NATURAL RESOURCE TECHNOLOGY

Remedial Construction Documentation Report

PCB-Impacted Sediment Removal
Lincoln Park/Blatz Pavilion Site
Milwaukee, Wisconsin

January 29, 2009

Project 1845

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REMEDIAL CONSTRUCTION DOCUMENTATION REPORT

PCB-IMPACTED SEDIMENT REMOVAL
LINCOLN PARK/BLATZ PAVILION SITE
MILWAUKEE, WISCONSIN

Project No: 1845

Prepared For:

Wisconsin Department of Natural Resources
2300 N. Martin Luther King Jr. Drive
Milwaukee, Wisconsin 53212

Prepared By:

Natural Resource Technology, Inc.
23713 W. Paul Road, Suite D
Pewaukee, WI 53072

January 29, 2009

Eric Termuehlen, PE
Project Engineer

Julie A. Zimdars, PE
Project Manager

EXECUTIVE SUMMARY

This Remedial Construction Documentation Report presents the results of the polychlorinated biphenyl (PCB) impacted sediment remedial activities performed within the embayment of the Milwaukee River adjacent to the Blatz Pavilion located in Lincoln Park, in the City of Milwaukee, Wisconsin (Figure 1). Remedial activities were performed in conformance with the *Remedial Design Report and Quality Assurance Project Plan (QAPP) Addendum and Contract Documents for the Remedial Construction*, both dated October 1, 2007, with minor changes detailed in the report. The sediment remedial action was reviewed and approved by the United States Environmental Protection Agency (USEPA) for compliance with Toxic Substances Control Act (TSCA) regulations prior to implementation.

Natural Resource Technology, Inc. (NRT) served as the engineer and provided construction oversight on behalf of the Wisconsin Department of Natural Resources (WDNR). Construction documentation record drawings were prepared by NRT and are included in this report. The embayment area is slightly less than one acre in size. Removal of three feet of sediment on average within the area was completed.

The specific remedial construction activities that are documented in this report include the following:

- Preliminary activities including permits and approvals, community relations, and site security controls;
- Site preparation for the remedial action;
- Removal of a total of 5,647 tons (estimated at 4,705 cubic yards [cy]) of PCB-impacted sediment, of which 3,534 tons (estimated at 2,945 cy) was classified as non-TSCA waste (less than 50 mg/kg) and 2,113 tons (estimated at 1,760 cy) was classified as TSCA waste (greater than 50 mg/kg). An additional 15 tons of debris and residuals were classified and disposed as non-TSCA waste for a total of 5,662 tons of PCB-impacted waste removed. Actual non-TSCA and TSCA landfilled amounts differed from these project billed amounts, as further discussed in the report;
- Completion of all pre-excavation and post-remedial verification sampling, inspection and Construction Quality Assurance (CQA) activities performed during remedial construction;
- Adequate segregation of the TSCA and non-TSCA layers based on previously collected sediment analytical data and on-site laboratory data, with the exception of two misdirected sediment incidents were adequately corrected;
- Post-remedial verification (PRV) base sampling demonstrated that the remedial action goal of 1 mg/kg was adequately met within the embayment prior to backfilling; and
- Site restoration that included backfilling of the embayment with granular fill and re-vegetation of the disturbed areas of the County park property.

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1 INTRODUCTION

1.1 Overview

Natural Resource Technology, Inc. (NRT) was retained by the Wisconsin Department of Natural Resources (WDNR) to perform remediation oversight and prepare a Remedial Construction Documentation Report for the sediment removal activities in the embayment of the Milwaukee River adjacent to the Lincoln Park/Blatz Pavilion site (Figure 1). An aerial photograph site plan of the embayment area is provided on Figure 2. The remedial activities were performed to remove sediment containing polychlorinated biphenyls (PCBs) resulting from unidentified historic releases. Removal of three feet of sediment (on average) was performed within the slightly less than one acre embayment. Remedial activities were performed in conformance with the *Remedial Design Report and Quality Assurance Project Plan (QAPP) Addendum and Contract Documents for the Remedial Construction*, both dated October 1, 2007, with minor changes detailed in the report. The sediment remedial action was reviewed and approved by the United States Environmental Protection Agency (USEPA) for compliance with Toxic Substances Control Act (TSCA) regulations prior to implementation.

Due to snow melt and spring rains, the project start was delayed until mid-May 2008. The majority of the on-site remedial activities were conducted between May 15 and July 22, 2008 with upland site restoration completed in August 2008. The Estabrook Dam was required to remain open during remedial activities within the embayment in order to excavate the exposed sediment. A significant flood event occurred on June 7, 2008, which delayed the project approximately three weeks. These weather related incidents delayed the closing of the Estabrook Dam until July 23, 2008. Also, an additional activity involving transfer of sediment misdirected to the inappropriate landfill was performed in September 2008. Relocation of misdirected sediment is discussed further in Section 3. A detailed remedial construction project schedule is provided on Figure 3.

In particular, this report discusses the following:

- Preliminary activities including permits and approvals, community relations, and site security controls;
- Site preparation for the remedial action;

- Removal of a total of 5,647 tons (estimated at 4,705 cubic yards [cy]) of PCB-impacted sediment, of which 3,534 tons (estimated at 2,945 cy) was classified as non-TSCA waste (less than 50 mg/kg) and 2,113 tons (estimated at 1,760 cy) was classified as TSCA waste (greater than 50 mg/kg). An additional 15 tons of debris and residuals were classified and disposed as non-TSCA waste for a total of 5,662 tons of PCB-impacted waste removed. Actual non-TSCA and TSCA landfilled amounts differed from these project billed amounts, as further discussed in the report;

- Documentation of all pre-excavation and post-remedial verification sampling, inspection and Construction Quality Assurance (CQA) activities performed during remedial construction;

- Documentation of post-remedial verification (PRV) base sampling demonstrating that the remedial action goal of 1 mg/kg was adequately met within the embayment prior to backfilling; and

- Site restoration that included backfilling of the embayment with granular fill and re-vegetation of the disturbed areas of the County park property.

NRT served as the engineer and provided construction oversight on behalf of the WDNR during implementation of the remedial action. Construction record drawings are included following the Appendices, hereafter referred to by Sheet number; Sheets C010 through C040.

1.2 General Site Information

Project Contact:	Wisconsin Department of Natural Resources (WDNR) 2300 N. Dr. Martin Luther King Jr. Drive Milwaukee, Wisconsin 53212 Mr. Theodore Bosch (414) 263-8623 Mr. William Fitzpatrick (608) 266-9267
Site Address:	Lincoln Park – Milwaukee County Park System Blatz Pavilion 1301 W. Hampton Avenue Milwaukee, Wisconsin Site Contact: Mr. Kevin Haley (414) 257-6242
Site Location:	Northwest ¼, Northwest ¼, Section 5, T7N, R22E City of Milwaukee, Milwaukee County (Figure 1)
Environmental Consultant:	Natural Resource Technology, Inc. (NRT) 23713 West Paul Road, Suite D Pewaukee, Wisconsin 53072

	Mr. Roy Wittenberg, P.E., Principal Engineer (262) 522-1195
	Ms. Julie Zimdars, P.E., Project Manager/Senior Engineer (262) 522-1204
	Mr. Eric Termuehlen, P.E., Project Engineer (262) 522-1240
Remedial Contractor:	Veolia ES Industrial Services, Inc 1203 Klement Street Fort Atkinson, WI 53538
	Mr. Robert Leszczynski, Project Manager (920) 568-2521
On-site Laboratory Service:	Environmental Chemistry Consulting Services, Inc. (ECCS) 2525 Advance Road Madison, WI 53718
	Mr. Nick Nigro, President (608) 221-8700
Waste Disposal	Veolia ES Emerald Park Landfill, LLC (Non-TSCA waste) W124 S10629 S. 124th Street Muskego, WI Mr. John Budzinski, Special Waste Coordinator (414) 529-1360
	EQ Wayne Disposal, Inc. (TSCA waste) 49350 N. I-94 Service Dr Bellville, MI 48111 EPA I.D. # MID 048090633
	Mr. Bryon Lawrence, Account Executive (630) 428-5818
Surveyor	T N & Associates, Inc. 2801 Crossroads Dr. Suite 1600 Madison, WI 53718
	Mr. John Thousand LS PE, Project Civil Engineer (608) 243-6470

Key supporting documentation and reports for the remedial construction consist of the following:

Wisconsin Department of Natural Resources (WDNR), September 2001 and amended in August 2003, *Quality Assurance Project Plan (QAPP) - Estabrook Impoundment Remediation Pre-Design Study, Revision 2.*

Wisconsin Department of Natural Resource (WDNR). August 2005, *Estabrook Impoundment Sediment Remediation Pre-Design Study*. Project Completion Report to USEPA, GLNPO Grant ID GL2000-82. Publication PUBL-WT 826.

Natural Resource Technology, Inc., March 29, 2007, *Remedial Investigation/Feasibility Study*, Lincoln Park/Blatz Pavilion Site, Milwaukee, Wisconsin (RI/FS).

Natural Resource Technology, Inc., October 1, 2007, *Remedial Design Report and Quality Assurance Project Plan (QAPP) Addendum*, Lincoln Park/Blatz Pavilion Site, Milwaukee, Wisconsin.

WDNR and Natural Resource Technology, Inc., October 1, 2007, *Contract Documents Remedial Construction,* Lincoln Park/Blatz Pavilion Site, Milwaukee, Wisconsin, Project 07 WTPE.

1.3 Background

1.3.1 Site Description

Lincoln and Estabrook Parks are an integral part of the park system, and continue to serve as recreational points for local residents. Aquatic activities are an important aspect of the parks, as well as the open green space they provide. The Milwaukee County Parks Department (MCPD) controls operation of the Estabrook Dam, which includes opening and closing the dam in the fall and spring of each year, respectively, or whenever necessary given expected flow/precipitation conditions.

The MCPD allows residents to portage non-motorized watercraft across park land and to launch into the rivers controlled by the Department, including the Milwaukee River and the Estabrook Impoundment. There are three designated access sites for canoeing and kayaking in Estabrook Park and one near the Lincoln Park fishing pier, which is located on the east bank of the river, north of Hampton Avenue.

Within Lincoln Park, in the vicinity of the Blatz Pavilion, there are picnic areas as well as baseball and softball diamonds, football/soccer fields, a playground, a swimming pool, and walking trails. The relative location of these areas to the Blatz Pavilion affords easy access to the river, which increases the possibility of exposure by the public to PCBs in the river sediments. This is especially true in summer, when outdoor temperatures are elevated and the river provides opportunities for wading and/or (possibly) swimming as a means for cooling off at this time of year.

In total, the Milwaukee River drains approximately 850 square miles (mi^2) in southeastern Wisconsin (Steuer et al, 1999). PCB contamination in the river was initially identified through fish tissue sampling, and fish advisories were issued in 1981. Based on the fish sampling results, numerous studies have been completed focusing on the river or specific reaches thereof (pertinent studies will be discussed further in

Section 2), and these studies indicated that there were a number of locations where PCBs accumulated in river sediments. One of these areas was the Estabrook Impoundment, which is located immediately upstream of the Estabrook Dam.

The Estabrook Impoundment contributes the greatest mass loading of PCBs in the Milwaukee River Basin, which is estimated to contain 64,000 cy of contaminated sediment with slightly more than 5,380 pounds of PCBs (WDNR, 2005). A portion of this impoundment is the embayment immediately adjacent to the Blatz Pavilion, which was originally estimated to contain approximately 3,600 cy of contaminated sediment and 286 pounds of PCBs. The Blatz Pavilion embayment is isolated from the other contaminated areas in the impoundment and has easy public access. Despite signs indicating the presence of PCBs, the public continues to risk potential exposures through swimming, wading, and fishing activities. Thus, the embayment was selected by the WDNR to be the first area to be remediated in the impoundment.

Sediments observed in the embayment were generally comprised of silt and clay with organic material, and the color ranged from dark gray and dark brown to black. The average sediment thickness was previously indicated to be slightly more than three feet and the maximum and minimum thickness observed at the site was 4.8 feet and 1.5 feet, respectively. Based on site observations during test pits performed in December 2006, the sediments at the site were underlain by a medium gray glacial till.

1.3.2 Site-Specific Remedial Considerations

Site-specific remedial parameters that required consideration during remedial design and construction implementation included the following:

- Maintaining the structural integrity of the historic embayment retaining wall;
- Providing measures to control nominal rises in river water stage from impacting sediment removal activities through installation of a temporary water-filled dam;
- Installing security fencing to maintain access to the Blatz Pavilion building by the community, but limit public access to the embayment, equipment laydown and waste hauling truck route from Hampton Avenue;
- Providing measures for sediment dewatering and treatment during remediation; and
- Backfilling of the embayment area to limit sediment re-deposition, but also provide access for recreational use and structural stability for the existing embayment stone retaining wall.

1.4 Remedial Action Objectives and Goal

Based on the assessment of the Conceptual Site Model detailed in the March 2007 Remedial Investigation/Feasibility Study (RI/FS), the following remedial action objectives were established:

- Reduce the potential for ingestion of PCBs through fish tissue; and
- Reduce the potential for dermal contact or ingestion of PCB contaminated sediment.

A remedial action goal of less than or equal to 1 mg/kg PCBs (dry weight basis) was established for the embayment sediment based on a screening level risk assessment using the consensus-based sediment quality guidelines (CBSQGs) in addition to consistency with remedial action goals established at other PCB sediment project sites in Wisconsin. Therefore, sediment less than or equal to 1 mg/kg could remain in-place. Table 1 presents the Sampling and Analysis Plan that was prepared for the QAPP Addendum to document that the remedial action goal was achieved. The plan consists of both pre-excavation screening base sampling and post-remedial verification (PRV) base sampling as further described in Section 3.

1.5 Summary of Sediment Removal

For the sediment removal operations, Sheet C031 of the *Remedial Construction Drawings* delineated the removal of the sediment in layers of less than 50 mg/kg and greater than 50 mg/kg PCBs by indicating the top of layer elevation contours. A 2" vertical buffer was included above (where applicable) and below the greater than 50 mg/kg material, which was considered an adequate tolerance based on the global positioning system (GPS) accuracy specified for use during removal of the layers. Also, adjustments were made such that removal thicknesses were practical for conventional equipment. Five areas were delineated including: 1) Areas 1 and 5 having no greater 50 mg/kg material 2) Areas 2 and 4 having greater than 50 mg/kg material at the surface and less than 50 mg/kg material below, and 3) Area 3 having less than 50 mg/kg material at the surface, greater than 50 mg/kg material in the middle, and less than 50 mg/kg below.

Each area was further divided into cells in a layout proposed by the contractor and approved by NRT, as indicated in Figure 4. Twenty-eight (28) cells were excavated in total. NRT closely tracked the tonnage of non-TSCA and TSCA material removed from each area and cell. Using 1.2 tons/cy from prior density testing, actual sediment tonnage removed could be tracked against design tonnage. As expected, the actual non-TSCA tonnage was higher than design tonnage in most areas since many of the cells required deeper excavation that consisted of the non-TSCA material. The actual tonnage of TSCA material

tracked closely with the design tonnage, with the exception of Area 3 (the largest area), which accounted for the entire overage of TSCA material (190 tons or 160 cubic yards). Below is a comparison table of design volumes to actual volumes using the 1.2 tons/cy conversion.

	Design Volumes (cy)	Actual Volumes (cy)	Overage (cy)
Non-TSCA	2300	2945	645
TSCA	1600	1760	160
Total	3900	4705	805

1.6 Remedial Design Field Revisions

The remedial design was effectively implemented on site. Field revisions to the design were necessary to meet the site conditions and manage site operations. These revisions included:

- Implementation of the Global Positioning System (GPS) directed field equipment operation was modified. The GPS changes were implemented to make additional use of the "long-stick" excavator. Both a standard excavator mounted GPS system and a portable GPS system were employed by Veolia to direct the excavation activities. The long-stick excavator, which was not equipped with GPS capabilities, was employed throughout most of the excavation work because the reach of this excavator allowed for sediment removal from cells without tracking heavy equipment into a non-backfilled cell. As a result, the portable GPS unit operated by Veolia personnel was used to direct most of the excavation work.

- Replacement of the temporary water-filled dam with a turbidity barrier/silt fence for the river erosion control/protection toward the end of the project. The approval of this change is discussed in Section 2.2. This modification was necessary as a result of the water-filled dam placement. The river bank along the embayment has a significant slope, particularly near the north end of the embayment, which did not permit placement of the dam as designed. The dam was moved further inland to prevent the dam from rolling into the river. As a result, the dam was placed on top of the cells along the river which were planned for excavation. Replacement of the dam with a turbidity barrier/silt fence towards the end of the project allowed excavation to occur closer to the river's edge (planned eastern extent).

- Phasing of the sediment removal was modified to meet the project constraints. Since the placement of the water-filled dam did not allow for excavation of the cells along the river, the excavation of these cells was sequenced to occur last (originally planned to be excavated as the second of three phases). This allowed the water-filled dam to be used for most of the project, until the cells under the dam needed to be accessed. In general, the excavation work was phased from the north to the south (inland), followed by excavation of the cells along the river.

