-0	PCB Congener # 66	12000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
73575-53-8	PCB Congener # 67	1600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
73575-52-7	PCB Congener # 68	450	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41464-42-0	PCB Congener # 72	500	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74338-23-1	PCB Congener # 73	350	U, D-4	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
32598-13-3	PCB Congener # 77	570	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70362-49-1	PCB Congener # 78	480	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41464-48-6	PCB Congener # 79	420	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
33284-52-5	PCB Congener # 80	440	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70362-50-4	PCB Congener # 81	530	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-62-4	PCB Congener # 82	960	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
60145-20-2	PCB Congener # 83	1000	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	720	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	730	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	3600		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
73575-57-2	PCB Congener # 89	940	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	1400		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-61-3	PCB Congener # 92	880	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	14000		ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
73575-55-0	PCB Congener # 94	960	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
73575-54-9	PCB Congener # 96	770	J, CLP01	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38380-01-7	PCB Congener # 99	800	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
60145-21-3	PCB Congener #103	790	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
56558-16-8	PCB Congener #104	97	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
32598-14-4	PCB Congener #105	390	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
70424-69-0	PCB Congener #106	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	340	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-35-8	PCB Congener #109	320	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	590	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
39635-32-0	PCB Congener #111	630	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-36-9	PCB Congener #112	610	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-37-0	PCB Congener #114	400	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
31508-00-6	PCB Congener #118	340	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
68194-12-7	PCB Congener #120	590	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
56558-18-0	PCB Congener #121	660	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
76842-07-4	PCB Congener #122	360	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
65510-44-3	PCB Congener #123	340	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
57465-28-8	PCB Congener #126	440	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
39635-33-1	PCB Congener #127	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	440	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	420	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-66-8	PCB Congener #130	550	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
61798-70-7	PCB Congener #131	490	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38380-05-1	PCB Congener #132	550	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
35694-04-3	PCB Congener #133	500	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52704-70-8	PCB Congener #134	540	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	260	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38411-22-2	PCB Congener #136	180	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
35694-06-5	PCB Congener #137	500	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	470	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52712-04-6	PCB Congener #141	460	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41411-61-4	PCB Congener #142	530	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
68194-15-0	PCB Congener #143	470	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
68194-14-9	PCB Congener #144	240	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-40-5	PCB Congener #145	200	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<i><b>CAS Number</b></i>	<i><b>Analyte</b></i>	<i><b>Results</b></i>	<i><b>Qualifiers</b></i>	<i><b>Units</b></i>	<i><b>MRL</b></i>	<i><b>Prepared</b></i>	<i><b>Analyzed</b></i>	<i><b>Method</b></i>
51908-16-8	PCB Congener #146	440	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	480	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-41-6	PCB Congener #148	250	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
68194-08-1	PCB Congener #150	190	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
68194-09-2	PCB Congener #152	180	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	390	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
33979-03-2	PCB Congener #155	120	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-42-7	PCB Congener #158	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
39635-35-3	PCB Congener #159	270	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41411-62-5	PCB Congener #160	400	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-43-8	PCB Congener #161	350	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
39635-34-2	PCB Congener #162	270	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-45-0	PCB Congener #164	370	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-46-1	PCB Congener #165	400	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-72-6	PCB Congener #167	300	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
32774-16-6	PCB Congener #169	290	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
35065-30-6	PCB Congener #170	410	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	400	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-74-8	PCB Congener #172	410	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
38411-25-5	PCB Congener #174	380	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
40186-70-7	PCB Congener #175	260	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-65-7	PCB Congener #176	200	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-70-4	PCB Congener #177	390	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-67-9	PCB Congener #178	280	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-64-6	PCB Congener #179	190	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	290	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-47-2	PCB Congener #181	380	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
60145-23-5	PCB Congener #182	270	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	380	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-48-3	PCB Congener #184	200	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID:** RF-27-SS**Lab ID:** C103202-09**MD No:****Station ID:** RF27SS**Matrix:** Surface Soil**D No:****Date Collected:** 7/27/10 12:30

