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5.0 ANALYTICAL TESTING AND RESULTS

The wipe samples were analyzed for the presence of PCB utilizing EPA Method 8082, as outlined in SW 846. The soil samples were analyzed for the presence of PCBs utilizing EPA methods 3550B/8082, as outlined in SW 846.

5.1 Results of the First Wipe Sampling Event (July 14, 2009)

Analytical results of the first wipe sampling event indicated that two of the six biased wipe samples from the beams (or 33%) had PCB levels (Aroclor - 1254) above the 10 $\mu\text{g}/100\text{ cm}^2$ high occupancy cleanup criteria imposed by USEPA. Analytical results of this sampling event are summarized on **Table 1**, provided in **Appendix 3**. Analytical Laboratory Reports are provided in **Appendix 4**.

The two metal beams in question were relocated by GES to the decontamination staging area for decontamination of the portions of the beams that contained any insulation and/or adhesive. According to GES, the two failed beams, #374 and #272, were decontaminated in accordance with the approved work plan and QAAP on July 28 and August 13, 2009 respectively

Furthermore, the remaining metal beams representing the sample group of these two metal beams were re-inspected and, as determined by visual inspection, relocated to the decontamination staging area for decontamination of the portions of the metal beam that contained any insulation and/or adhesive.

5.2 Results of the Second Wipe Sampling Event (July 21, 2009)

Analytical results of the second wipe sampling event indicated that 16 of the 59 biased wipe samples from the metal beams (or ~ 27%) had PCB levels (Aroclor - 1254) above 10 $\mu\text{g}/100\text{ cm}^2$ PCB high occupancy cleanup criteria imposed by USEPA. Analytical results of this sampling event are summarized on **Table 2**, provided in **Appendix 3**. Analytical Laboratory Reports are provided in **Appendix 4**.

According to GES, the failed beams were relocated to the decontamination staging area for decontamination. All failed beams were decontaminated on August 13, 2009, with the exception of Beam # 894 which was decontaminated on August 14, 2009.

Furthermore, the remaining 144 metal beams representing the sample group of these 16 metal beams were re-inspected, as determined by visual inspection, relocated to the decontamination staging area for decontamination of the portions of the metal beam that contained any insulation and/or adhesive.

5.3 Results of the Third Wipe Sampling Event (August 11, 2009)

Analytical results of the third wipe sampling event indicated that none of the 26 wipe samples from the metal beams (or 100%) had PCB concentrations in excess of the 10 $\mu\text{g}/100\text{ cm}^2$ high occupancy cleanup criteria imposed by USEPA. Analytical results of this sampling event are summarized on **Table 3**, provided in **Appendix 3**. Analytical Laboratory Reports are provided in **Appendix 4**.

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5.4 Results of Background/Composite Soil Samples (August 11 & 12, 2009)

Analytical results from the soil sampling events conducted on August 11, and 12, 2009 indicated that PCBs (Aroclors) were not detected above the laboratory method detection limits (MDLs) in any of the four background soil samples (collected on August 11, 2009) or in the 33 composite soil samples (collected on August 12, 2009). Thus, all samples were below the high occupancy cleanup criteria of 1,000 µg/Kg (or 1.0 mg/Kg).

Analytical results of this sampling event are summarized on **Tables 4 & 5**, provided in **Appendix 3**. Analytical Laboratory Reports are provided in **Appendix 5**.

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6.0 CONCLUSIONS

21st Century Resources, Inc. (21st CR) was retained by Mr. Mark Johnson, Esq. of Stinson Morrison Hecker LLP on behalf of Dico, Inc, and Titan Tire Corporation (collectively Dico/Titan) to perform polychlorinated biphenyl (PCB) sampling of structural steel components and soil located at the Southern Iowa Mechanical (SIM) property located at 3043 Pawnee Drive, Ottumwa, Wapello County, Iowa. 21st CR was retained to perform independent, third-party, wipe sampling of structural steel components piled at the property and sampling of soils below the steel piles for purposes of confirming or denying the presence of PCBs.