- The eastern excavation limit was shifted slightly west on the northern end and slightly east on the southern end of the embayment based upon accessibility. River water elevations did not allow access to the originally designed eastern excavation limit on the north end of the embayment, as these cell limits were at the river water elevation during construction. The

cell limits were extended as far east as possible on the northern end, based on the constraints of the river elevation.

- Sediment removal in the southwest corner of the embayment was adjusted to account for a filled area within the embayment. Surface deposited soils extended over the embayment retaining wall, directly into the embayment. This surface soil was removed, sediments were excavated beneath it, and surface soil was replaced to the top of the embayment wall similar to the conditions which were present before construction. The surface soil was replaced to provide an earthen support to the embayment wall, which was in poor condition in this location and in danger of potential collapse into the embayment. This feature also provides easier future water access to the embayment.

2 PERMITTING AND APPROVALS

Several permits and approvals were obtained for the Blatz Pavilion embayment sediment remediation project as detailed below. Also, the sediment remedial action was reviewed and approved by the United States Environmental Protection Agency (USEPA) for compliance with TSCA regulations.

2.1 Environmental Assessment

An Environmental Assessment was prepared for the project and this assessment determined that an Environmental Impact Statement (EIS) was not required. A public notice was issued for comment on the Environmental Assessment on July 26, 2007 and also a public informational hearing was held on August 9, 2007. The Environmental Assessment was certified on September 19, 2007, a copy of which is provided in Appendix A1.

2.2 Water Quality Permits

The following water quality permits were received prior to initiating the work in the embayment and are included in Appendix A2.

- A Chapter 30/401 Water Quality Certification (IP-SE-2007-41-0359/0360/0361/0362) was originally approved on October 1, 2007, with an amendment approved on April 30, 2008. The permit amendment requested an extension of the time limits set in the original permit application, to allow construction to be delayed as a result of higher than average historical spring water levels in the river related to heavy snow-melt and significant spring rainfall events. The approval also included a permit to place a piling on the bed of the confluence of the embayment and the Milwaukee River, a permit to place a structure (temporary water dam and outfall structure) on the bed of the confluence of the embayment and the Milwaukee River, and a permit to remove materials from the bed of the embayment and the Milwaukee River. NRT provided a memorandum to WDNR, dated June 4, 2008, requesting a change to the erosion protection along the river including removal of the water-filled dam and replacement with a turbidity barrier/silt fence combination. This requested change was approved in an email from Ms. Rachel Sabre of WDNR dated June 4, 2008. NRT notified WDNR of the start of the work and also submitted photographs following completion of the work, which depicted all work authorized by this permit, on August 1, 2008; and

- A Section 404 permit (COE permit # 2007-2400-RMG) from US Army Corps of Engineers was received, dated September 19, 2007.

2.3 City of Milwaukee and Milwaukee County

The following City of Milwaukee and Milwaukee County permits were received prior to initiating work on County property and in the embayment and are included in Appendix A3.

- A construction/right-of-entry permit was obtained from Milwaukee County prior to beginning work on the Lincoln Park county property; and
- A construction site erosion control permit was obtained from the City of Milwaukee on March 11, 2008.

2.4 MMSD Water Discharge Permit

A discharge permit for the treated water generated from the dewatering operations was approved by MMSD on September 13, 2007 (Notice of Intent to Discharge 7.018). A copy of this permit approval letter is provided in Appendix A4. NRT provided the initial treated water laboratory results to MMSD and obtained approval prior to beginning discharge on June 6, 2008. NRT also notified MMSD, in a letter dated August 13, 2008 (Appendix A4), of termination of the water discharge on July 23, 2008 and provided a volume discharge summary and treated water laboratory analytical reports.

2.5 Landfill Disposal

Waste profiles were approved for landfill disposal of the less than 50 mg/kg total PCB sediment material and greater than 50 mg/kg total PCB sediment material. Prior sediment analytical results from 2001, 2003, December 2006 and May 2007 were used for waste profiling. Specifically, these approvals included:

- A waste disposal approval from Veolia's Emerald Park Landfill in Muskego, Wisconsin for disposal of the less than 50 mg/kg (non-TSCA) sediment material under profile number EPL2008-059; and
- A waste disposal approval from EQ's Wayne Disposal facility in Belleville, Michigan for disposal of the greater than 50 mg/kg (TSCA) sediment material under profile number D084195WDI. A second waste profile (number I088071WDI) was needed as part of the misdirected waste issue in September 2008, discussed further in Section 3.3.3.2 and Appendix H2.

Waste profile information is provided in Appendix A5.

3 REMEDIAL ACTION

Oversight of the remedial action was documented on a daily basis using Daily Field Reports (Appendix B). Each cell had a documentation form that was completed which tracked TSCA and non-TSCA truck manifest ticket numbers and tonnage, and pre- and post-excavation analytical data (Appendix C). Photo documentation of the remedial action was obtained and is provided in Appendix D.

3.1 Preliminary Activities

3.1.1 Community Communication

WDNR communicated with the neighboring community on the plans for sediment removal in the embayment adjacent to the Blatz Pavilion and plans for the Estabrook Dam during this time period through the following:

- Public approval for the remedial option to remove and landfill the contaminated sediment was obtained through a public meeting on April 17, 2007 at the Blatz pavilion;
- Public notice was issued for comment on July 26, 2007 and a public informational hearing was held at WDNR's headquarter office on August 9, 2007 regarding the Environmental Assessment and water quality permits; and
- Throughout the remedial construction period, WDNR provided email updates on progress of the project to communicate with neighboring and interested parties.

3.1.2 Site Security and Controls

Several site security measures were implemented during the project including:

- An exclusion zone was clearly demarcated with appropriate signage and secured with 8 ft. high temporary chain link fencing as shown on Sheet No. C020. The primary emphasis was placed on public safety with regards to limiting contact with the remedial construction operations and/or traffic. A security gate was installed for truck access at Hampton Avenue. Also, a park pedestrian pathway was rerouted.
- The work area was lighted during night hours using the existing embayment light poles.
- A professional security company was present on-site during most of the remedial construction work including nights and weekends.

3.1.3 Signage

Signs were placed around the work area including:

- Truck entrance signs for pedestrian and traffic safety on the sidewalk and on Hampton Avenue as shown on Sheet C020; and
- A project identification sign in accordance with WDNR guidelines was displayed on the chain link fence near Hampton Avenue.

3.2 Site Preparation

The site preparation activities included installation of erosion controls, preparing an access road to the embayment, installation of a water treatment system, installation of a temporary dam, and mobilization of an on-site analytical laboratory. The site security controls established a secure work area for all of the site preparation activities. The existing landscaped improvements in the exclusion zone were protected to the extent possible, with particular attention to the mature trees in the park, which were isolated from truck traffic and high overhead equipment staging and operations.

3.2.1 Erosion Controls

Erosion control measures were implemented prior to the start of site activities. The controls included silt fence, filter fabric for sewer inlet protection, and a tracking pad at Hampton Avenue. Veolia was responsible for maintenance, replacement (if necessary), and inspection of all in-place erosion controls as indicated on Sheet C020.

Over the duration of remedial construction, Veolia implemented the erosion control plan for the site. This included conducting site inspections to:

- Document the condition and/or repair of silt fences;
- Document sediment accumulation amounts adjacent to fences and on catch basins;
- Document the condition of the tracking pad;
- Evaluate eroded or potentially unstable soils; and,
- Determine whether additional erosion control measures were needed.

Inspections were made on a bi-weekly basis and within 24-hours after significant rainfall events (0.5 inches or greater) in accordance with the WDNR's Runoff Management Website developed under Wis.

Admin. Code Ch. NR 151.31 and the Chapter 30/401 Water Quality Certification (IP-SE-2007-41-0359/0360/0361/0362) originally approved for this project on October 1, 2007, with an amendment approved on April 30, 2008. Maintenance activities included tracking pad regrading and silt fence repair, as needed. Routine erosion control inspection forms are presented in Appendix E.

The following engineering controls were employed and maintained to supplement those already in-place and previously discussed construction management and erosion controls:

- An exclusion zone was established to limit access to the work areas. Equipment and trucks leaving the exclusion zone went through a "dry decontamination" procedure prior to exit. This activity consisted of brushing off any sediment on truck side-rails or bed exteriors.
- In general, no heavy equipment or trucks were allowed to track directly over unexcavated areas of sediment. Trucks were staged for loading over completed and backfilled cells to eliminate potential off-site tracking of sediment.
- A tracking pad was installed near the entrance/exit gate to the exclusion zone to prevent tracking of material during transport of impacted sediment or hauling of clean fill. (Sheet C020). The tracking pad was constructed of 6-ounce nonwoven geotextile with 3-inch clear stone over the fabric. The topsoil was removed from the back side of the Hampton Avenue curb to allow the tracking pad to be completed on the finish grade of the top of the curb. A temporary wood ramp was placed into the street gutter to transition truck traffic onto the roadway and protect the curb.
- Street sweeping was employed, as necessary, to clean tracked materials on Hampton Avenue or the park driveways and parking lots.

3.2.2 Laydown Areas and Access Road/Ramp

Following the installation of erosion controls and site security measures, preparation of the laydown area and work access began. Laydown area construction consisted of covering the park turf with a 6-ounce nonwoven geotextile fabric and placing 12 inches of crushed limestone. Access down the hillside to the embayment was constructed in a similar fashion as the laydown area. However, the access road was built-up to maintain a uniform slope to the embayment. The access ramp required protection of the embayment stone retaining wall, which included 12-ounce non-woven geotextile placed over of the wall followed by 2 feet of fill material and crane mats to distribute the truck load (refer to detail on Sheet C020).

3.2.3 Water Treatment Equipment

A water treatment system was delivered to the site on completion of the laydown area. The treatment system consisted of a 20,000 gallon frac tank, four bag filter units, and two granular activated carbon

vessels, capable of treating water at a minimum flow rate of 50 gallons per minute. A plastic discharge tank and pump were provided to temporarily store treated water and also functioned as a method of measuring discharge volumes. The tank was volumetrically labeled and water was discharged in measured "batches" through the discharge tank and lay-flat hose, into the MMSD sewer manhole in the park driveway approximately 120 feet west of the laydown area. The water treatment system was installed within an HDPE membrane lined "secondary containment berm". Upon installation of all treatment equipment and connections with quick-connect hoses, the carbon tanks were filled with municipal potable water and allowed to soak prior to use. The air was bled out of the carbon units and they were "topped off" with potable water after soaking for 24 hours.

3.2.4 Bypass Sewer and Temporary Dam Installation

The northwest corner of the embayment has three storm sewer outfalls from surface grated catch basins in the park west of the embayment and building roof drains. Prior to performing work in the embayment, the outfalls were extended with a temporary HDPE pipe beyond the work area into the Milwaukee River at the northeast corner of the embayment. HDPE pipe was installed inside the outfalls and fusion welded together into a 12 inch diameter HDPE header pipe. The connections at the outfalls were sealed with butyl rope and caulk. Prior to beginning installation of the piping, vegetation growing into the embayment from the sides of the retaining wall was cleared and 4 ft by 8 ft sheets of plywood were placed upon the sediment along the north side of the embayment to limit construction worker disruption of the sediment during the installation of the piping.

Construction in the embayment occurred while the downstream Estabrook Dam was maintained in the open position by the Milwaukee County Parks Department. This allowed the sediment to be exposed and removed in the "dry" during average seasonal Milwaukee River flow conditions. To provide additional protection to the work area during construction, a water-filled temporary dam was installed along the edge of the embayment as a means to manage water elevations in the river up to 614 feet MSL. This dam was able to maintain a "dry" work area in the embayment during periods of river elevation increases of approximately 2 feet above "normal" flow conditions at the site with the Estabrook Dam open.

The water-filled dam was installed in four sections. Each section consisted of a heavy gauge polyester reinforced PVC tube with an inner restraint baffle/diaphragm. The sections were fitted with threaded fill and drain ports and end lifting loops. The individual sections were overlapped at the ends to create a watertight barrier. The dam sections were brought to the edge of the embayment along the constructed access drive. They were placed into the embayment in a rolled-up condition, and then manually unrolled

along the edge of the embayment. A plywood path was temporarily installed along the west side of the dam installation to minimize sediment disturbance. At the northern end of the embayment, the dam section was placed over the temporary HDPE stormwater discharge pipe and sandbags were installed around the pipe-dam connection to provide a watertight barrier along the northern embayment retaining wall.

Once the dam sections were in place, a portable pump was used to fill the sections with river water beginning at the northern end of the embayment. Due to the slope of the embayment sediment into the river channel, the northern dam section could not be maintained in its originally placed alignment. As the section was pumped full of water, it began to roll down the slope towards the river. To accommodate the slope of the river channel, the dam section was drained and moved further west onto the more gradually sloping edge of the embayment. The sections were filled with river water and the ends of each section were secured with wire rope to anchor points on the ground surface above the north and south ends of the embayment.

3.2.5 On-Site Laboratory

Environmental Chemistry Consulting Services, Inc. (ECCS) of Madison, Wisconsin provided an on-site laboratory which was under contract with Veolia, to expedite decision making regarding sediment management. ECCS provided a Wisconsin certified on-site laboratory to analyze sediment samples for PCBs (as Aroclors) by USEPA Method SW-846 8082. ECCS' quality assurance manual (QAM), which included their Statement of Qualifications (SOQ) and Standard Operating Procedures (SOPs), were reviewed by the WDNR and NRT prior to performing the work. PCB concentrations were reported to a detection limit of approximately 100 micrograms per kilogram (ug/kg) per Aroclor type.

The site preparation activities included installation of a temporary electrical service in the northwest corner of the laydown area to power the temporary laboratory operations. The lab was mobilized to the site in a self-contained trailer. The trailer was leveled and secured on-site. The electrical connections from the temporary service to the trailer were made, and the laboratory equipment was energized. The laboratory equipment was calibrated and verified for proper operation by ECCS.

Quality assurance and quality control (QA/QC) procedures were conducted in general accordance with the previously prepared *Quality Assurance Project Plan - Estabrook Impoundment Remediation Pre-Design Study*, Revision 2, dated September 2001 and amended in August 2003, as well as the *Remedial Design Report and Quality Assurance Project Plan (QAPP) Addendum,* dated October 1, 2007.

During post project internal QA/QC reviews in August 2008, ECCS identified two issues with the field-reported PCB sediment analytical data. Because of these issues, sediment analytical results presented for the project have "Draft" (ECCS field-reported results) and "Final" (ECCS post-project corrected results) values. These issues included: 1) an error in the total solids calculation that resulted in field-reported results being biased low for the majority of the samples, and 2) several sample results changed due to analyst interpretation error, the most significant of which was not identifying and quantifying Arochlor 1016 which was determined to be present in nine samples. Laboratory documentation of these issues is provided in Appendix F1.

3.3 Remedial Excavation

Sediment removal was conducted in three phases: the first phase on the north side of the embayment (ramp installation), the second phase in the central and southern "inland" portion of the embayment, and the third phase along the river's edge. This differed from the planned phasing shown on Sheet C030. The excavation plan for removal of the sediment by cells was coordinated between Veolia and NRT. The cell layout is shown on Figure 4.

Table 2 presents the sediment tonnage totals for the project. As explained further below, there were two separate incidents of sediment misdirected to the inappropriate landfill, which are detailed on Table 2 as "Issue #1 GPS" and "Issue #2 Lab". Due to these incidents, there are three separate tonnage columns presented on this table including 1) Originally Hauled Waste Tonnage, 2) Actual Landfilled Tonnage, and 3) Project Billed Tonnage. Provided on Tables 2A, 2B and 2C are these tonnages, respectively, detailed by area and by cell.

3.3.1 Pre-Excavation Sampling

NRT collected pre-excavation base samples in accordance with Table 1 for the purpose of providing additional assurance that the post-remedial verification (PRV) base samples would be less than or equal to 1 mg/kg. This sampling program was initiated to maximize the use of the on-site laboratory and save overall construction time. The pre-excavation base samples were collected in four locations in each of the proposed excavation cells as shown on Figure 4. The locations were determined by NRT based on Veolia's approved cell layout. The coordinates of these locations are provided on Table 3. NRT identified each of the locations using a handheld differential GPS unit capable of subfoot accuracy. The design elevation was determined using traditional laser survey technology referenced back to the onsite

benchmark locations. At each location, a 6-inch sample was collected with the top of the sample being located at the design base elevation (i.e. first sample). A second 6-inch sample was collected 6 inches deeper and a third was collected 1 foot deeper than the design base elevation. In some locations, refusal of the sampling tool limited the number of vertical interval samples to one or two. NRT provided the on-site laboratory the samples from each of the locations for PCB analysis. The laboratory performed the analytical testing of the top sample in each location, and provided both NRT and Veolia the results of the analysis according to the following sequence:

1. If all pre-excavation sample results in a cell indicated a total PCB concentration less than or equal to 1 mg/kg at the design base elevation, Veolia proceeded with the excavation of the cell as designed.
2. If any one of the first pre-excavation sample results indicated a PCB concentration greater than 1 mg/kg, the following procedure occurred:
    a. NRT requested the laboratory to analyze the second sample from the same location that the first sample indicated greater than 1 mg/kg, with the intent of defining the depth of the necessary additional sediment excavation.
    b. The laboratory provided the results of the second analysis.
    c. NRT provided Veolia with a revised cell base elevation for the cell quadrant based on the second sample results. Again, if the design standard of 1 mg/kg was not achieved in the second sampling interval, the third was analyzed by the laboratory and the cell base elevation for the cell quadrant was revised accordingly.
    d. Veolia excavated the cell in layers and the final base of the cell matched the revised elevations, as provided and directed by the NRT confirmed pre-excavation sampling results.