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
74472-49-4	PCB Congener #186	210	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-68-0	PCB Congener #187	270	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74487-85-7	PCB Congener #188	210	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
39635-31-9	PCB Congener #189	240	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
41411-64-7	PCB Congener #190	310	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-50-7	PCB Congener #191	290	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-51-8	PCB Congener #192	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
35694-08-7	PCB Congener #194	380	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-78-2	PCB Congener #195	410	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
42740-50-1	PCB Congener #196	340	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	240	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	350	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
40186-71-8	PCB Congener #201	250	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2136-99-4	PCB Congener #202	290	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-76-0	PCB Congener #203	330	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-52-9	PCB Congener #204	240	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
74472-53-0	PCB Congener #205	260	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
40186-72-9	PCB Congener #206	310	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-79-3	PCB Congener #207	260	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
52663-77-1	PCB Congener #208	280	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW
2051-24-3	PCB Congener #209	200	U	ng/kg dry	1000	9/02/10	9/21/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

<b>CAS Number</b>	<b>Analyte</b>	<b>Results</b>	<b>Qualifiers</b>	<b>Units</b>	<b>MRL</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Method</b>
E1644012	% Moisture	6.3		%		9/15/10	9/19/10	Contract SOW
25512-42-9	Dichlorobiphenyl (Total)	1500	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
28655-71-2	Heptachlorobiphenyl (Total)	1400	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
26601-64-9	Hexachlorobiphenyl (Total)	4000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
27323-18-8	Monochlorobiphenyl (Total)	85	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53742-07-7	Nonachlorobiphenyl (Total)	140	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55722-26-4	Octachlorobiphenyl (Total)	530	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25429-29-2	Pentachlorobiphenyl (Total)	4200	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000909	TEQ (Mammalian Toxic. Equiv. for PCBs, WHO TEQ-05)	5.3	J, D-5	ng/kg dry	5.3	9/15/10	9/19/10	Contract SOW
26914-33-0	Tetrachlorobiphenyl (Total)	18000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
1336-36-3	Total PCBs	42000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25323-68-6	Trichlorobiphenyl (Total)	12000	J, Q-3	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-60-7	PCB Congener # 1	14		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-61-8	PCB Congener # 2	33		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-62-9	PCB Congener # 3	38		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
13029-08-8	PCB Congener # 4	110		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16605-91-7	PCB Congener # 5	31		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
25569-80-6	PCB Congener # 6	45		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-50-3	PCB Congener # 7	6.9		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-43-7	PCB Congener # 8	180		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-39-1	PCB Congener # 9	30		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33146-45-1	PCB Congener # 10	7.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-67-1	PCB Congener # 11	100	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000863	PCB Congener # 12 and/or 13	140		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
34883-41-5	PCB Congener # 14	0.87	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2050-68-2	PCB Congener # 15	1000		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-78-9	PCB Congener # 16	360		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-66-3	PCB Congener # 17	480		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000864	PCB Congener # 18 and/or 30	870		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
38444-73-4	PCB Congener # 19	67		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000865	PCB Congener # 20 and/or 28	2800		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000866	PCB Congener # 21 and/or 33	1300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-85-8	PCB Congener # 22	770		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55720-44-0	PCB Congener # 23	2.0	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55702-45-9	PCB Congener # 24	27		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
55712-37-3	PCB Congener # 25	140	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000867	PCB Congener # 26 and/or 29	310		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-76-7	PCB Congener # 27	83		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
16606-02-3	PCB Congener # 31	3200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-77-8	PCB Congener # 32	140		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-68-5	PCB Congener # 34	7.1		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
37680-69-6	PCB Congener # 35	79		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-87-0	PCB Congener # 36	140		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-90-5	PCB Congener # 37	1500		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
53555-66-1	PCB Congener # 38	7.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38444-88-1	PCB Congener # 39	34		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000868	PCB Congener # 40 and/or 41,71	1400		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
36559-22-5	PCB Congener # 42	610		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-46-8	PCB Congener # 43	130		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000869	PCB Congener # 44 and/or 47,65	3200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000870	PCB Congener # 45 and/or 51	430		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-47-5	PCB Congener # 46	82		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-47-9	PCB Congener # 48	590		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000871	PCB Congener # 49 and/or 69	2800		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000872	PCB Congener # 50 and/or 53	220		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35693-99-3	PCB Congener # 52	3400		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
15968-05-5	PCB Congener # 54	2.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-24-2	PCB Congener # 55	34		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-43-1	PCB Congener # 56	160	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-67-8	PCB Congener # 57	13		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
41464-49-7	PCB Congener # 58	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000873	PCB Congener # 59 and/or 62,75	380		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33025-41-1	PCB Congener # 60	68	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000874	PCB Congener # 61 and/or 70,74,76	2400		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-34-7	PCB Congener # 63	78		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-58-8	PCB Congener # 64	640		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-10-0	PCB Congener # 66	980		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-53-8	PCB Congener # 67	65		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-52-7	PCB Congener # 68	19		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-42-0	PCB Congener # 72	31		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74338-23-1	PCB Congener # 73	43		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-13-3	PCB Congener # 77	40		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-49-1	PCB Congener # 78	2.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41464-48-6	PCB Congener # 79	4.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33284-52-5	PCB Congener # 80	2.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70362-50-4	PCB Congener # 81	2.4	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-62-4	PCB Congener # 82	44		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-20-2	PCB Congener # 83	49		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-60-2	PCB Congener # 84	150		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000876	PCB Congener # 85 and/or 116,117	140		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000877	PCB Congener # 86 and/or 87,97,108,119,125	280		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000878	PCB Congener # 88 and/or 91	240		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-57-2	PCB Congener # 89	11		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000879	PCB Congener # 90 and/or 101,113	470		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-61-3	PCB Congener # 92	94		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000880	PCB Congener # 93 and/or 95,98,100,102	970		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-55-0	PCB Congener # 94	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
73575-54-9	PCB Congener # 96	21		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-01-7	PCB Congener # 99	76	U, B-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-21-3	PCB Congener #103	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