On May 16, 2008, EPA conducted a site assessment at the property. EPA alleged that it found PCB contamination present in the location of adhesion areas of old insulation on identified areas of the structural steel beams stockpiled on the property at concentrations exceeding the cleanup standards: (1) applicable to non-liquid PCB contamination on surfaces in high occupancy areas per 40 CFR 761.61(a)(4)(ii) of 10 µg/100 cm² (instead of the low occupancy area standard) and (2) EPA also reported that one sample of site soils under the metal beam stockpile areas, tested in excess of 1.0 mg/Kg designated for high occupancy areas per 40 CFR 761.61(a)(4)(i)(A) (instead of the low occupancy area standard). In EPA's Quality Assurance Project Plan ("QAPP") for the May 16, 2008 assessment, EPA declared that the standards for "high occupancy areas" {40 CFR 761.61(a)(4)(i)(A)} should be applied to the site, in spite of the fact that the reference used by EPA in the Work Plan (Section 1.3, item 9, page 4) submitted by GES and approved by USEPA, indicates cleanup standards for low occupancy areas {40 CFR 761.61(a)(4)(i)(B)}.

According to information provided to us by GES, as of August 14, 2009, a total of 2,281 metal beams had been segregated from the site stockpiles and visually inspected. It was determined that 726 (32%) of the metal beams contained no residual insulation or adhesives (relocated for sampling) and 1,555 (68%) of the metal beams contained visible residual insulation or adhesive and were relocated to the decontamination staging area for subsequent removal of the visible insulation and adhesive residues and decontamination of the portions of the metal beam that contain the visible insulation and adhesive. Metal beam decontamination activities to remove the visible insulation and adhesive residues and decontaminate the portions of the metal beams that contained the visible insulation and adhesive commenced on July 9, 2009. Completion of decontamination of the 1,555 (100%) of the metal beams which were visually identified to contain residual insulation or adhesives was completed by August 14, 2009.

Out of the 726 of the metal beams that contained no residual insulation or adhesives, 81 metal beams (~ 11%) were selected for wipe sampling and verification which exceeded the 10% number of beams to be selected for wipe sampling as stipulated in the EPA-approved work plan and QAAP.

Of the 81 metal beams selected for biased wipe sampling and the 91 total wipe samples collected (including field duplicates), 18 (~22 %) of the sampled beams tested positive for PCBs (Aroclor – 1254) above the 10 µg/100 cm² high occupancy cleanup criteria imposed by USEPA. These 18 beams were then moved to the decontamination area for subsequent removal of the visible insulation and adhesive residues and decontamination of the portions of the metal beam that contain the visible insulation and adhesive. Decontamination of these beams was completed by August 14, 2009.

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Out of the six wipe samples collected during the first wipe sampling event (July 14, 2009), all sample locations (100%) were biased and selected by the EPA on-site representative. Selected sampling locations were mainly from beam edges (representing a side and an edge) as depicted on the photographs provided in this report.

Out of the 59 wipe samples collected from beams during the second wipe sampling event (July 21, 2009), at least 53 sample locations (~90 %) were biased and selected by the EPA on-site representatives. Selected sampling locations were mainly from beam edges (representing a side and an edge) and two of the sampled locations were from ends of two beams as depicted on the photographs provided in this report.

Out of the 26 wipe samples collected from beams during the third wipe sampling event (August 11, 2009), at least 20 sample locations (~75 %) were biased and selected by the EPA on-site representative. Due to the large size of the majority of the beams during this event, sampling locations represented mainly homogeneous surfaces as depicted on the photographs provided in this report.

37 composite soil samples (plus duplicate QA/QC samples) were collected from designated background areas (4 samples) and former stockpile areas designated Area A (seven samples and one duplicate), Area B (five samples and one duplicate) and Area C (21 samples and two duplicates). Analytical results from the soil sampling events conducted on August 11 and 12, 2009 indicated that PCBs were not detected above the laboratory method detection limits (MDLs) in any of the four background soil samples (collected on August 11, 2009) or in the 33 composite soil samples (collected on August 12, 2009). Thus, all samples were below the high occupancy cleanup criteria of 1,000 $\mu\text{g}/\text{Kg}$ (or 1.0 mg/Kg). Therefore, it does not appear that the beams have had an impact on the soils within and outside the former stockpile areas as evident by the non detection of PCBs.

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