The pre-excavation sample analytical results are summarized on Table 4 with ECCS laboratory results provided in Appendix F1. Typically, if a pre-excavation sample location indicated a concentration in excess of 1 mg/kg total PCBs, subsequent samples collected from deeper intervals in the same location decreased in total PCB concentrations until the remedial goal was achieved. In one location (Pre-Exc Cell 22-3), the first interval sample result was 9.5 mg/kg, followed by 71 mg/kg in the subsequent interval and 0.13 mg/kg in the final interval collected ("Draft" total PCB results). Thus, quadrant three of Cell 22 was over-excavated one foot from the original design elevation to achieve the remedial goal. However, since the second interval exceeded the TSCA designation threshold, the quadrant was over-excavated by a 6-inch interval which was disposed of as non-TSCA, followed by a second 6-inch interval that was over-excavated and disposed of as TSCA material. The "Final" lab results reported for these pre-excavation samples did not change the waste classification of the intervals; therefore, the material was disposed of properly.

3.3.2 Sediment Excavation Procedures

Sediment excavation activities began on the north side of the embayment, below the access road from the laydown area. An excavator with an extended boom (long-stick) was placed above the embayment, at a safe working distance from the retaining wall, to remove sediment from inside the embayment in the location of the planned access ramp. Area 1 was completed first, which contained a single layer of less than 50 mg/kg total PCB concentration sediment.

The cells which comprised the footprint of the embayment access ramp were completed, and then the ramp was constructed into the embayment. Cell excavation continued with sediment placement directly into the appropriate truck staged on the temporary access road to the embayment. When excavation activities progressed well into the Phase 1 area, the access ramp was extended onto the completed cells and the trucks were driven into the embayment on the completed cells.

The sediment was tested on-site with a paint filter test (SW-846 Method 9095B) to verify that no free liquids were present prior to loading and transport. Cells were excavated in layers to the design depths of TSCA or non-TSCA sediment until the final depth was reached as determined by the pre-excavation sample results. Then, post-excavation sampling was conducted in each excavated cell, per the methodology summarized below in Section 3.3.2.3.

The cell remained open until post-excavation sampling results verified an analytical result of less than or equal to 1 mg/kg total PCBs at which time the cell was backfilled with stone. Cells were typically completed and backfilled during a single day, to avoid leaving a cell “open” over night. Truck or excavator traffic was only allowed over completed cells. No heavy equipment traffic was allowed on cells until the excavation activities were completed in the cell and the excavation was at least partially backfilled.

3.3.2.1 Survey and Field Documentation

The locations of the cells were surveyed by a registered land surveyor (TN & Associates, Inc.) and the perimeter of each cell was staked. The excavation elevations were surveyed by Veolia with a portable GPS unit capable of identifying elevations to an accuracy of within 0.1 foot. A GPS equipped standard-reach excavator was also provided on-site to direct excavation activities where the long-stick excavator was not required to reach the sediment limits of a cell without disturbing the cell with the tracks of the excavator. The majority of the sediment removal activities were performed with the long-stick excavator and portable GPS unit to identify excavation elevations. Both GPS units (portable and excavator

mounted) were consistent with the established site coordinate system used on the plan sheets. The GPS units were calibrated to a benchmark (established by a registered land surveyor) on-site each day, prior to beginning site operations.

The surface elevation of the stone backfill (interim grade) was field staked for construction purposes and the sand backfill layer (final grade) was survey documented by TN & Associates, Inc. The interim and final grade contours are identified on the record sheets C030 and C040, respectively.

3.3.2.2 Sediment Dewatering and Stockpiling

The sediment excavation activities progressed from north to south, across the embayment. Sumps were installed at the north end of the embayment to dewater sediments in the embayment at the beginning of the project and following rainfall events. However, as the weather became warmer and dryer during the construction schedule, the sediments held less water and pumping of sump water from the sediments was no longer necessary to facilitate removal and transport of sediments.

If scheduling of daily activities did not facilitate removal of a complete truckload of sediment, the material excavated from one cell was stockpiled on another cell with similarly exposed sediment (i.e. TSCA on top of TSCA), until a complete load of sediment could be arranged for transport from the site. This was implemented particularly for TSCA sediments, because the truck scheduling to the EQ Wayne Disposal facility was more complex. This temporary staging of sediment allowed the construction activities to continue on a more effective schedule. Sediments which were stockpiled overnight were covered with anchored plastic sheeting and were limited, to the extent possible, to dry periods when rain was not forecasted.

3.3.2.3 Post-Excavation Sampling

Veolia notified NRT when the excavated cell was completed to the design elevation or revised design elevation. NRT collected PRV base samples in accordance with Table 1 from each excavated cell. The PRV base sample submitted for analysis was a composite sample from four locations within the cell as shown on Figure 4. NRT used their handheld GPS unit to locate the post-remedial samples in the approximate same locations as the pre-excavation samples. The coordinates of these locations are provided on Table 3. A 6-inch sample was collected from each of the four locations for compositing. A laboratory duplicate of composite material was also provided to the on-site laboratory, to verify adequate compositing of the material. NRT provided the on-site laboratory the sample for PCB analysis and ECCS

provided Veolia and NRT the results of the analysis. The following sequence applied to post sample results:

1. If the PRV base sample result from a cell indicated a total PCB concentration less than or equal to 1 mg/kg, Veolia was allowed to backfill the excavated cell.
2. If the PRV base sample result indicated a total PCB concentration greater than 1 mg/kg, the following procedure occurred:
    a. NRT requested that ECCS analyze the four discrete samples (used to make-up the composite) to determine which quadrant(s) indicate total PCB concentrations greater than 1 mg/kg. Veolia then removed additional sediment from that quadrant(s), as directed by NRT. Any quadrant(s) with a concentration less or equal to 1 mg/kg did not require further excavation or sampling.
    b. NRT collected an additional PRV base sample from the base of the new excavated quadrant(s). A discrete sample was collected if excavation of only one quadrant was required. A composite sample was collected if excavation of more than one quadrant was required.
    c. Veolia was approved to backfill the excavated cell if the additional sample result was less than or equal to 1 mg/kg. The procedure was repeated as necessary.
3. Veolia then documented the limits and base of the excavated cell at a minimum of four corners and in the center of the cell, or as requested by NRT, with their portable GPS unit.

The PRV sample analytical results are summarized on Table 5 with ECCS lab results provided in Appendix F1. PRV sampling confirmed that the final base of the excavated cells was in compliance with the remedial action goal established for this project (i.e. less than or equal to 1 mg/kg total PCBs) in all cells.

3.3.3 TSCA and Non-TSCA Waste Disposal

Sediment disposal activities included both TSCA and non-TSCA material. TSCA sediment was transported to the EQ Wayne Disposal, Inc. facility in Belleville, Michigan. Non-TSCA sediment was transported to the Veolia ES Emerald Park Landfill, LLC. facility in Muskego, Wisconsin.

The TSCA sediment was loaded in tractor/trailer trucks for transport to Michigan. These trailers included tailgates which were mechanically sealed. Each load was completely lined with a disposable plastic liner. The liners were then wrapped over the top of the loaded sediment. Non-TSCA sediment was loaded into quad-axle dump trucks for transport to Muskego, Wisconsin. These truck tailgates were also mechanically sealed. All truck loads were covered with a tarp prior to site departure.

Decisions on classification of sediment as either TSCA or non-TSCA material were based upon the previous investigative assessment of the sediment deposition at the site and further data gathered during the pre-excavation sampling. The elevations of the sediment layers classified for each type of disposal were previously established on Sheet C031. Sediment was excavated to the design elevations for each layer within each cell. These elevations were confirmed in the field by the Veolia GPS equipment. As stated previously, this equipment was calibrated to a site benchmark on a daily basis.

Landfill disposal tonnage summaries for Veolia Emerald Park Landfill and EQ Wayne Disposal facility are provided in Appendix G1 and G2, respectively. Also, waste manifests and certificates of disposal for the TSCA waste is provided in Appendix G3.

3.3.3.1 Misdirected Sediment – GPS Issue

On June 4, 2008, Veolia changed out part of their GPS equipment due to technical problems. The equipment was calibrated to the site benchmark and work began again. On June 5, 2008, in performing a review of the previous day's calibration data, NRT identified an error in the previous day's calibration data. No work was conducted on June 5 because of inclement weather. NRT determined that the replacement equipment was not properly calibrated on June 4, resulting in an elevational error of approximately 6 inches on that day. This resulted in disposal of a 6 inch layer of sediment classified as TSCA material being disposed with the non-TSCA designated sediment on June 4, 2008. An estimated quantity of 27 tons of TSCA sediment was misdirected for disposal at the Veolia facility. Since this material was incorporated into non-TSCA sediment disposed, it could not be separated out of the total volume hauled to the Veolia landfill on that day (292 tons). The landfill was immediately notified of the condition and the section of the landfill which received the materials was isolated until a decision was made regarding the disposed material. Following discussions with the WDNR and USEPA, all sediment disposed at the Veolia landfill on June 4, 2008 was removed and transported to the EQ Wayne Disposal Facility in Michigan. A total of 296.09 tons of sediment were removed from the Veolia facility on June 19, 23 and 25, 2008 and hauled to the EQ facility. The removal, hauling and disposal of this material was handled and paid for by Veolia. Project billing amounts were not affected by this issue, as it was contractor error causing the co-mixed the TSCA and non-TSCA classified sediments. A summary of these activities along with disposal documentation and a photo log are attached as Appendix H1 to this report.

3.3.3.2 Misdirected Sediment – Lab Issue

A second misdirected sediment issue was identified following project completion. During post-project internal ECCS QA/QC reviews in August 2008, the on-site laboratory corrected the field-reported PCB analytical data which resulted in sediment being transported to the incorrect disposal facility. Quality control results from ECCS is provided in Appendix F4. As a result of this quality control process, ECCS reported "Final" analytical results, some of which were significantly different from the field-reported values particularly for the pre-excavation samples. The internal QA/QC review identified PCB Aroclor 1016 in three pre-excavation samples (Pre-Exc Cell 5-1, 5-4 and 6-2), which resulted in a field result of less than 50 mg/kg total PCBs changing to a final reporting result of more than 50 mg/kg. Thus, sediment identified in the field as non-TSCA material and transported to the Veolia facility in Muskego, Wisconsin was later identified as TSCA material based upon the ECCS corrected "Final" reported data.

The quantity of TSCA sediment misdirected as a result of this change in the laboratory reporting was estimated by NRT to be 40 tons from Cells 5 and 6 (refer to Appendix H2 for calculation). The sediment was hauled to the Veolia landfill on May 20 and 23, 2008. The sediment was co-mixed and hauled with non-TSCA material (120 tons) on the transport dates from which it could not be separated. The Veolia landfill facility was notified of the change in classification of the sediment and the need to remove this material. Following discussions with the WDNR and USEPA, sediment from these cells disposed at the Veolia landfill on the dates referenced was removed and transported to the EQ Wayne Disposal Facility in Michigan. A total of 125.05 tons of sediment were excavated at the Veolia facility, temporarily staged there, and on September 11, 2008 hauled to the EQ facility in Michigan. Project billing amounts were decreased by 40 tons for the non-TSCA waste and increased by 40 tons for the TSCA waste as a result of this issue. The remainder of the costs for removal, hauling and disposal of this material was handled and paid for by ECCS. The material was required to be disposed of under a new waste profile number due to the billing changes. A summary of these activities along with disposal documentation and a photo log are attached as Appendix H2 to this report.

3.3.4 Storm Event Response Activities

A significant storm event occurred in southeastern Wisconsin on June 7, 2008. The resulting local flooding raised the river elevation to approximately 620 ft. MSL at the embayment. This flood elevation overtopped the retaining walls of the embayment. The temporary dam installation was not designed for this water elevation. The temporary dam was damaged by the swiftly moving flood waters and floating debris. The dam anchors prevented the dam sections from floating away; however, the dam was

irreparably damaged. Small temporary stockpiles of sediment within the embayment, which were covered and anchored with plastic sheeting, were not significantly impacted by the flood waters. No equipment was in the embayment at the time of flooding. The temporary HDPE storm water conveyance pipe along the north side of the embayment was not damaged by the storm event.

The event resulted in an extended period during which the embayment was flooded. The on-site laboratory was temporarily shut down. Site operations were discontinued until flood water subsidence and the embayment sediments and fill materials were allowed to "dry out". The flood event deposited a relatively thin layer (less than three inches) of "new" sediments across the embayment. Where cells had been completed, the sediments were deposited on top of the fill materials. The newly deposited sediment was sampled and submitted to the ECCS fixed-based laboratory in Madison, Wisconsin for analysis of total PCBs. The analytical results indicated low-level concentrations of total PCBs, in the range of 1.4 to 2.6 mg/kg (Table 6, Appendix F3). This sediment was scraped to the extent practical from the top of the backfill and disposed as non-TSCA sediment. The water-filled dam was replaced with a turbidity barrier and silt fence combination on June 30, 2008. This change was requested in a memorandum to the WDNR, dated June 4, 2008 and was approved in an email from the WDNR. Initially, this change was intended to allow excavation of the cells along the river, which were effectively located beneath the water-filled dam. The implementation of this alternative was placed on an earlier schedule, due to the storm damage. Excavation operations were restarted in the embayment on July 1, 2008.

3.3.5 Excavation Backfilling

Cells were backfilled with stone when field reported PRV analytical results indicated that the excavation had progressed to the depth that attained the remedial goal. Tunnel stone from MMSD tunneling operations in Milwaukee were used as backfill for this project, as well as crushed limestone from the laydown area/access road. Cells were filled with this material to an elevation which allowed access of heavy equipment onto the cell, and eventually filled to the interim grade elevation (final grade minus one foot). The fill was typically "bermed" along adjoining unexcavated cells to prevent sediment erosion into an excavated cell.

The backfill activities at the edge of the embayment along the river included construction of a "toe" with non-woven geotextile fabric and 3-inch clear stone at the surface. The geotextile was placed on the base of the excavated cell and the fill was placed over the fabric. At the completion of the project, the top layer of imported sand was placed along the river's edge, the fabric was wrapped over the sand, and 3-inch clear stone was placed on top of the fabric along the edge of the embayment facing the river. A drain

was also constructed from the outfall of the storm sewers in the northwest corner of the embayment to the river. This drain consisted of a 3-inch clear stone covered with a non-woven geotextile with sand placed over the drain. Details of both construction features are included on Sheet C040 of the plans.

The final fill activities progressed from the south side of the embayment to the north, after the excavation activities were concluded. The ramp and laydown area limestone materials were partially removed and used as backfill in the embayment upon visual verification that the material was not impacted with sediment from the site. The tunnel stone and limestone were filled to the interim surface grade and then a one-foot sand layer was placed over the stone. The sieve analysis for the sand material is included in Appendix I.

3.4 Residuals Material and Wastewater Management

In addition to sediment disposal, some construction related materials were also disposed at the Veolia landfill in Muskego, Wisconsin. This material included construction materials with sediment impacts as a result of site activities. The water treatment system media and residuals were also managed in this manner.

3.4.1 Residuals Sampling and Disposal

Samples of the treatment system residuals (granular activated carbon) and frac tank residuals (sediment) were analyzed in accordance with Table 1 to determine the necessary disposal requirements for the material. The total PCB concentrations for these residuals were less than 50 mg/kg and the residuals were disposed of as special waste at the Veolia ES Emerald Park Landfill, LLC. The residuals analytical results are summarized in Table 6, with the ECCS lab results provided in Appendix F1.

Additionally, the June 7, 2008 storm event resulted in significant flooding of the area. The subsiding flood waters left floating debris and sediment deposits in the embayment. The debris consisted of wood, the damaged sections of the water filled dam, and some floating recreational equipment. The debris was disposed as special waste at the Veolia ES Emerald Park Landfill, LLC.

The total quantity of the debris and residuals was approximately 15 tons.

3.4.2 Wastewater Sampling and Discharge

Samples of the treated water (effluent) from the dewatering and treatment system were collected from a sample port on the discharge holding tank, in accordance with the frequency and parameters required by the MMSD permit approval (Appendix A4). Treated water was not discharged until the total PCB concentration in the treated water was verified to be below MMSD limits. One influent sample was also collected during the project for PCB analysis to quantify the untreated total PCB concentration. All discharge water was in compliance with the discharge requirements of the MMSD. During construction, MMSD visited the site on several occasions to inspect the water treatment system and effluent and collected their own sample for laboratory analysis. When the project was completed, the MMSD was notified that discharge activities were completed and that the treatment system was being demobilized.

Discharge occurred through a “lay flat” hose which was rolled out, as needed, along the circular access drive to the Pavilion building, with discharge into a manhole to the west of the treatment system. The manhole was closed immediately when discharge activities were not in progress. The discharge always occurred with Veolia personnel on-site, (i.e., no unattended discharge activities occurred during construction). The wastewater discharge analytical results and discharge quantities are summarized in Tables 7 and 8, respectively. The laboratory analytical reports are provided in Appendix F2.