**PCB Aroclors****Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

<i>CAS Number</i>	<i>Analyte</i>	<i>Results</i>	<i>Qualifiers</i>	<i>Units</i>	<i>MRL</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Method</i>
56558-16-8	PCB Congener #104	0.80	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32598-14-4	PCB Congener #105	290		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
70424-69-0	PCB Congener #106	4.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000881	PCB Congener #107 and/or 124	36		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-35-8	PCB Congener #109	58		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000882	PCB Congener #110 and/or 115	480		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-32-0	PCB Congener #111	4.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-36-9	PCB Congener #112	58		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-37-0	PCB Congener #114	9.6		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
31508-00-6	PCB Congener #118	680		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-12-7	PCB Congener #120	4.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
56558-18-0	PCB Congener #121	4.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
76842-07-4	PCB Congener #122	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
65510-44-3	PCB Congener #123	14		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
57465-28-8	PCB Congener #126	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-33-1	PCB Congener #127	4.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000883	PCB Congener #128 and/or 166	230		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000884	PCB Congener #129 and/or 138,160,163	1300		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-66-8	PCB Congener #130	67		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
61798-70-7	PCB Congener #131	6.2		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38380-05-1	PCB Congener #132	190		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-04-3	PCB Congener #133	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52704-70-8	PCB Congener #134	26		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000886	PCB Congener #135 and/or 151,154	200		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-22-2	PCB Congener #136	43		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-06-5	PCB Congener #137	75	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000887	PCB Congener #139 and/or 140	15		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52712-04-6	PCB Congener #141	110		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-61-4	PCB Congener #142	3.9	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-15-0	PCB Congener #143	3.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-14-9	PCB Congener #144	27		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
74472-40-5	PCB Congener #145	1.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
51908-16-8	PCB Congener #146	38		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000888	PCB Congener #147 and/or 149	410		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-41-6	PCB Congener #148	1.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-08-1	PCB Congener #150	0.94	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
68194-09-2	PCB Congener #152	0.98	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000889	PCB Congener #153 and/or 168	950		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
33979-03-2	PCB Congener #155	0.66	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000890	PCB Congener #156 and/or 157	160		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-42-7	PCB Congener #158	93		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-35-3	PCB Congener #159	2.3	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-62-5	PCB Congener #160	2.6	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-43-8	PCB Congener #161	38		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-34-2	PCB Congener #162	7.3		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-45-0	PCB Congener #164	52	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-46-1	PCB Congener #165	3.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-72-6	PCB Congener #167	65		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
32774-16-6	PCB Congener #169	2.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35065-30-6	PCB Congener #170	230		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000891	PCB Congener #171 and/or 173	46		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-74-8	PCB Congener #172	36		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
38411-25-5	PCB Congener #174	150		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-70-7	PCB Congener #175	5.3		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-65-7	PCB Congener #176	12		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-70-4	PCB Congener #177	110		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-67-9	PCB Congener #178	56		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-64-6	PCB Congener #179	72		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000892	PCB Congener #180 and/or 193	280		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-47-2	PCB Congener #181	2.0	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
60145-23-5	PCB Congener #182	0.88	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000893	PCB Congener #183 and/or 185	82		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division

980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 10-0444

Project: 10-0444, Robinson Foundry - Reported by Charlie Appleby

## PCB Aroclors

**Project: 10-0444, Robinson Foundry****Contract Lab Case: 40176****Sample ID: RF-28-SED****Lab ID: C103202-10****MD No:****Station ID: RF28SED****Matrix: Sediment****D No:****Date Collected: 7/27/10 13:35**