4 SITE RESTORATION

4.1 Embayment Area and Access Ramp

Final restoration of the embayment area involved the placement of surface sand over the interim grade material consisting of crushed limestone (Sheet C040). The sand was placed on the south side of the embayment first. The construction equipment was removed as the sand was placed, and no heavy equipment traffic occurred on the sand layer. The access ramp was completely decommissioned. The bypass stormwater pipe along the north end of the embayment was disconnected and removed. Final sediment removal from beneath the temporary pipe was conducted using the long-stick excavator from on top of the embayment. The north end of the embayment was restored from the land surface above the embayment with the excavator.

4.2 Laydown Area

The laydown area outside the embayment was completely decommissioned. Visibly "clean" laydown area stone was transported to the Milwaukee County Brown Deer Park golf course facility for maintenance of an access road there. A minor amount of potentially impacted laydown area and access road construction materials were transported and disposed as special waste at the Veolia Emerald Park Landfill. Geotextile fabric used to protect the landscaping in the laydown area was also removed from the site and disposed at the Veolia landfill.

After removal of loose rock from the laydown and site access areas, topsoil was imported and placed. Topsoil was finish graded across the former landscaped area of the site which was disturbed by construction activities. The topsoil was seeded with a turf seed mix requested by the County and covered with erosion control matting and loose straw. The seed was watered and maintained by Veolia until a uniform stand of grass had established itself. The straw and erosion matting was then removed from the site and the perimeter temporary construction fencing was removed from the site.

5 CONCLUSIONS

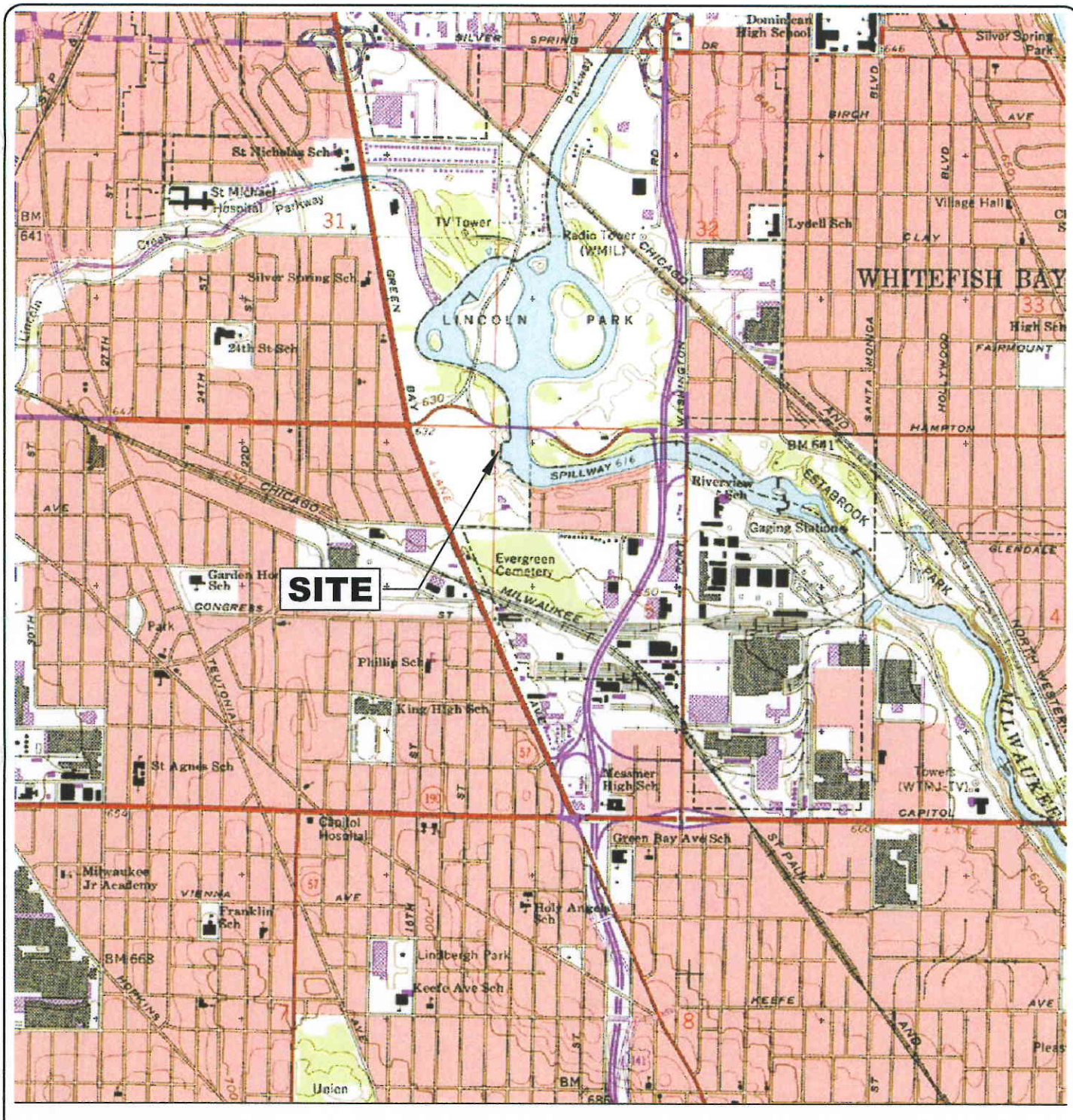
Remedial activities were performed in conformance with the *Remedial Design Report and Quality Assurance Project Plan (QAPP) Addendum and Contract Documents for the Remedial Construction*, both dated October 1, 2007, with minor changes detailed in this report. Key remedial documentation points include:

- Adequate segregation of the TSCA and non-TSCA layers based on previously collected sediment analytical data and on-site laboratory data, with the exception of two misdirected sediment incidents were adequately corrected;
- Post-remedial verification (PRV) base sampling demonstrated that the remedial action goal of 1 mg/kg was adequately met within the embayment prior to backfilling; and
- Site restoration was completed that included backfilling of the embayment with granular fill to the approximate previous sediment grade to minimize sediment re-deposition and re-vegetation of the disturbed areas of the County park property.

The results of the sediment removal operations in the embayment performed as a pilot project, provided the WDNR with information to address several potential design challenges for use during the broader remedial design for the Estabrook Impoundment including, but not limited to, the following:

- Effectiveness of segregation strategies for less than and greater than 50 mg/kg PCB impacted sediment;
- Effectiveness of an on-site laboratory for timely results;
- Effectiveness of excavation equipment and use of GPS equipment for guiding the excavation operations under “dry” conditions;
- Assessing challenges for conducting sediment removal operations given uncertain and seasonal river flow conditions;
- Evaluating future sediment dewatering requirements for off-site disposal; and
- Assessing potential concerns and impacts to the surrounding community.

FIGURES



SOURCE: EARTHVISIONS U.S. TERRAIN SERIES,
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USGS 7.5 MINUTE QUADRANGLE,
City. DATED 1958.
PHOTOREVISED 1971.

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0 2000 4000

SCALE IN FEET

CONTOUR INTERVAL 10 FEET

SITE LOCATION MAP

NATURAL RESOURCE TECHNOLOGY

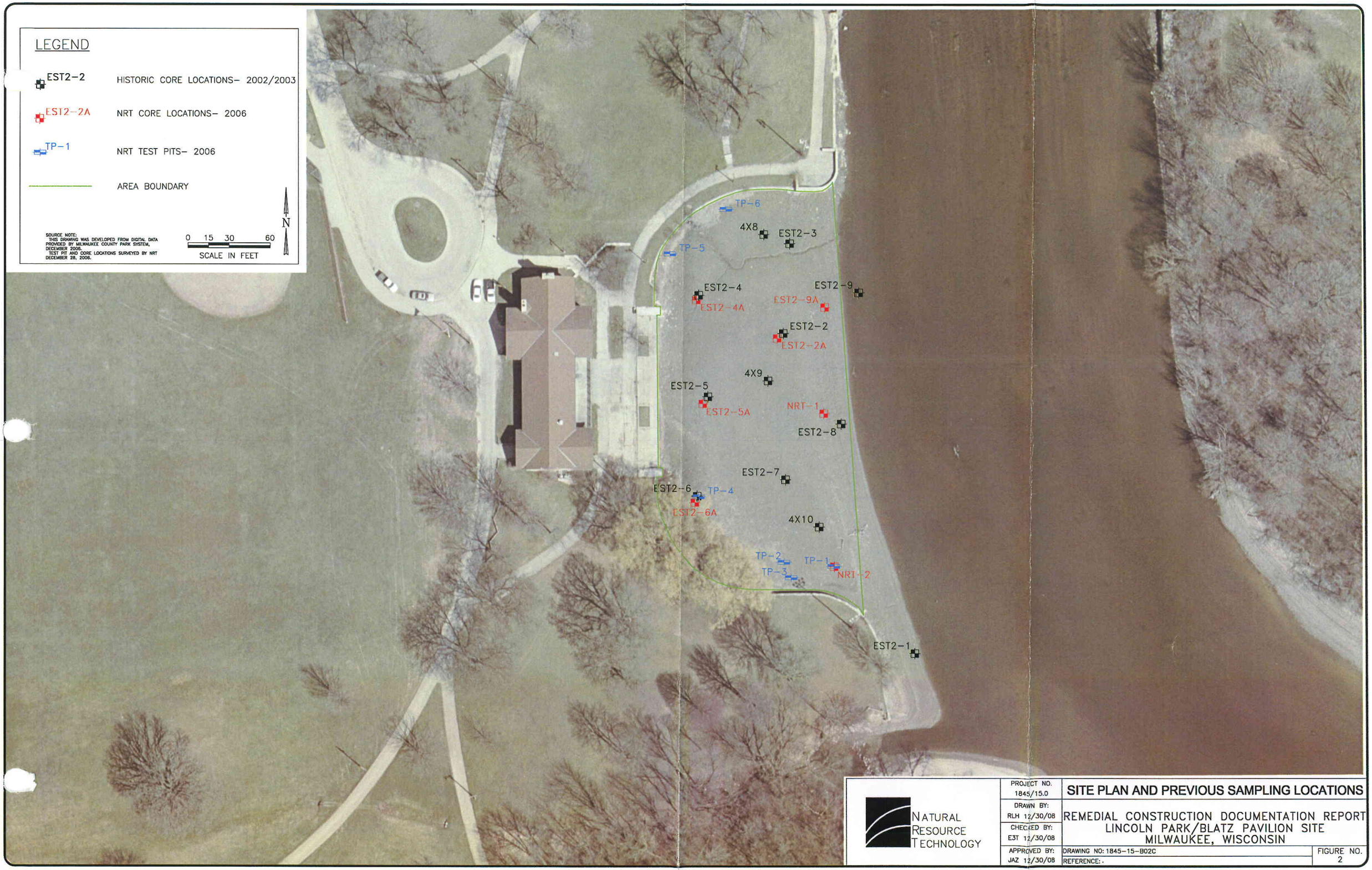
REMEDIAL CONSTRUCTION DOCUMENTATION REPORT
LINCOLN PARK/BLATZ PAVILION
MILWAUKEE, WISCONSIN

DRAWN BY: RLH 12/30/08 APP'D BY: JAZ DATE: 12/30/08

PROJECT NO.
1845/7/DOCRPT

DRAWING NO.
1845-A01C

FIGURE NO.
1

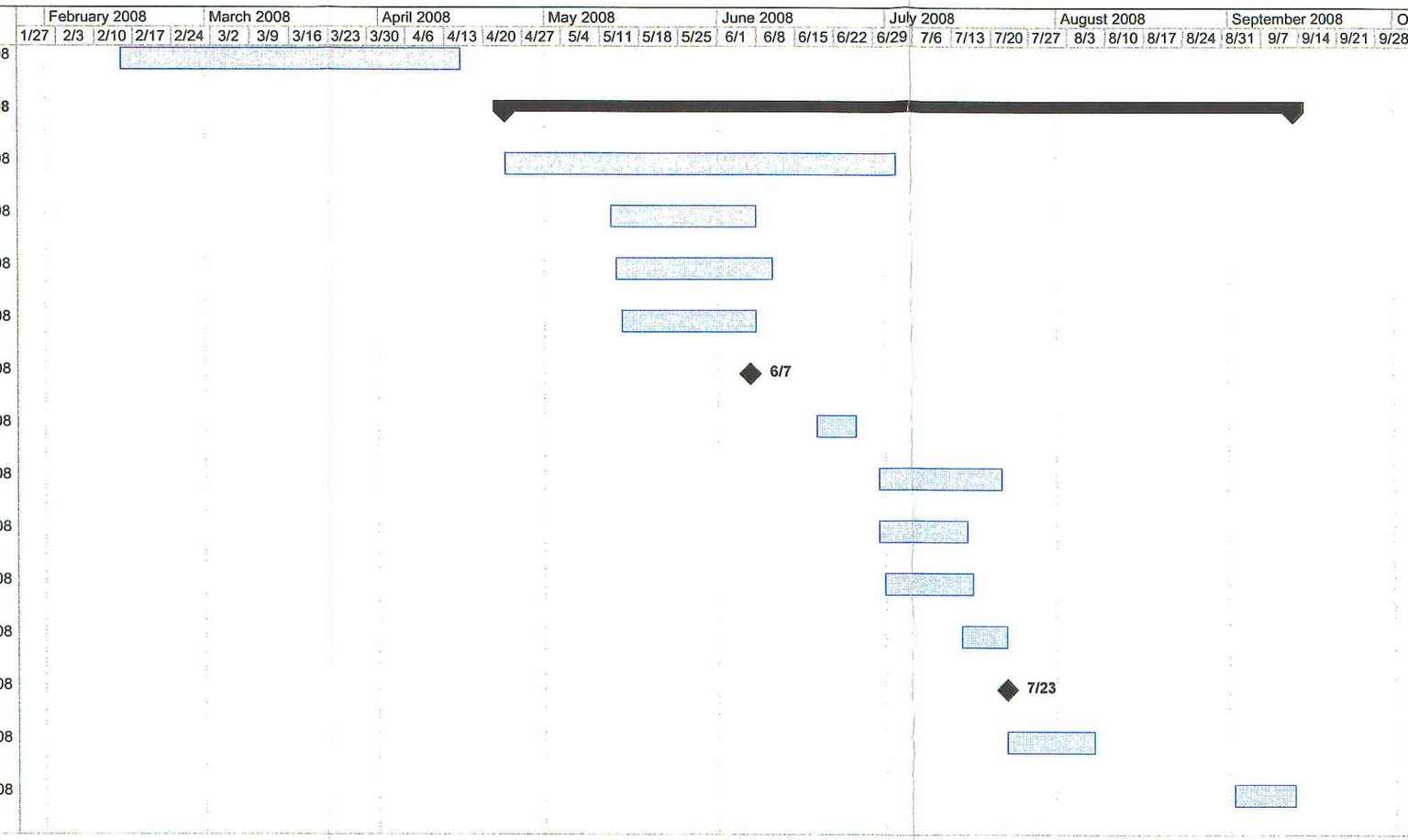


NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1845/15.0	SITE PLAN AND PREVIOUS SAMPLING LOCATIONS
DRAWN BY: RLH 12/30/08	REMEDIAL CONSTRUCTION DOCUMENTATION REPORT LINCOLN PARK/BLATZ PAVILION SITE MILWAUKEE, WISCONSIN
CHECKED BY: EJT 12/30/08	
APPROVED BY: JAZ 12/30/08	DRAWING NO: 1845-15-B02C REFERENCE: .
	FIGURE NO. 2

Figure 3: Remedial Construction Project Schedule
Lincoln Park/Blatz Pavilion Site, Milwaukee, Wisconsin