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
74472-48-3	PCB Congener #184	0.67	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-49-4	PCB Congener #186	0.73	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-68-0	PCB Congener #187	250		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74487-85-7	PCB Congener #188	0.76	U	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
39635-31-9	PCB Congener #189	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
41411-64-7	PCB Congener #190	43		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-50-7	PCB Congener #191	5.7		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-51-8	PCB Congener #192	1.5	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
35694-08-7	PCB Congener #194	94		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-78-2	PCB Congener #195	37		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
42740-50-1	PCB Congener #196	43		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000894	PCB Congener #197 and/or 200	16		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
R4-8000895	PCB Congener #198 and/or 199	180		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-71-8	PCB Congener #201	10		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2136-99-4	PCB Congener #202	42		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-76-0	PCB Congener #203	100		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-52-9	PCB Congener #204	1.2	U, D-4	ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
74472-53-0	PCB Congener #205	6.8		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
40186-72-9	PCB Congener #206	94		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-79-3	PCB Congener #207	8.5		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
52663-77-1	PCB Congener #208	36		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW
2051-24-3	PCB Congener #209	58		ng/kg dry	1.0	9/15/10	9/19/10	Contract SOW

**APPENDIX E**  
**PHOTOGRAPHIC LOG**  
(13 Pages)



**OFFICIAL PHOTOGRAPH No. 1**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** South

**Date:** July 21, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-01. The sample was collected from bag dust covering the warehouse floor.



**TETRA TECH**

E-1

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 2**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** West

**Date:** July 20, 2009

**Photographer:** Quinn Kelley, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-02. The sample was collected from bag dust dumped haphazardly onto the ground. RF-03-SF was collected from a similar nearby pile.



**TETRA TECH**



**OFFICIAL PHOTOGRAPH No. 3**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** West

**Date:** July 20, 2009

**Photographer:** Quinn Kelley, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-04. The sample was collected from bag dust runoff.



**TETRA TECH**

E-3

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 4**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** South

**Date:** July 21, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-05. The sample was collected from bag dust in a sump within one of the buildings.



**TETRA TECH**

E-4

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 5**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 21, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-06. The samples RF-06-SF and RF-06A-SS were collected from oil-stained soil directly beneath two removed transformers. Sample RF-06B-SS was collected from the grass strip between the concrete pad and the gravel drive.



**TETRA TECH**

E-5

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 6**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 21, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-07. The sample was collected from soil in the runoff pathway in a former maintenance area. The superimposed arrow indicates the direction of runoff.



**TETRA TECH**

E-6

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 7**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** West

**Date:** July 20, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Locations RF-08 and RF-09. RF-08 is in the immediate foreground, and RF-09 consists of the mounds in the distance.



**TETRA TECH**

E-7

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 8**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** South

**Date:** July 20, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-10. The sample was collected from various types of soil and ground cover within the target area.



**TETRA TECH**

E-8

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 9**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 21, 2009

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-12. The sample was collected from sediment along the bank of the site drainage ditch.



**TETRA TECH**

E-9

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 10**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 21, 2009

**Photographer:** Quinn Kelley, Tetra Tech

**Witness:** Stephen Ball, EPA

**Subject:** Location RF-13. The sample was collected from surface soil in an area thought to be a historical sand dump. The yellow pin flag denotes the sample location.



**TETRA TECH**

E-10

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 11**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 27, 2010

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Jason Booth, EPA

**Subject:** Location RF-20. Tetra Tech collected position data at each sampling location.



**TETRA TECH**

E-13

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 12**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 27, 2010

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Jason Booth, EPA

**Subject:** Location RF-21. The overlying brush and vines were removed to provide access to the stream.



**TETRA TECH**

E-13

TDD No. TTEMI-05-003-0063  
Robinson Foundry



**OFFICIAL PHOTOGRAPH No. 13**  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**TDD Number:** TTEMI-05-003-0063

**Location:** Robinson Foundry

**Orientation:** North

**Date:** July 27, 2010

**Photographer:** Charles Berry, Tetra Tech

**Witness:** Jason Booth, EPA

**Subject:** Location RF-22. The sample was collected from exposed sediment within the bed of the small creek.



**TETRA TECH**

E-13

TDD No. TTEMI-05-003-0063  
Robinson Foundry

**APPENDIX F**  
**TABLE OF WITNESSES**  
(One Page)

## TABLE OF WITNESSES

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