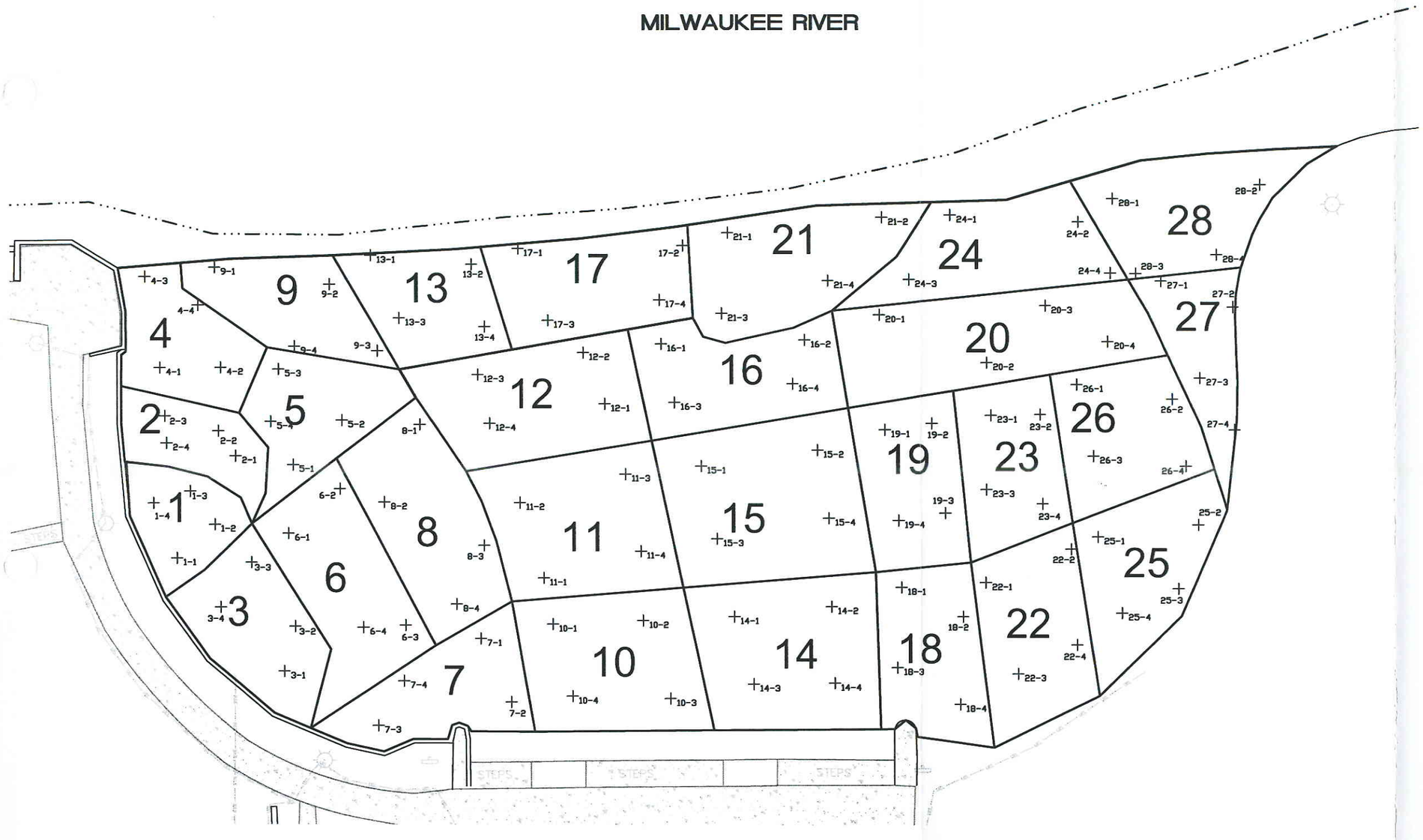
Task Name	Start	Finish
onstruction Project Planning/Final Permit Approvals	Fri 2/15/08	Tue 4/15/08
Remedial Construction	**Thu 4/24/08**	**Fri 9/12/08**
Pre-Excavation Sample Collection	Thu 4/24/08	Wed 7/2/08
Water-Filled Dam In-Place	Tue 5/13/08	Sat 6/7/08
On-site Laboratory Analysis	Wed 5/14/08	Tue 6/10/08
Sediment Excavation (Prior to Flood Event)	Thu 5/15/08	Sat 6/7/08
Flood Event	Sat 6/7/08	Sat 6/7/08
Waste Transfer (Misdirected Sediment - GPS Issue)	Thu 6/19/08	Wed 6/25/08
Turbidity Barrier/Silt Fence In-Place (Replacement for Water-Filled Dam)	Mon 6/30/08	Mon 7/21/08
On-site Laboratory Analysis	Mon 6/30/08	Tue 7/15/08
Sediment Excavation (Following Flood Event)	Tue 7/1/08	Wed 7/16/08
Sand Backfill & Embayment Restoration	Tue 7/15/08	Tue 7/22/08
Estabrook Dam Closed	Wed 7/23/08	Wed 7/23/08
Site Restoration/Landscaping	Wed 7/23/08	Thu 8/7/08
Post-Project Waste Transfer (Misdirected Sediment - Lab Issue)	Tue 9/2/08	Fri 9/12/08



roject: Lincoln Park/Blatz Pavilion
Date: Tue 12/30/08

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Natural Resource Technology, Inc.



LEGEND

CELL BOUNDARY

28-4 SAMPLING LOCATION

SHORELINE (VARIES)

N

0 30 60

SCALE IN FEET

SOURCE NOTES:
1. THIS DRAWING WAS DEVELOPED FROM A SURVEY MAP BY KAPUR & ASSOCIATES, INC., MILWAUKEE, WISCONSIN, TOPOGRAPHIC SURVEY/BLATZ PAVILION, SHEET 1 OF 1, DATED JUNE 4, 2007, FILE NO: 07B26H.DWG. HORIZONTAL DATUM IS (WTM 83/97), VERTICAL DATUM IS (HGVD 29).
2. SAMPLE LOCATIONS SHOWN CORRESPOND TO PRE-EXCAVATION SAMPLE COORDINATES.

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1845	EXCAVATION CELL LAYOUT AND PRE/POST SAMPLE LOCATIONS
DRAWN BY: KNW/RLH 12/29/08	REMEDIAL CONSTRUCTION DOCUMENTATION REPORT LINCOLN PARK/BLATZ PAVILION SITE WISCONSIN DEPARTMENT OF NATURAL RESOURCES MILWAUKEE, WISCONSIN
CHECKED BY: EJT 12/30/08	
APPROVED BY: JAZ 1/28/09	DRAWING NO: 1845-7-B04 / REFERENCE: 7\DOC RPT\ / FIGURE NO. 4

TABLES

Table 1 - Sampling and Analysis Plan Summary
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

Sample Purpose (Media)	Proposed Number of Sampling Locations	Estimated No. of Samples Collected	Type of Samples	Sample Labeling	Laboratory	Required Turn-Around Time	Parameter	Method	Remedial Action Goal	Estimated No. of Samples Analyzed	Blind Lab Duplicates [2]	Equipment Blanks [3]	MS/MSD [4]	TOTAL	Container Type	Minimum Volume	Preservation (Cool to 4° ≥ 2°C All Samples)
Remedial Action																	
Pre-Excavation Screening Base Samples (Sediment)	100 approx. (4 locations per cell, 25 cells)	200 (2 sample intervals per location)	Discrete	Pre-Exc Cell #-1,2,3,or 4 & Top of Sample Elevation [ie Pre-Exc Cell 5-1 (615') & Pre-Exc Cell 5-1 (614')]	mobile	24 hour	PCBs	8082	≤ 1 mg/kg	100-200	0 [5]	TBD	0 [5]	100-200	amber glass	250 g	
PRV Base Samples (Sediment)	100 approx. (4 locations per cell, 25 cells)	25 (1 sample per cell, 4 locations to be composited)	Composite	PRV Cell # (ie PRV Cell 5)	mobile	Same Day	PCBs	8082	≤ 1 mg/kg	25	2	TBD	2	29	amber glass	250 g	
For PRV Base > 1 mg/kg - Analyze 4 discrete samples	TBD	TBD	Discrete	PRV Cell #-1,2,3, or 4 (ie PRV Cell 5-1)	mobile	Same Day	PCBs	8082	≤ 1 mg/kg	TBD	TBD	TBD	TBD	TBD	amber glass	250 g	
For Additional PRV Base (As Needed Per Quadrant)	TBD	TBD	Discrete or Composite [6]	PRV Cell #-1,2,3, or 4 **B**	mobile	Same Day	PCBs	8082	≤ 1 mg/kg	TBD	TBD	TBD	TBD	TBD	amber glass	250 g	
Influent - Dewatering (water)	1	1 (at beginning)	Grab	INF-Sample Date (ie INF- 11/11/07)	mobile	Same Day	PCBs	8082	NA	1	0	0	0	1	amber glass	1 L	
Effluent - Dewatering [1] (water)	1	PCBs - Daily; For Others- Daily then Weekly once results pass	Grab	EFF-Sample Date (ie EFF- 11/11/07)	mobile	Same Day	PCBs	8082	No Detection	TBD	TBD	0	TBD	TBD	amber glass	1 L	
					fixed	3 day then Normal	Arsenic	6010/6020	<0.6 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Cadmium	6010/6020	<1.5 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Chromium	6010/6020	<64 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Lead	6010/6020	<2.0 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Mercury	6010/6020	<0.0026 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Nickel	6010/6020	<4.0 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	Zinc	6010/6020	<8.0 mg/L	TBD	TBD	0	TBD	TBD	plastic	500 ml	HNO3 to pH <2
					fixed	3 day then Normal	SVOCs	8270	<5 mg/L	TBD	TBD	0	TBD	TBD	amber glass	1 L	
					fixed	3 day then Normal	Cyanide T.	9010/9012	<2.9 mg/L	TBD	TBD	0	TBD	TBD	plastic	250 ml	NaOH to pH>12
					fixed	3 day then Normal	Oil & Grease (HEM)	1664	<300 mg/L	TBD	TBD	0	TBD	TBD	amber glass	1 L	H2SO4
					fixed	3 day then Normal	TSS	EPA 160.2	<100 mg/L	TBD	TBD	0	TBD	TBD	plastic	250 ml	
					fixed	3 day then Normal	pH	Field	>5 s.u.	TBD	TBD	0	TBD	TBD	field measured	125 ml	
Project Completion																	
Treatment System residuals (Carbon, Filter bags)	2	2 (1 sample per media)	Composite	Carbon, Bags	mobile	Same Day	PCBs	8082	NA	2	0	0	0	2	amber glass	250 g	
Frac Tank residuals (Sediment)	1	1	Grab	Frac Tank	mobile	Same Day	PCBs	8082	NA	1	0	0	0	1	amber glass	250 g	

Notes:
1. Effluent monitoring frequency and limits are per MMSD requirements.
2. Blind Lab duplicates will be collected at a frequency of one per group of twenty or fewer sediment samples. Three samples to be collected, one labeled as original sample and two as bogus sample labels.
3. Equipment blanks will be collected at a frequency of one per sampling event with non-dedicated sampling equipment.
4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected at a frequency of one per group of twenty or fewer investigative samples. Additional volume will be determined per laboratory requirements.
5. QA/QC samples will not be collected for the pre-excavation samples as these samples are for screening purposes only.
6. A discrete sample will be collected if excavation of only one quadrant is required. A composite sample will be collected if excavation of more than one quadrant is required

Acronyms:
PCB = Polychlorinated Biphenyl
PRV = Post Remedial Verification Sample
NA = Not Applicable
TBD = To be determined based on field encountered conditions

Holding Time from Sample Date
14 days
14 days
14 days
14 days
7 days
7 days
6 mo
6 mo
6 mo
6 mo
6 mo
6 mo
7 days
14 days
28 days
7 days
immediately
14 days
14 days

Table 2 - Sediment Tonnage Totals
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

	TABLE 2A					TABLE 2B	TABLE 2C
		Issue #1 GPS		Issue #2 Lab (post project correction)			
Non TSCA Tons	Non TSCA Tons Originally Hauled In	Hauled out (1)		Hauled out (2)	Refer to Tonnage Calc (Appendix H)	Actual Non TSCA Tons Landfilled at Veolia EPL	Non TSCA Tons Billed to Project
Landfilled Amounts	3589.34	-296.09		-125.05		3168.2	
Project billing amounts	3589.34				-40		3549.34
TSCA Tons	TSCA Tons Originally Hauled In	Add. Hauled In		Add. Hauled In	Refer to Tonnage Calc (Appendix H)	Actual TSCA Tons Landfilled at EQ	TSCA Tons Billed to Project
Landfilled Amounts	2072.57	296.09		125.05		2493.71	
Project billing amounts	2072.57				40		2112.57
Totals (Balance)	5661.91	0		0	0	5661.91	5661.91
		Issue #1 GPS (June 4)		Issue #2 Lab (May 20&23)			
		Cells 18,20,22,23,26 tons	Truck Manifest #	Cells 5&6 tons	Truck Manifest #		
		23.67	85	19.78	6		
		20.43	86	17.42	7		
		21.9	87	23.39	8		
		23.15	88	21.04	9		
		19.82	89	18.27	16		
		23.02	90	20.01	17		
		26.37	91	**119.91**			
		21.97	92				
		22.71	93				
		24.91	94				
		19.66	95				
		20.4	96				
		24.4	97				
		292.41					

Notes:
(1) The tonnage necessary for removal to correct this issue was 292.41; an actual amount of 296.09 tons was removed, which is an overage of 3.68 tons.
(2) The tonnage necsessary for removal to correct this issue was 119.91; an actual amount of 125.05 tons was removed, which is an overage of 5.14 tons.
Therefore, there was an additional **8.82 tons** (3.68 + 5.14) of material hauled to the TSCA landfill.

Table 2A - Originally Hauled Waste Tonnage By Area & Cell
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

			NON TSCA	TSCA
			Actual Ton	**Actual Ton**
Area	Cell	Date Excav.	**Non TSCA**	**TSCA**
Area 1			152	0
	1	5/15/,7/10/08	62.54	
	2	5/15&20&7/10/08	89.07	
Area 2			329	598
	3	5/16,7/17/08	18.72	92.91
	6	5/19-20/2008	81.63	85.5
	7	5/20-21/2008	39.81	88.66
	8	5/21-22/2008	40.89	127.86
	5	5/22-23,28/08	38.28	89.99
	4	7/14-15/08	51.45	43.14
	9	7/14-15/08	58.33	70.19
Area 3			2703	1293
	10	5/23&28/2008	168.83	70.2
	11	5/23&28/2008	146.52	70.94
	12	5/23&27/2008	179.29	85.94
	16	5/28-29/2008	96.71	93.16
	15	5/29-30/08	193.6	113.67
	14	5/30,6/2/08	200.29	91.76
	20	5/30,6/2,4/08	241.99	111.05
	19	6/2-3/2008	145.76	68.19
	23	6/4/2008	89.79	67.66
	18	6/2,3,4/08	183.94	72.74
	22	6/4-7/2/08	177.65	90.12
	26	6/4-7/8/08	253.07	94.18
	25	7/1-7/8/08	187.86	66.48
	24	7/3-7/10/08	143.61	63.79
	17	7/7-7/11/08	189.70	89.82
	13	7/14/2008	104.50	42.91
Area 4			148	182
	21	7/8-7/11/08	148.17	181.71
Area 5			242	0
	27	6/6-7/3/08	109.1	
	28	7/2&7/3/08	133.35	
			3574.45 tons	**2072.57 tons**
			2.99 debris tons	
			11.82 frac tank res, carbon tons	
			3589.3 tons	

Total Tons	**5662**

Table 2B - Landfilled Waste Tonnage By Area & Cell
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

			NON TSCA		TSCA	
Area	Cell	Date Excav.	**Actual Ton Non TSCA**		**Actual Ton TSCA**	
Area 1			152		0	
	1	5/15/,7/10/08	62.54			
	2	5/15&20&7/10/08	89.07			
Area 2			209		718	
	3	5/16,7/17/08	18.72		92.91	
	6	5/19-20/2008	0		167.13	
	7	5/20-21/2008	39.81		88.66	
	8	5/21-22/2008	40.89		127.86	
	5	5/22-23,28/08	0		128.27	
	4	7/14-15/08	51.45		43.14	
	9	7/14-15/08	58.33		70.19	
Area 3			2411		1585	
	10	5/23&28/2008	168.83		70.2	
	11	5/23&28/2008	146.52		70.94	
	12	5/23&27/2008	179.29		85.94	
	16	5/28-29/2008	96.71		93.16	
	15	5/29-30/08	193.6		113.67	
	14	5/30,6/2/08	200.29		91.76	
	20	5/30,6/2,4/08	129.5		223.54	
	19	6/2-3/2008	145.76		68.19	
	23	6/4/2008	0		157.45	
	18	6/2,3,4/08	133.9		122.78	
	22	6/4-7/2/08	157.22		110.55	
	26	6/4-7/8/08	233.41		113.84	
	25	7/1-7/8/08	187.86		66.48	
	24	7/3-7/10/08	143.61		63.79	
	17	7/7-7/11/08	189.70		89.82	
	13	7/14/2008	104.50		42.91	
Area 4			148		182	
	21	7/8-7/11/08	148.17		181.71	
Area 5			242		0	
	27	6/6-7/3/08	109.1			
	28	7/2&7/3/08	133.35			
			3162.13	**tons**	**2484.89**	**tons**
			2.99	debris tons		
			11.82	frac tank res, carbon tons		
			3176.94	**tons**		
			-8.82	**tons extra removed from NonTSCA landfill**	**8.82**	**tons extra hauled to TSCA landfill (Table 2)**
			3168.12		**2493.71**	

Blue cells affected by lab issue
Red cells affected by GPS issue

Total Tons	**5662**

Table 2C - Project Billed Tonnage By Area & Cell
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

			NON TSCA	TSCA
			Actual Ton	**Actual Ton**
Area	Cell	Date Excav.	**Non TSCA**	**TSCA**
Area 1			152	0
	1	5/15/,7/10/08	62.54	
	2	5/15&20&7/10/08	89.07	
Area 2			289	638
	3	5/16,7/17/08	18.72	92.91
	6	5/19-20/2008	56.63	110.5
	7	5/20-21/2008	39.81	88.66
	8	5/21-22/2008	40.89	127.86
	5	5/22-23,28/08	23.28	104.99
	4	7/14-15/08	51.45	43.14
	9	7/14-15/08	58.33	70.19
Area 3			2703	1293
	10	5/23&28/2008	168.83	70.2
	11	5/23&28/2008	146.52	70.94
	12	5/23&27/2008	179.29	85.94
	16	5/28-29/2008	96.71	93.16
	15	5/29-30/08	193.6	113.67
	14	5/30,6/2/08	200.29	91.76
	20	5/30,6/2,4/08	241.99	111.05
	19	6/2-3/2008	145.76	68.19
	23	6/4/2008	89.79	67.66
	18	6/2,3,4/08	183.94	72.74
	22	6/4-7/2/08	177.65	90.12
	26	6/4-7/8/08	253.07	94.18
	25	7/1-7/8/08	187.86	66.48
	24	7/3-7/10/08	143.61	63.79
	17	7/7-7/11/08	189.70	89.82
	13	7/14/2008	104.50	42.91
Area 4			148	182
	21	7/8-7/11/08	148.17	181.71
Area 5			242	0
	27	6/6-7/3/08	109.1	
	28	7/2&7/3/08	133.35	
			3534.45 tons	**2112.57 tons**
			2.99 debris tons	
			11.82 frac tank res, carbon tons	
			3549.3 tons	

Blue cells affected by lab issue

Total Tons	**5662**

Table 3 - Pre/Post Sample Coordinate Locations
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwuakee, Wisconsin

Sample Location	Pre-Exc		Post-Exc	
	Northing (feet)	Easting (feet)	Northing (feet)	Easting (feet)
Cell 1-1	965916	2259618	NA	NA
Cell 1-2	965906	2259627	NA	NA
Cell 1-3	965913	2259636	NA	NA
Cell 1-4	965923	2259633	NA	NA
Cell 2-1	965901	2259646	NA	NA
Cell 2-2	965905	2259652	965904	2259646
Cell 2-3	965920	2259656	965920	2259656
Cell 2-4	965919	2259649	NA	NA
Cell 3-1	965888	2259588	965887	2259585
Cell 3-2	965885	2259600	965884	2259598
Cell 3-3	965896	2259617	965897	2259614
Cell 3-4	965905	2259605	965904	2259601
Cell 4-1	965921	2259669	NA	NA
Cell 4-2	965905	2259670	NA	NA
Cell 4-3	965925	2259694	NA	NA
Cell 4-4	965911	2259686	NA	NA
Cell 5-1	965885	2259643	965885	2259644
Cell 5-2	965872	2259655	965872	2259655
Cell 5-3	965889	2259669	965890	2259669
Cell 5-4	965891	2259655	965892	2259654
Cell 6-1	965886	2259625	965885	2259625
Cell 6-2	965873	2259637	965876	2259638
Cell 6-3	965855	2259600	965855	2259601
Cell 6-4	965867	2259600	965870	2259598
Cell 7-1	965835	2259597	965834	2259595
Cell 7-2	965827	2259580	965826	2259578
Cell 7-3	965863	2259573	965861	2259572
Cell 7-4	965856	2259585	965859	2259585
Cell 8-1	965851	2259654	965853	2259652
Cell 8-2	965861	2259633	965860	2259633
Cell 8-3	965834	2259622	965835	2259620
Cell 8-4	965842	2259606	965841	2259606
Cell 9-1	965906	2259696	NA	NA
Cell 9-2	965875	2259692	NA	NA
Cell 9-3	965863	2259674	NA	NA
Cell 9-4	965885	2259675	NA	NA
Cell 10-1	965816	2259600	965816	2259600
Cell 10-2	965792	2259601	965793	2259601
Cell 10-3	965785	2259580	965784	2259580
Cell 10-4	965811	2259581	965811	2259581
Cell 11-1	965818	2259613	965817	2259614
Cell 11-2	965825	2259633	965826	2259635
Cell 11-3	965796	2259641	965798	2259642
Cell 11-4	965792	2259620	965795	2259620
Cell 12-1	965802	2259660	965800	2259659
Cell 12-2	965808	2259673	965807	2259671
Cell 12-3	965836	2259668	965835	2259664
Cell 12-4	965833	2259654	965832	2259654
Cell 13-1	965865	2259699	NA	NA
Cell 13-2	965838	2259697	NA	NA
Cell 13-3	965857	2259683	NA	NA
Cell 13-4	965834	2259680	NA	NA
Cell 14-1	965767	2259602	965767	2259604
Cell 14-2	965741	2259605	965742	2259605
Cell 14-3	965762	2259584	965760	2259583
Cell 14-4	965741	2259585	965740	2259585
Cell 15-1	965776	2259643	965778	2259643
Cell 15-2	965745	2259647	965748	2259647
Cell 15-3	965772	2259623	965772	2259624
Cell 15-4	965742	2259629	965742	2259629

Table 3 - Pre/Post Sample Coordinate Locations
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwuakee, Wisconsin

Sample Location	Pre-Exc		Post-Exc	
	Northing (feet)	Easting (feet)	Northing (feet)	Easting (feet)
Cell 16-1	965787	2259676	965786	2259676
Cell 16-2	965749	2259677	965749	2259675
Cell 16-3	965783	2259660	965782	2259659
Cell 16-4	965752	2259665	965750	2259665
Cell 17-1	965825	2259701	NA	NA
Cell 17-2	965781	2259702	NA	NA
Cell 17-3	965817	2259682	NA	NA
Cell 17-4	965787	2259687	NA	NA
Cell 18-1	965723	2259610	965724	2259609
Cell 18-2	965706	2259602	965705	2259603
Cell 18-3	965724	2259589	965726	2259589
Cell 18-4	965707	2259579	965708	2259578
Cell 19-1	965727	2259653	965727	2259651
Cell 19-2	965715	2259654	965713	2259654
Cell 19-3	965711	2259630	965710	2259630
Cell 19-4	965724	2259628	965725	2259628
Cell 20-1	965729	2259683	965726	2259680
Cell 20-2	965700	2259671	965701	2259670
Cell 20-3	965684	2259686	965685	2259686
Cell 20-4	965667	2259676	965665	2259674
Cell 21-1	965769	2259706	NA	NA
Cell 21-2	965728	2259710	NA	NA
Cell 21-3	965771	2259684	NA	NA
Cell 21-4	965742	2259693	NA	NA
Cell 22-1	965700	2259612	965703	2259613
Cell 22-2	965677	2259621	965685	2259617
Cell 22-3	965692	2259587	965690	2259585
Cell 22-4	965676	2259595	965673	2259600
Cell 23-1	965699	2259657	NA	NA
Cell 23-2	965686	2259657	NA	NA
Cell 23-3	965700	2259637	NA	NA
Cell 23-4	965685	2259633	NA	NA
Cell 24-1	965710	2259710	NA	NA
Cell 24-2	965675	2259708	NA	NA
Cell 24-3	965721	2259693	NA	NA
Cell 24-4	965667	2259695	NA	NA
Cell 25-1	965670	2259624	965670	2259627
Cell 25-2	965643	2259627	965639	2259633
Cell 25-3	965649	2259610	965658	2259605
Cell 25-4	965664	2259603	965660	2259607
Cell 26-1	965676	2259665	965681	2259664
Cell 26-2	965650	2259661	965650	2259660
Cell 26-3	965671	2259646	965671	2259644
Cell 26-4	965647	2259643	965653	2259643
Cell 27-1	965653	2259693	965653	2259690
Cell 27-2	965634	2259686	965637	2259684
Cell 27-3	965643	2259667	965646	2259665
Cell 27-4	965634	2259653	965640	2259655
Cell 28-1	965666	2259715	965666	2259715
Cell 28-2	965627	2259718	965628	2259719
Cell 28-3	965660	2259695	965661	2259705
Cell 28-4	965639	2259700	965641	2259700

Notes:
Horizontal Datum is WTM (83/97) ft.
NA = Not Available

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				Draft		Final	
Cell	**Sample ID ***	**Sample Date**	**Sample Type ****	**Total PCBs (ppm)**		**Total PCBs (ppm)**	
1	Pre-Exc Cell 1-1 (613.4)	04/24/08	Discrete	**0.49**		**0.63**	
	Pre-Exc Cell 1-1 (612.9)	04/24/08	Discrete	NR			
	Pre-Exc Cell 1-1 (612.4)	04/24/08	Discrete	NR			
	Pre-Exc Cell 1-2 (613.1)	04/24/08	Discrete	**0.59**		**0.58**	
	Pre-Exc Cell 1-2 (612.6)	04/24/08	Discrete	NR			
	Pre-Exc Cell 1-2 (612.1)	04/24/08	Discrete	NR			
	Pre-Exc Cell 1-3 (613)	04/24/08	Discrete	**22**		**28**	
	Pre-Exc Cell 1-3 (612.5)	04/24/08	Discrete	0.11	U	**0.47**	
	Pre-Exc Cell 1-3 (612)	04/24/08	Discrete	**0.45**		**0.42**	
	Pre-Exc Cell 1-4 (613.2)	04/24/08	Discrete	**0.11**		0.13	U
	Pre-Exc Cell 1-4 (612.7)	04/24/08	Discrete	NR			
	Pre-Exc Cell 1-4 (612.2)	04/24/08	Discrete	NR			
2	Pre-Exc Cell 2-1 (612.8)	04/24/08	Discrete	**15**		**6.8**	
	Pre-Exc Cell 2-1 (612.3)	04/24/08	Discrete	0.12	U	0.15	U
	Pre-Exc Cell 2-1 (611.8)	04/24/08	Discrete	0.10	U	0.39 (1)	U
	Pre-Exc Cell 2-2 (612.7)	04/24/08	Discrete	**11**		**8.3**	
	Pre-Exc Cell 2-2 (612.2)	04/24/08	Discrete	0.11	U	0.14	U
	Pre-Exc Cell 2-2 (611.7)	04/24/08	Discrete	0.097	U	0.12	U
	Pre-Exc Cell 2-3 (612.7)	04/24/08	Discrete	**5.1**		**5.1**	
	Pre-Exc Cell 2-3 (612.2)	04/24/08	Discrete	0.11	U	0.13	U
	Pre-Exc Cell 2-3 (611.7)	04/24/08	Discrete	0.092	U	0.11	U
	Pre-Exc Cell 2-4 (612.9)	04/24/08	Discrete	0.095	U	0.12	U
	Pre-Exc Cell 2-4 (612.4)	04/24/08	Discrete	NR			
	Pre-Exc Cell 2-4 (611.9)	04/24/08	Discrete	NR			
3	Pre-Exc Cell 3-1 (613.6)	04/24/08	Discrete	**0.76**		**1.0**	
	Pre-Exc Cell 3-1 (613.1)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-1 (612.6)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-2 (613.4)	04/24/08	Discrete	**1.7**		**2.3**	
	Pre-Exc Cell 3-2 (612.9)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-2 (612.4)	04/24/08	Discrete	**1.2**		**1.5**	
	Pre-Exc Cell 3-3 (613.2)	04/24/08	Discrete	**0.55**		**0.79**	
	Pre-Exc Cell 3-3 (612.7)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-3 (612.2)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-4 (613.5)	04/24/08	Discrete	**0.94**		**0.84**	
	Pre-Exc Cell 3-4 (613)	04/24/08	Discrete	NR			
	Pre-Exc Cell 3-4 (612.5)	04/24/08	Discrete	NR			
4	Pre-Exc Cell 4-1 (612.4)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 4-1 (611.9)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 4-1 (611.4)	7/2/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 4-2 (612.2)	7/2/2008	Discrete	0.15	U	0.47 (1)	U
	Pre-Exc Cell 4-2 (611.7)	7/2/2008	Discrete	0.14	U	1.4 (1)	U
	Pre-Exc Cell 4-2 (611.2)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 4-3 (612)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 4-3 (611.5)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 4-4 (611.9)	7/2/2008	Discrete	0.14	U	0.44 (1)	U
	Pre-Exc Cell 4-4 (611.4)	7/2/2008	Discrete	0.12	U	0.25 (1)	U

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Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
5	Pre-Exc Cell 5-1 (612.8)	5/19/2008	Discrete	**28**		**72**	
	Pre-Exc Cell 5-1 (612.3)	5/19/2008	Discrete	0.15	U	0.16	U
	Pre-Exc Cell 5-1 (611.8)	5/19/2008	Discrete	0.15	U	**0.31**	
	Pre-Exc Cell 5-2 (612.2)	5/19/2008	Discrete	**6.7**		**20**	
	Pre-Exc Cell 5-2 (611.7)	5/19/2008	Discrete	**0.23**		**0.21**	
	Pre-Exc Cell 5-2 (611.2)	5/19/2008	Discrete	0.16	U	0.52 (1)	U
	Pre-Exc Cell 5-3 (612)	5/19/2008	Discrete	**3.5**		**9.3**	
	Pre-Exc Cell 5-3 (611.5)	5/19/2008	Discrete	**0.83**		**0.92**	
	Pre-Exc Cell 5-3 (611)	5/19/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 5-4 (612.7)	5/19/2008	Discrete	**39**		**120**	
	Pre-Exc Cell 5-4 (612.2)	5/19/2008	Discrete	**0.46**		**0.65**	
	Pre-Exc Cell 5-4 (611.7)	5/19/2008	Discrete	**1.3**		**1.1**	
6	Pre-Exc Cell 6-1 (613.0)	5/14/2008	Discrete	**27**		**34**	
	Pre-Exc Cell 6-1 (612.5)	5/14/2008	Discrete	**0.39**		**0.39**	
	Pre-Exc Cell 6-1 (612.0)	5/14/2008	Discrete	NR			
	Pre-Exc Cell 6-2 (612.6)	5/14/2008	Discrete	**46**		**140**	
	Pre-Exc Cell 6-2 (612.1)	5/14/2008	Discrete	**1.5**		**1.5**	
	Pre-Exc Cell 6-2 (611.6)	5/14/2008	Discrete	0.097	U	0.17	U
	Pre-Exc Cell 6-3 (612.6)	5/14/2008	Discrete	**5.5**		**6.7**	
	Pre-Exc Cell 6-3 (612.1)	5/14/2008	Discrete	**0.32**		**0.55**	
	Pre-Exc Cell 6-3 (611.6)	5/14/2008	Discrete	NR			
	Pre-Exc Cell 6-4 (613.0)	5/14/2008	Discrete	**3.0**		**3.7**	
	Pre-Exc Cell 6-4 (612.5)	5/14/2008	Discrete	0.073	U	0.11	U
	Pre-Exc Cell 6-4 (612.0)	5/14/2008	Discrete	NR			
7	Pre-Exc Cell 7-1 (612.5)	5/16/2008	Discrete	0.097	U	0.36 (1)	U
	Pre-Exc Cell 7-1 (612)	5/16/2008	Discrete	0.095	U	0.12	U
	Pre-Exc Cell 7-1 (611.5)	5/16/2008	Discrete	0.096	U	0.12	U
	Pre-Exc Cell 7-2 (612.5)	5/16/2008	Discrete	0.097	U	0.12	U
	Pre-Exc Cell 7-2 (612)	5/16/2008	Discrete	0.10	U	0.13	U
	Pre-Exc Cell 7-2 (611.5)	5/16/2008	Discrete	0.096	U	0.12	U
	Pre-Exc Cell 7-3 (613.1)	5/16/2008	Discrete	0.091	U	0.11	U
	Pre-Exc Cell 7-3 (612.6)	5/16/2008	Discrete	0.091	U	0.11	U
	Pre-Exc Cell 7-3 (612.1)	5/16/2008	Discrete	0.091	U	0.11	U
	Pre-Exc Cell 7-4 (612.9)	5/16/2008	Discrete	0.093	U	0.12	U
	Pre-Exc Cell 7-4 (612.4)	5/16/2008	Discrete	0.092	U	0.12	U
	Pre-Exc Cell 7-4 (611.9)	5/16/2008	Discrete	0.095	U	0.12	U
8	Pre-Exc Cell 8-1 (611.7)	5/16/2008	Discrete	**0.42**		**0.73**	
	Pre-Exc Cell 8-1 (611.2)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-1 (610.7)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-2 (612.3)	5/16/2008	Discrete	**0.37**		**0.52**	
	Pre-Exc Cell 8-2 (611.8)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-2 (611.3)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-3 (611.9)	5/16/2008	Discrete	**1.1**		**1.7**	
	Pre-Exc Cell 8-3 (611.4)	5/16/2008	Discrete	**0.89**		**0.97**	
	Pre-Exc Cell 8-3 (610.9)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-4 (612.4)	5/16/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 8-4 (611.9)	5/16/2008	Discrete	NR			
	Pre-Exc Cell 8-4 (611.4)	5/16/2008	Discrete	NR			

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Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
9	Pre-Exc Cell 9-1 (611.6)	7/2/2008	Discrete	0.14	U	0.51 (1)	U
	Pre-Exc Cell 9-1 (611.1)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-1 (610.6)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-2 (611.3)	7/2/2008	Discrete	0.16	U	**0.20**	
	Pre-Exc Cell 9-2 (610.8)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-2 (610.3)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-3 (611.5)	7/2/2008	Discrete	0.16	U	1.3 (1)	U
	Pre-Exc Cell 9-3 (611)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-3 (610.5)	7/2/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 9-4 (611.8)	7/2/2008	Discrete	0.16	U	**0.40**	
	Pre-Exc Cell 9-4 (611.3)	7/2/2008	Discrete	0.14	U	0.15	U
10	Pre-Exc Cell 10-1 (612.4)	5/22/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 10-1 (611.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-1 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-2 (612.4)	5/22/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 10-2 (611.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-2 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-3 (612.4)	5/22/2008	Discrete	0.11	U	0.12	U
	Pre-Exc Cell 10-3 (611.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-3 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-4 (612.5)	5/22/2008	Discrete	0.11	U	0.12	U
	Pre-Exc Cell 10-4 (612)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 10-4 (611.5)	5/22/2008	Discrete	NR			
11	Pre-Exc Cell 11-1 (612.3)	5/20/2008	Discrete	**0.89**		**1.4**	
	Pre-Exc Cell 11-1 (611.8)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-1 (611.3)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-2 (611.7)	5/20/2008	Discrete	**0.71**		**1.1**	
	Pre-Exc Cell 11-2 (611.2)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-2 (610.7)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-3 (612.1)	5/20/2008	Discrete	**0.76**		**1.3**	
	Pre-Exc Cell 11-3 (611.6)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-3 (611.1)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 11-4 (612.3)	5/20/2008	Discrete	**1.9**		**2.7**	
	Pre-Exc Cell 11-4 (611.8)	5/20/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 11-4 (611.3)	5/20/2008	Discrete	NR			
12	Pre-Exc Cell 12-1 (611.4)	5/20/2008	Discrete	**0.26**		**0.54**	
	Pre-Exc Cell 12-1 (610.9)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 12-2 (611)	5/20/2008	Discrete	**2.3**		**6.1**	
	Pre-Exc Cell 12-2 (610.5)	5/20/2008	Discrete	**0.35**		**1.4**	
	Pre-Exc Cell 12-3 (611.1)	5/20/2008	Discrete	0.12	U	0.13	U
	Pre-Exc Cell 12-3 (610.6)	5/20/2008	Discrete	NR			
	Pre-Exc Cell 12-4 (611.2)	5/20/2008	Discrete	0.13	U	0.14	U
	Pre-Exc Cell 12-4 (610.7)	5/20/2008	Discrete	NR			

Table 4 - Pre-Excavation Sediment Analytical Results
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Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
13	Pre-Exc Cell 13-1 (611.1)	7/1/2008	Discrete	**1.5** [(4)]		**1.3**	
	Pre-Exc Cell 13-1 (610.6)	7/1/2008	Discrete	0.12	U	**0.12**	
	Pre-Exc Cell 13-2 (611)	7/1/2008	Discrete	0.15	U	0.27 [(1)]	
	Pre-Exc Cell 13-2 (610.5)	7/1/2008	Discrete	0.11	U	0.12	U
	Pre-Exc Cell 13-2 (610)	7/1/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 13-3 (611.4)	7/1/2008	Discrete	0.16	U	0.85 [(1)]	U
	Pre-Exc Cell 13-3 (610.9)	7/1/2008	Discrete	0.16	U	0.86 [(1)]	U
	Pre-Exc Cell 13-3 (610.4)	7/1/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 13-4 (611)	7/1/2008	Discrete	0.16	U	0.49 [(1)]	U
	Pre-Exc Cell 13-4 (610.5)	7/1/2008	Discrete	0.12	U	0.12	U
14	Pre-Exc Cell 14-1 (612.4)	5/22/2008	Discrete	**0.14**		**0.84**	
	Pre-Exc Cell 14-1 (611.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 14-1 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 14-2 (612.5)	5/22/2008	Discrete	**4.0**		**5.4**	
	Pre-Exc Cell 14-2 (612)	5/22/2008	Discrete	**0.28**		**0.68**	
	Pre-Exc Cell 14-2 (611.5)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 14-3 (612.4)	5/22/2008	Discrete	0.12	U	0.13	U
	Pre-Exc Cell 14-3 (611.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 14-3 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 14-4 (612.5)	5/22/2008	Discrete	**3.1**		**4.2**	
	Pre-Exc Cell 14-4 (612)	5/22/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 14-4 (611.5)	5/22/2008	Discrete	NR			
15	Pre-Exc Cell 15-1 (611.9)	5/22/2008	Discrete	**0.17**		**0.30**	
	Pre-Exc Cell 15-1 (611.4)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 15-1 (610.9)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 15-2 (612)	5/22/2008	Discrete	**0.29**		**0.58**	
	Pre-Exc Cell 15-2 (611.5)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 15-2 (611)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 15-3 (612.1)	5/22/2008	Discrete	**1.1**		**2.3**	
	Pre-Exc Cell 15-3 (611.6)	5/22/2008	Discrete	**0.49**		**0.82**	
	Pre-Exc Cell 15-3 (611.1)	5/22/2008	Discrete	NR			
	Pre-Exc Cell 15-4 (612.3)	5/22/2008	Discrete	**2.3**		**4.2**	
	Pre-Exc Cell 15-4 (611.8)	5/22/2008	Discrete	0.14	U	0.15	U
	Pre-Exc Cell 15-4 (611.3)	5/22/2008	Discrete	NR			
16	Pre-Exc Cell 16-1 (611.1)	5/23/2008	Discrete	**0.32**		**0.63**	
	Pre-Exc Cell 16-1 (610.6)	5/23/2008	Discrete	NR			
	Pre-Exc Cell 16-2 (611.4)	5/23/2008	Discrete	**0.20**		**0.37**	
	Pre-Exc Cell 16-2 (610.9)	5/23/2008	Discrete	NR			
	Pre-Exc Cell 16-3 (611.8)	5/23/2008	Discrete	**0.47**		**0.85**	
	Pre-Exc Cell 16-3 (611.3)	5/23/2008	Discrete	NR			
	Pre-Exc Cell 16-4 (611.6)	5/23/2008	Discrete	**0.22**		**0.50**	
	Pre-Exc Cell 16-4 (611.1)	5/23/2008	Discrete	NR			

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Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
17	Pre-Exc Cell 17-1 (611.0)	6/30/2008	Discrete	0.14	U	0.15	U
	Pre-Exc Cell 17-1 (610.5)	6/30/2008	Discrete	**0.55** (4)		**0.56**	
	Pre-Exc Cell 17-1 (610)	6/30/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 17-2 (611.1)	6/30/2008	Discrete	**1.1** (4)		**1.5**	
	Pre-Exc Cell 17-2 (610.6)	6/30/2008	Discrete	0.17	U	0.18	U
	Pre-Exc Cell 17-2 (610.1)	6/30/2008	Discrete	0.16	U	**0.39**	
	Pre-Exc Cell 17-3 (611)	6/30/2008	Discrete	**0.21** (4)		**0.75**	
	Pre-Exc Cell 17-3 (610.5)	6/30/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 17-4 (611.1)	6/30/2008	Discrete	0.16	U	**0.84**	
	Pre-Exc Cell 17-4 (610.6)	6/30/2008	Discrete	0.12	U	0.12	U
18	Pre-Exc Cell 18-1 (612.4)	5/28/2008	Discrete	**3.1**		**6.5**	
	Pre-Exc Cell 18-1 (611.9)	5/28/2008	Discrete	**0.35**		**0.53**	
	Pre-Exc Cell 18-1 (611.4)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 18-2 (612.5)	5/28/2008	Discrete	**1.5**		**2.6**	
	Pre-Exc Cell 18-2 (612.0)	5/28/2008	Discrete	**0.45**		**0.68**	
	Pre-Exc Cell 18-2 (611.5)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 18-3 (612.5)	5/28/2008	Discrete	**0.25**		**0.59**	
	Pre-Exc Cell 18-3 (612.0)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 18-3 (611.5)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 18-4 (612.5)	5/28/2008	Discrete	**8.6**		**11**	
	Pre-Exc Cell 18-4 (612)	5/28/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 18-4 (611.5)	5/28/2008	Discrete	NR			
19	Pre-Exc Cell 19-1 (612.1)	5/28/2008	Discrete	**0.36**		**0.60**	
	Pre-Exc Cell 19-1 (611.6)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 19-1 (611.1)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 19-2 (612.1)	5/28/2008	Discrete	**1.4**		**2.6**	
	Pre-Exc Cell 19-2 (611.6)	5/28/2008	Discrete	**0.17**		**0.29**	
	Pre-Exc Cell 19-2 (611.1)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 19-3 (612.3)	5/28/2008	Discrete	**1.5**		**2.7**	
	Pre-Exc Cell 19-3 (611.8)	5/28/2008	Discrete	**0.17**		**0.29**	
	Pre-Exc Cell 19-3 (611.3)	5/28/2008	Discrete	NR			
	Pre-Exc Cell 19-4 (612.3)	5/28/2008	Discrete	**1.8**		**3.5**	
	Pre-Exc Cell 19-4 (611.8)	5/28/2008	Discrete	**0.16**		**0.17**	
	Pre-Exc Cell 19-4 (611.3)	5/28/2008	Discrete	NR			
20	Pre-Exc Cell 20-1 (611.6)	5/29/2008	Discrete	**0.27**		**0.31**	
	Pre-Exc Cell 20-1 (611.1)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-1 (610.6)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-2 (611.9)	5/29/2008	Discrete	**0.65**		**1.2**	
	Pre-Exc Cell 20-2 (611.4)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-2 (610.9)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-3 (611.5)	5/29/2008	Discrete	**0.42**		**0.57**	
	Pre-Exc Cell 20-3 (611)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-3 (610.5)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-4 (611.8)	5/29/2008	Discrete	**0.35**		**0.55**	
	Pre-Exc Cell 20-4 (611.3)	5/29/2008	Discrete	NR			
	Pre-Exc Cell 20-4 (610.8)	5/29/2008	Discrete	NR			

Table 4 - Pre-Excavation Sediment Analytical Results
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Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
21	Pre-Exc Cell 21-1 (609.3)	6/30/2008	Discrete	0.15	U	0.16	U
	Pre-Exc Cell 21-1 (608.8)	6/30/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 21-2 (609.5)	6/30/2008	Discrete	**0.93** (4)		0.88 (1)	U
	Pre-Exc Cell 21-2 (609)	6/30/2008	Discrete	**0.99** (4)		**3.1**	
	Pre-Exc Cell 21-3 (610.5)	6/30/2008	Discrete	**0.63** (4)		0.75 (1)	U
	Pre-Exc Cell 21-3 (610)	6/30/2008	Discrete	0.11	U	0.11	U
	Pre-Exc Cell 21-4 (610.6)	6/30/2008	Discrete	**1.2** (4)		**1.3**	
22	Pre-Exc Cell 22-1 (612.5)	6/2/2008	Discrete	**3.3**		**3.3**	
	Pre-Exc Cell 22-1 (612)	6/2/2008	Discrete	**0.23**		**0.15**	
	Pre-Exc Cell 22-1 (611.5)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 22-2 (612.5)	6/2/2008	Discrete	**1.9**		**1.6**	
	Pre-Exc Cell 22-2 (612)	6/2/2008	Discrete	**0.17**		0.16	U
	Pre-Exc Cell 22-2 (611.5)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 22-3 (612.6)	6/2/2008	Discrete	**9.5**		**14**	
	Pre-Exc Cell 22-3 (612.1)	6/2/2008	Discrete	**71**		**97**	
	Pre-Exc Cell 22-3 (611.6)	6/2/2008	Discrete	**0.13**		**0.14**	
	Pre-Exc Cell 22-4 (612.6)	6/2/2008	Discrete	0.11	U	0.11	U
	Pre-Exc Cell 22-4 (612.1)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 22-4 (611.6)	6/2/2008	Discrete	NR			
23	Pre-Exc Cell 23-1 (612.1)	6/2/2008	Discrete	**0.77**		**0.93**	
	Pre-Exc Cell 23-1 (611.6)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 23-1 (611.1)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 23-2 (612.2)	6/2/2008	Discrete	**3.4**		**4.0**	
	Pre-Exc Cell 23-2 (611.7)	6/2/2008	Discrete	**0.27**		**0.29**	
	Pre-Exc Cell 23-2 (611.2)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 23-3 (612.3)	6/2/2008	Discrete	**0.91**		**1.3**	
	Pre-Exc Cell 23-3 (611.8)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 23-3 (611.3)	6/2/2008	Discrete	NR			
	Pre-Exc Cell 23-4 (612.4)	6/2/2008	Discrete	**1.6**		**2.1**	
	Pre-Exc Cell 23-4 (611.9)	6/2/2008	Discrete	0.14	U	0.15	U
	Pre-Exc Cell 23-4 (611.4)	6/2/2008	Discrete	NR			
24	Pre-Exc Cell 24-1 (611.2)	6/30/2008	Discrete	0.15	U	0.15	U
	Pre-Exc Cell 24-1 (610.7)	6/30/2008	Discrete	0.15	U	**0.26**	
	Pre-Exc Cell 24-1 (610.2)	6/30/2008	Discrete	**0.35** (4)		**0.57**	
	Pre-Exc Cell 24-2 (611.5)	6/30/2008	Discrete	**0.95** (4)		**0.98**	
	Pre-Exc Cell 24-2 (611.0)	6/30/2008	Discrete	0.15	U	**0.23**	
	Pre-Exc Cell 24-2 (610.5)	6/30/2008	Discrete	**0.44** (4)		**0.47**	
	Pre-Exc Cell 24-3 (611.4)	6/30/2008	Discrete	**0.17** (4)		0.16	U
	Pre-Exc Cell 24-3 (610.9)	6/30/2008	Discrete	**0.19** (4)		**0.38**	
	Pre-Exc Cell 24-3 (610.4)	6/30/2008	Discrete	0.16	U	0.83 (1)	U
	Pre-Exc Cell 24-4 (612.1)	6/30/2008	Discrete	**1.2** (4)		**1.3**	
	Pre-Exc Cell 24-4 (611.6)	6/30/2008	Discrete	**0.19** (4)		**0.19**	
	Pre-Exc Cell 24-4 (611.1)	6/30/2008	Discrete	0.16	U	**0.17**	

Table 4 - Pre-Excavation Sediment Analytical Results
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Milwaukee, Wisconsin

Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)		Final Total PCBs (ppm)	
25	Pre-Exc Cell 25-1 (612.5)	6/4/2008	Discrete	0.15	U	0.15	U
	Pre-Exc Cell 25-1 (612.0)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 25-2 (612.5)	6/4/2008	Discrete	0.11	U	0.11	U
	Pre-Exc Cell 25-2 (612.0)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 25-3 (612.5)	6/4/2008	Discrete	0.11	U	0.11	U
	Pre-Exc Cell 25-3 (612.0)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 25-4 (612.5)	6/4/2008	Discrete	0.11	U	0.11	U
	Pre-Exc Cell 25-4 (612.0)	6/4/2008	Discrete	NR			
26	Pre-Exc Cell 26-1 (612.0)	6/4/2008	Discrete	**2.1**		**2.2**	
	Pre-Exc Cell 26-1 (611.5)	6/4/2008	Discrete	**1.2**		**1.2**	
	Pre-Exc Cell 26-2 (612.2)	6/4/2008	Discrete	0.13	U	0.14	U
	Pre-Exc Cell 26-2 (611.7)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 26-3 (612.3)	6/4/2008	Discrete	0.14	U	0.15	U
	Pre-Exc Cell 26-3 (611.8)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 26-4 (612.3)	6/4/2008	Discrete	0.12	U	0.12	U
27	Pre-Exc Cell 27-1 (612.4)	6/4/2008	Discrete	**9.9**		**10**	
	Pre-Exc Cell 27-1 (611.9)	6/4/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 27-2 (612.8)	6/4/2008	Discrete	0.14	U	0.15	U
	Pre-Exc Cell 27-2 (612.3)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 27-3 (612.4)	6/4/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 27-3 (611.9)	6/4/2008	Discrete	NR			
	Pre-Exc Cell 27-4 (612.6)	6/4/2008	Discrete	**0.81**		**0.84**	
28	Pre-Exc Cell 28-1 (612)	6/6/2008	Discrete	**0.63**		**1.1**	
	Pre-Exc Cell 28-1 (611.5)	6/6/2008	Discrete	NR			
	Pre-Exc Cell 28-1 (611)	6/6/2008	Discrete	NR			
	Pre-Exc Cell 28-2 (612.8)	6/6/2008	Discrete	0.13	U	0.13	U
	Pre-Exc Cell 28-2 (612.3)	6/6/2008	Discrete	NR			
	Pre-Exc Cell 28-3 (612.3)	6/6/2008	Discrete	**1.8**		**2.6**	
	Pre-Exc Cell 28-3 (611.8)	6/6/2008	Discrete	**2.8**		**3.6**	
	Pre-Exc Cell 28-3 (611.3)	6/6/2008	Discrete	**0.96**		**1.5**	
	Pre-Exc Cell 28-4 (612.8)	6/6/2008	Discrete	0.12	U	0.12	U
	Pre-Exc Cell 28-4 (612.3)	6/6/2008	Discrete	NR			
Southwest Corner (Filled Area)	SW 619-616 Comp	6/4/2008	Comp	**0.44**		**0.44**	
	SW 615.0	6/4/2008	Discrete	**10**		**11**	
	SW 614.0	6/4/2008	Discrete	0.13	U	0.13	U
	SW 613.0	6/4/2008	Discrete	0.11	U	0.12	U
	SW 619-617 Comp	6/30/2008	Comp	**1.4** (4)		**1.7**	

Table Notes:
* Sample ID includes Cell #, Quadrant # and top elevation of the 6-inch sample.
** Discrete = Sample collected using core tube representing 6-inch interval.
Comp = Composite sample

Lab Notes & Qualifiers:
All samples analyzed by ECCS On-site laboratory by Test Method Reference LAM-005 8082 PCBs.
U = Nondetect

NR = Not requested

(1) = Reporting limit elevated due to interference.

(4) = Individual Aroclors draft reported on a wet weight basis. Total Aroclors reported on dry weight basis.

Table 5 - Post-Remedial Verification Analytical Results
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

				Draft		Final	
Cell	**Sample ID ***	**Sample Date**	**Sample Type ****	**Total PCBs (ppm)**		**Total PCBs (ppm)**	
1	PRV Cell 1	5/15/2008	Comp	0.083	U	0.13	U
	PRV Cell 1-1	5/15/2008	Discrete	NR			
	PRV Cell 1-2	5/15/2008	Discrete	NR			
	PRV Cell 1-3	5/15/2008	Discrete	NR			
	PRV Cell 1-4	5/15/2008	Discrete	NR			
2	PRV Cell 2A	5/15/2008	Comp	0.081	U	0.13	U
	PRV Cell 2-1	5/15/2008	Discrete	NR			
	PRV Cell 2-4	5/15/2008	Discrete	NR			
	PRV Cell 2B	5/20/2008	Comp	0.14	U	0.15	U
	PRV Cell 2-2	5/20/2008	Discrete	NR			
	PRV Cell 2-3	5/20/2008	Discrete	NR			
3	PRV Cell 3	5/16/2008	Comp	0.10	U	0.13	U
	PRV Cell 3-1	5/16/2008	Discrete	NR			
	PRV Cell 3-2	5/16/2008	Discrete	0.11	U	0.13	U
	PRV Cell 3-3	5/16/2008	Discrete	NR			
	PRV Cell 3-4	5/16/2008	Discrete	NR			
4	PRV Cell 4	7/14/2008	Comp	0.15	U	0.15	U
	PRV Cell 4-1	7/14/2008	Discrete	NR			
	PRV Cell 4-2	7/14/2008	Discrete	NR			
	PRV Cell 4-3	7/14/2008	Discrete	NR			
	PRV Cell 4-4	7/14/2008	Discrete	NR			
5	PRV Cell 5	5/22/2008	Comp	0.13	U	0.28 (1)	U
	PRV Cell 5-1	5/22/2008	Discrete	NR			
	PRV Cell 5-2	5/22/2008	Discrete	NR			
	PRV Cell 5-3	5/22/2008	Discrete	NR			
	PRV Cell 5-4	5/22/2008	Discrete	NR			
6	PRV Cell 6	5/19/2008	Comp	0.12	U	0.12	U
	PRV Cell 6-1	5/19/2008	Discrete	NR			
	PRV Cell 6-2	5/19/2008	Discrete	NR			
	PRV Cell 6-3	5/19/2008	Discrete	NR			
	PRV Cell 6-4	5/19/2008	Discrete	NR			
7	PRV Cell 7	5/21/2008	Comp	0.11	U	0.11	U
	PRV Cell 7-1	5/21/2008	Discrete	NR			
	PRV Cell 7-2	5/21/2008	Discrete	NR			
	PRV Cell 7-3	5/21/2008	Discrete	NR			
	PRV Cell 7-4	5/21/2008	Discrete	NR			
8	PRV Cell 8	5/22/2008	Comp	**0.14**		0.14	U
	PRV Cell 8-1	5/22/2008	Discrete	NR			
	PRV Cell 8-2	5/22/2008	Discrete	NR			
	PRV Cell 8-3	5/22/2008	Discrete	NR			
	PRV Cell 8-4	5/22/2008	Discrete	NR			
9	PRV Cell 9	7/14/2008	Comp	**0.16 (4)**		**0.36**	
	PRV Cell 9-1	7/14/2008	Discrete	NR			
	PRV Cell 9-2	7/14/2008	Discrete	NR			
	PRV Cell 9-3	7/14/2008	Discrete	NR			
	PRV Cell 9-4	7/14/2008	Discrete	NR			
10	PRV Cell 10	5/29/2008	Comp	0.11	U	0.11	U
	PRV Cell 10-1	5/29/2008	Discrete	NR			
	PRV Cell 10-2	5/29/2008	Discrete	NR			
	PRV Cell 10-3	5/29/2008	Discrete	NR			
	PRV Cell 10-4	5/29/2008	Discrete	NR			

Table 5 - Post-Remedial Verification Analytical Results
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Milwaukee, Wisconsin

Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)	Final Total PCBs (ppm)
11	PRV Cell 11	5/28/2008	Comp	**0.58**	**0.51**
	PRV Cell 11-1	5/28/2008	Discrete	NR	
	PRV Cell 11-2	5/28/2008	Discrete	NR	
	PRV Cell 11-3	5/28/2008	Discrete	NR	
	PRV Cell 11-4	5/28/2008	Discrete	NR	
12	PRV Cell 12	5/27/2008	Comp	0.13 U	0.52 (1) U
	PRV Cell 12-1	5/27/2008	Discrete	NR	
	PRV Cell 12-2	5/27/2008	Discrete	NR	
	PRV Cell 12-3	5/27/2008	Discrete	NR	
	PRV Cell 12-4	5/27/2008	Discrete	NR	
13	PRV Cell 13	7/14/2008	Comp	**0.27 (4)**	**0.35**
	PRV Cell 13-1	7/14/2008	Discrete	NR	
	PRV Cell 13-2	7/14/2008	Discrete	NR	
	PRV Cell 13-3	7/14/2008	Discrete	NR	
	PRV Cell 13-4	7/14/2008	Discrete	NR	
14	PRV Cell 14	6/2/2008	Comp	**0.15**	**0.39**
	PRV Cell 14-1	6/2/2008	Discrete	NR	
	PRV Cell 14-2	6/2/2008	Discrete	NR	
	PRV Cell 14-3	6/2/2008	Discrete	NR	
	PRV Cell 14-4	6/2/2008	Discrete	NR	
15	PRV Cell 15	5/30/2008	Comp	**0.51**	**0.83**
	PRV Cell 15-1	5/30/2008	Discrete	NR	
	PRV Cell 15-2	5/30/2008	Discrete	NR	
	PRV Cell 15-3	5/30/2008	Discrete	NR	
	PRV Cell 15-4	5/30/2008	Discrete	NR	
16	PRV Cell 16	5/29/2008	Comp	**0.48**	0.45 (1) U
	PRV Cell 16-1	5/29/2008	Discrete	NR	
	PRV Cell 16-2	5/29/2008	Discrete	NR	
	PRV Cell 16-3	5/29/2008	Discrete	NR	
	PRV Cell 16-4	5/29/2008	Discrete	NR	
17	PRV Cell 17	7/10/2008	Comp	0.14 U	0.14 U
	PRV Cell 17-1	7/10/2008	Discrete	NR	
	PRV Cell 17-2	7/10/2008	Discrete	NR	
	PRV Cell 17-3	7/10/2008	Discrete	NR	
	PRV Cell 17-4	7/10/2008	Discrete	NR	
18	PRV Cell 18	6/4/2008	Comp	**3.8**	**3.1**
	PRV Cell 18-1	6/4/2008	Discrete	**7.9**	**8.3**
	PRV Cell 18-2	6/4/2008	Discrete	**15**	**15**
	PRV Cell 18-3	6/4/2008	Discrete	**5.1**	**5.9**
	PRV Cell 18-4	6/4/2008	Discrete	**0.11**	**0.13**
	PRV Cell 18B	6/9/2008	Comp	0.11 U	0.12 U
	PRV Cell 18-1B	6/7/2008	Discrete	NR	
	PRV Cell 18-2B	6/7/2008	Discrete	NR	
	PRV Cell 18-3B	6/7/2008	Discrete	NR	
19	PRV Cell 19	6/3/2008	Comp	**0.23**	**0.41**
	PRV Cell 19-1	6/3/2008	Discrete	NR	
	PRV Cell 19-2	6/3/2008	Discrete	NR	
	PRV Cell 19-3	6/3/2008	Discrete	NR	
	PRV Cell 19-4	6/3/2008	Discrete	NR	

Table 5 - Post-Remedial Verification Analytical Results
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

Cell	Sample ID *	Sample Date	Sample Type **	Draft Total PCBs (ppm)	Final Total PCBs (ppm)
20	PRV Cell 20A	6/3/2008	Comp	**0.78**	**1.0**
	PRV Cell 20-1	6/3/2008	Discrete	NR	
	PRV Cell 20-2	6/3/2008	Discrete	NR	
	PRV Cell 20B	6/4/2008	Comp	**0.19**	**0.33**
	PRV Cell 20-3	6/4/2008	Discrete	NR	
	PRV Cell 20-4	6/4/2008	Discrete	NR	
21	PRV Cell 21	7/10/2008	Comp	0.12 U	0.12 U
	PRV Cell 21-1	7/10/2008	Discrete	NR	
	PRV Cell 21-2	7/10/2008	Discrete	NR	
	PRV Cell 21-3	7/10/2008	Discrete	NR	
	PRV Cell 21-4	7/10/2008	Discrete	NR	
22	PRV Cell 22	7/2/2008	Comp	0.13 U	0.13 U
	PRV Cell 22-1	7/2/2008	Discrete	NR	
	PRV Cell 22-2	7/2/2008	Discrete	NR	
	PRV Cell 22-3	7/2/2008	Discrete	NR	
	PRV Cell 22-4	7/2/2008	Discrete	NR	
23	PRV Cell 23	6/7/2008	Comp	0.12 U	0.59 (1) U
	PRV Cell 23-1	6/7/2008	Discrete	NR	
	PRV Cell 23-2	6/7/2008	Discrete	NR	
	PRV Cell 23-3	6/7/2008	Discrete	NR	
	PRV Cell 23-4	6/7/2008	Discrete	NR	
24	PRV Cell 24	7/9/2008	Comp	**0.16 (4)**	**0.34**
	PRV Cell 24-1	7/9/2008	Discrete	NR	
	PRV Cell 24-2	7/9/2008	Discrete	NR	
	PRV Cell 24-3	7/9/2008	Discrete	NR	
	PRV Cell 24-4	7/9/2008	Discrete	NR	
25	PRV Cell 25	7/8/2008	Comp	0.12 U	0.12 U
	PRV Cell 25-1	7/8/2008	Discrete	NR	
	PRV Cell 25-2	7/8/2008	Discrete	NR	
	PRV Cell 25-3	7/8/2008	Discrete	NR	
	PRV Cell 25-4	7/8/2008	Discrete	NR	
26	PRV Cell 26	7/8/2008	Comp	0.13 U	0.14 U
	PRV Cell 26-1	7/8/2008	Discrete	NR	
	PRV Cell 26-2	7/8/2008	Discrete	NR	
	PRV Cell 26-3	7/8/2008	Discrete	NR	
	PRV Cell 26-4	7/8/2008	Discrete	NR	
27	PRV Cell 27	7/3/2008	Comp	**0.31 (4)**	**0.64**
	PRV Cell 27-1	7/3/2008	Discrete	NR	
	PRV Cell 27-2	7/3/2008	Discrete	NR	
	PRV Cell 27-3	7/3/2008	Discrete	NR	
	PRV Cell 27-4	7/3/2008	Discrete	NR	
28	PRV Cell 28	7/3/2008	Comp	**0.23 (4)**	**0.46**
	PRV Cell 28-1	7/3/2008	Discrete	NR	
	PRV Cell 28-2	7/3/2008	Discrete	NR	
	PRV Cell 28-3	7/3/2008	Discrete	NR	
	PRV Cell 28-4	7/3/2008	Discrete	NR	

Table 5 - Post-Remedial Verification Analytical Results
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				Draft	Final
Cell	**Sample ID ***	**Sample Date**	**Sample Type ****	**Total PCBs (ppm)**	**Total PCBs (ppm)**
Quality Assurance/Quality Control Sample					
16 (Dup)	PRV Cell Duplicate	5/29/2008	Comp	**0.70**	0.59 (1) U

Table Notes:
PRV = Post Remedial Verification sample
* Sample ID includes Cell # as well as Quadrant # for Discrete samples.
Cells 2 and 20 were completed in two parts resulting in the A and B suffix.
Cell 18 required additional excavation in three quadrants resulting in the additional "B" composite sample.
** Discrete = Sample collected at base following excavation of each cell quadrant.
Comp = Composite of 4 discrete samples from each cell quadrant.

Lab Notes & Qualifiers:
All samples analyzed by ECCS On-site laboratory by Test Method Reference LAM-005 8082 PCBs.
U = Nondetect
NR = Not requested
(1) = Reporting limit elevated due to interference.
(4) = Individual Aroclors draft reported on a wet weight basis. Total Aroclors reported on dry weight basis.

Table 6 - Residuals Analytical Results
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

				Draft		Final	
Sample ID	**Sample Date**	**Sample Type ***	**Lab Type ****	**Total PCBs (ppm)**		**Total PCBs (ppm)**	
Water Treatment Sediment	7/15/2008	Comp	On-site	**0.95** [4]		**3.6**	
Water Treatment Carbon [3]	7/15/2008	Comp	On-site	0.17	U	0.18	U
Flood Sediment Residuals							
Surface NE	6/24/2008	Discrete	Fixed	NA		**1.8**	
Surface NW	6/24/2008	Discrete	Fixed	NA		**1.4**	
Surface E	6/24/2008	Discrete	Fixed	NA		**2.3**	
Surface W	6/24/2008	Discrete	Fixed	NA		**1.6**	
Surface SE	6/24/2008	Discrete	Fixed	NA		**2.6**	
Surface SW	6/24/2008	Discrete	Fixed	NA		**1.8**	

Table Notes:
NA = Not Applicable
Comp = Composite sample

Lab Notes & Qualifiers:
** Onsite = Samples analyzed by ECCS On-site laboratory by Test Method Reference LAM-005 8082 PCBs.
Fixed = Samples analyzed by ECCS laboratory in Madison, Wisconsin by Method Reference Modified 8081.

U = Nondetect

[3] = Low recoveries in this sample indicate a matrix effect is present. Reported values should be considered estimates.

[4] = Individual Aroclors draft reported on a wet weight basis. Total Aroclors reported on dry weight basis.

Table 7 - Wastewater Analytical Results
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

					Inorganics										
			(µg/L)		(µg/L)							(mg/L)			(su)
Sample ID	**Sample Date**	**Lab Type ***	**Total SVOCs**	**PCB, Total**	**Arsenic**	**Cadmium**	**Chromium**	**Lead**	**Mercury**	**Nickel**	**Zinc**	**Total Cyanide**	**Oil & Grease**	**Total Suspended Solids**	**pH**
EFF - 05/15/08	05/15/08	Fixed	ND	<0.23	48.4	<0.13	2.2	<1.4	<0.10	2.3	7.7	<0.0060	ND	<0.31	9.2
EFF - 06/07/08	6/7/2008	On-site	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
EFF - 06/27/08	6/27/2008	On-site	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
INF - 07/01/08	7/1/2008	On-site	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
EFF - 07/01/08	7/1/2008	On-site	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
EFF - 07/01/08	7/1/2008	Fixed	ND	<0.23	7.3	<0.13	<1.1	<1.4	<0.10	2.2	<2.6	<0.0060	1.9	4.9	8.2
EFF - 07/15/08	7/15/2008	On-site	--	<0.1	--	--	--	--	--	--	--	--	--	--	--
MMSD Discharge Limit			5,000	ND	600	1,500	64,000	2,000	2.6	4,000	8,000	2.9	300	100	> 5.0

(O-E3T/C-JAZ 07/08, 12/08)

Notes:

* On-site = Samples analyzed by ECCS On-site laboratory

Fixed = Samples analyzed by Pace Analytical fixed-based laboratory in Green Bay, WI and Minneapolis, MN.

-- = not analyzed

ND = Not Detected at or above adjusted method detection limit.

µg/L : micrograms per liter

mg/L : milligrams per liter

su: standard units

MMSD: Milwaukee Metropolitan Sewerage District

Refer to lab reports for method references and data qualifiers.

Table 8 - Wastewater Discharge Summary
Remedial Construction Documentation Report
Blatz Pavilion/Lincoln Park Sediment Removal
Milwaukee, Wisconsin

Discharge Date	Initial Flow Meter Reading	Final Flow Meter Reading	Total Gallons	Sample ID	Sample Date	Approved Analytical	Parameters Sampled
6/6/2008	0	10,000	10,000	EFF - 05/15/08	5/15/08	yes	PCBs, Metals[1], SVOCs, Total Cyanide, O&G, TSS, pH
6/7/2008	10,000	30,000	20,000	EFF - 06/07/08	6/7/2008	yes	PCBs
6/27/2008	30,000	44,000	14,000	EFF - 06/27/08	6/27/2008	yes	PCBs
7/1/2008	44,000	66,000	22,000	INF - 07/01/08 EFF - 07/01/08	7/1/2008	yes	PCBs, Metals[1], SVOCs, Total Cyanide, O&G, TSS, pH
7/15/2008	66,000	68,500	2,500	EFF - 07/15/08	7/15/2008	yes	PCBs
Site Total Discharge			**68,500**				

(O-E31/C-JAZ 07/08)

Notes:
1. Metals include total Arsenic, total Cadmium, total Chromium, total Lead, total Mercury, total Nickel, total Zinc (no filtering).
2. Total Gallons = (Final Flow Meter Reading - Initial Flow Meter Reading).